MANDATORY - RETURNING YOUR REPORT

Please attach this cover sheet to all reports sent to QAI. Your report should include the following material in the order it is listed (as discussed in Part II.A.2 of the inspector Manual). Please check each box to verify that those materials are included. If there are any organic integrity issues that require your report to be prioritized for review, please identify such below. NO PAPERCLIPS/STAPLES

☑️ Please include your Conlin AirTravel Receipt if Applicable (QAI must process this outside of Oasis)

☑️ Description of Certificate Information (New clients) OR Current Certificate (Renewals)

☑️ Application for Organic Certification (New clients) OR ...for Annual Monitoring (Renewals)

☑️ Verified NOP OCP / International OCPs if applicable

☑️ Work Order - completed with signature page absolutely MANDATORY. Include Traceback Audit Forms.

☑️ OCP attachments and any SOPs, Flow Charts, etc.

☑️ International Marketing Verification Sheet (IMVS) – if applicable; if NA, proceed to next step

☑️ Verified profile forms, including any attachments (labels, etc)

☑️ Last Year's NC Letter, supporting documents, miscellaneous paperwork that was included in packet.

☐ Place behind COLOR Insert from QAI: NEW, Clean copies, Updated/Revised, and Retired Documents.

Please discard/shred last year’s work order.

NEEDS URGENT ATTENTION

Organic integrity issues

☐ YES ☒ NO

If yes, please briefly describe issue:

INSPECTOR'S SIGNATURE: [REDACTED]

TODAY'S DATE: 3/18

R/F 3/18

AESOP 9650: ISSUE 4; STATUS-PUBLISHED; EFFECTIVE 28 DEC 2010; AUTHORITY JACLYN BOWEN

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National Organic Program Certificate of Compliance

Certified Organic

Number: C0031767-NOPCPR-2

Certified Entity
Shamrock Farms Co.
P.O. Box 280
Stanfield, AZ 85172
USA

Type of Operation
Crop (Producer)

Certified Products
Per Attached NOP Organic System Plan Summary

Identification Marks
Per Attached NOP Organic System Plan Summary

Location Inspected
Shamrock Farms Co.
40034 W. Clayton Rd
Stanfield, AZ 85172
USA

Field IDs
Beryl 320, Red River 1, Red River 2, Red River 3, Red River 4, Red River 5, Red River 6

Effective Date
3.16.11

Signed on behalf of QAI Inc

Jessica Walden
July 23, 2010

Quality Assurance International
9191 Towne Centre Drive, Suite 510, San Diego, California 92122, USA
Tel: (858) 792-3531 • Fax: (858) 792-8665
NOP Organic System Plan Summary

Company: Shamrock Farms Co.
P.O. Box 280
Stanfield, AZ 85172
USA

Inspected: Shamrock Farms Co.
Location: 40034 W. Clayton Rd
Stanfield, AZ 85172
USA

Operation Type: Crop (Producer)
Certification Number: C0031767-NOPCPR-2
First Certified Date: 02-Mar-2007
Next Annual Monitoring Date: 27-Mar-2011

100% Organic

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<th>Id Mark</th>
<th>Compliance</th>
<th>Date Added</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pasture Mix (Pasture, Hay, Silage)</td>
<td>Shamrock Farms</td>
<td>NOP</td>
<td>29-Aug-2010</td>
</tr>
<tr>
<td>Sudan Grass (Pasture, Hay, Silage)</td>
<td>Shamrock Farms</td>
<td>NOP</td>
<td>02-Jan-2009</td>
</tr>
</tbody>
</table>

The above information is provided as a description of the organic system under certification. This document does not replace the organic certificate. It is provided as customer service to assist in the representation of the certified organic products.

Signed on behalf of QA1 Inc

Albert Moscona  August 20, 2010
National Organic Program Certificate of Compliance

Certified Organic

Number: C0031767-NOPLDY-2

Certified Entity
Shamrock Farms Co.
P.O. Box 280
Stanfield, AZ 85172
USA

Type of Operation
Livestock (Dairy)

Certified Products
Per Attached NOP Organic System Plan Summary

Identification Marks
Per Attached NOP Organic System Plan Summary

Location Inspected
Shamrock Farms Co.
40034 W. Clayton Rd
Stanfield, AZ 85172
USA

Pasture IDs
Beryl 320, Red River 1, Red River 2, Red River 3,
Red River 4, Red River 5, Red River 6

Effective Date
02-Mar-2007

Signed on behalf of QAI Inc

Jessica Walden
July 23, 2010

Quality Assurance International
9191 Towne Centre Drive, Suite 510, San Diego, California 92122, USA
Tel: (858) 792-3531 • Fax: (858) 792-8665
NOP Organic System Plan Summary

Company: Shamrock Farms Co.
P.O. Box 280
Stanfield, AZ 85172
USA

Inspected: Shamrock Farms Co.
Location: 40034 W. Clayton Rd
Stanfield, AZ 85172
USA

Operation Type: Livestock (Dairy)
Certification Number: C0031767-NOPLDY-2
First Certified Date: 02-Mar-2007
Next Annual Monitoring Date: 27-Mar-2011

100% Organic

<table>
<thead>
<tr>
<th>Product</th>
<th>Id Mark</th>
<th>Compliance</th>
<th>Date Added</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dairy Cows - Holstein (Not for slaughter)</td>
<td>Shamrock Farms Co.</td>
<td>NOP</td>
<td>23-Apr-2007</td>
</tr>
<tr>
<td>Milk (Raw)</td>
<td>Shamrock Farms Co.</td>
<td>NOP</td>
<td>23-Apr-2007</td>
</tr>
</tbody>
</table>

The above information is provided as a description of the organic system under certification. This document does not replace the organic certificate. It is provided as customer service to assist in the representation of the certified organic products.

Signed on behalf of QAI Inc

Jessica Walden July 23, 2010

John O. Van

Page 1 of 1
C0031767-NOPLDY 2.01
APPLICATION FOR ORGANIC CERTIFICATION ANNUAL MONITORING

This application may be used for a Certified Entity (C.E.), Additional Participant (A.P.) or C.E. Location.

This form must be completed by the C.E. Contact Person Responsible for Organic Certification.

Name of Location Seeking Certification: SHAMROCK FARMS CO.
Contact Person for Organic Certification at the Location: John Voss
Location Address: 40034 W. CLAYTON RD. P.O. Box 280
City: STANFIELD State/Province: ARIZONA Postal Code: 85172
Phone No.: 480-988-1452 Fax No.: 480-988-1634 E-Mail: john.voss@shamrockfoods.com

Please complete the following information regarding your Certified Entity if different than above:

Name of Certified Entity (C.E.):
C.E. Contact Person Responsible for Organic Certification:
Mailing Address: P.O. Box 280
City: STANFIELD State/Province: ARIZONA Postal Code: 85172
Phone No.: Fax No.: E-Mail:

A) General Business Information:

The Certified Entity (C.E.) is responsible for the certification of its location and all locations under its umbrella. The C.E. and any locations the C.E. owns may sell certified products to the public. Any Additional Participant (A.P.) not owned by the C.E. but certified under the C.E. umbrella, may only use their certification to produce products that are owned and sold by the C.E.

1. Is the location owned by the Certified Entity (C.E.)? YES □ NO □
   • If NO, do you understand that product certified at this location must be owned by the Certified Entity at the time of sale or distribution? YES ☑ NO □

B) Product/Labels/Fields/Locations Update:

If you are adding, discontinuing or revising products, fields or labels you must submit that information at this time. Attached are the appropriate forms. You may also obtain additional forms by visiting our website www.qai-inc.com or calling your Client Service Representative. NOP 205.406

1. Are you adding organic products, fields, or labels? YES □ NO ☑
   • If YES, please attach a copy of the appropriate completed profile forms and/or labels. [Attached]

2. Are you changing existing organic products, fields, or labels? YES □ NO ☑
   • If YES, please attach copies of revised profile forms and/or labels. [Attached]

3. Are you discontinuing existing organic products, fields, or labels? YES □ NO ☑
   • If YES, please attach a list of these products, fields or labels. [Attached]

C) Compliance Update:

The inspector will be verifying that resolutions to all noncompliances identified last year have been effectively implemented. NOP 205.406(a)(3)

1. Have you responded in writing to QAI regarding all noncompliances identified during last year’s evaluation? YES ☑ NO □
   • If NO, please attach your response at this time for review prior to inspection. [Attached]
D) **Description of Operation Changes:**

Any changes to your organic system since your last inspection must be described. Examples of such changes include but are not limited to: amended operating procedures, new land fertility or pest management methods, less acreage, reformulated feed rations, changed suppliers, or a change in health care medications for livestock. QAI recommends you review your previously submitted Organic Compliance Plan and Product Profiles prior to answering this question. NOP 205.406(a)(1)

1. In addition to the information provided on new or updated product profiles, please provide a brief narrative description of any organic system changes.

   **SEE ATTACHED DOC**

---

E) **Other Standards, Programs and International Marketing**

The QAI staff will be happy to explain the different programs offered through QAI and affiliate companies as well as any organic requirements for specific regions or standards. You may also want to ask your buyers if they have any specific international requirements. **Note:** If your operation has previously participated in international programs, we will assume you wish to continue unless otherwise indicated above under Question D1 Operation Changes.

1. Your products may need to be certified to multiple standards if you or your buyers wish to sell your products as organic in an international market. Please indicate in which of the following QAI programs you would like to participate:

   - [x] USA (NOP)
   - [ ] EU (EC 834/2007)
   - [ ] Japan (JAS)
   - [ ] Japan (Export Arrangement)
   - [ ] Quebec, Canada (CARTV/CAAQ)
   - [ ] Canadian Organic Regime (COR) (effective June 30, 2009)
   - [ ] QAI Organic Personal Care Certification to NSF 305
   - [ ] Bio Suisse
   - [ ] Other ____________

2. Please let us know if you would like additional information about programs offered through affiliate companies for the following services:

   - [ ] Kosher Certification
   - [ ] Non-GMO Project Verification
   - [ ] Other ________________

3. Is your operation food safety certified through SQF, BRC or IFS?

   - [x] Yes
   - [ ] No
   - [ ] Other ____________

4. If you have selected any organic program(s) other than USA (NOP), have you updated the product profile forms indicating which products are seeking certification to alternate standards?

   - [x] Attached
   - [ ] Previously Submitted and I have not added new products or international programs this year.
   - [x] Not Applicable, only seeking NOP certification.

---

**Signature of official representative for the Certified Entity**

[Signature]

**Date**

12/16/2010

**Print Name**

John O Voss

**Title**

Organic Dairy Farm Supervisor
PRODUCER ORGANIC COMPLIANCE PLAN (OCP)

Under the USDA National Organic Program (NOP), any production or handling operation seeking certification to sell, label or otherwise represent goods with any organic claim must develop an organic compliance plan that is approved by an accredited certifying agent, in this case QAI. Any changes you make to your organic compliance plan need to be documented and approved by QAI prior to implementation.

Physical Location Name: Shamrock Farms Co.
Physical Address: 410034 W. Clayton Rd.
City: Stanley
State/Province: AZ
Zip/Postal Code: 85272
Country: USA

To assist you in completing your OCP, you will find guidelines for each question along with references to the relevant subsections of the National Organic Program (NOP), 7 CFR Part 205, in italics following each question below. Please refer to those subsections of the regulation for the source of each question appearing in this Organic Compliance Plan.

You will also be asked to complete and attach additional QAI documents to verify product, procedure and material compliances as applicable.

If you find a question is not applicable to your operation, please clearly indicate this in the space provided after the question with explanation. If needed for clarity, please provide further explanation as to why the question does not pertain to your operation in Section H.

The QAI Inspector will be verifying on-site that you have documented all procedures indicated in this Organic Compliance Plan. Please be advised that your inspection must occur when the land, facilities and activities that demonstrate compliance, or the ability to comply, can be observed. NOP 205.403(b)

A) Organic Compliance Plan Overview

1. Please attach completed, current Individual Field Profiles (IFPs) and Annual Input Record for each field or farm parcel under organic management. Please attach color labels for products that are packed in the field. If labels are not used, a bill of lading or a bulk label may be submitted. Please ensure to attach certificates or ingredient information for each input listed on the Annual Input Record. NOP 205.201(a)(2)

☒ Attached ☐ Not Attached, please explain:

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2. Please attach a farm map to the Individual Field Profile(s) (IFP).

The map should include all surrounding land activity, buffer zones, boundaries, roads, tracks, direction indicator (north, south), cropping areas, all buildings and structures, wells, irrigation channels, fertigation injection locations, and the field numbers and area in acres. NOP 205.201(a)(6)

☒ Attached ☐ Not Attached, please explain:

3. If you are washing or packing products in an on-farm facility or structure, have you completed a QAI Post-Harvest Organic Compliance Plan?

A Post-Harvest OCP must be submitted for any cleaning or packing of product which does not occur directly in the field. NOP 205.201(a)(1)

☐ Yes ☒ No, all activities happen in the field ☐ No, please explain:

4. Please provide a description of your organic crop production practices and procedures. Include the estimated frequency of harvest.

Provide a general overview of the farming activities employed at your operation. NOP 205.201(a)(1)

OUR FARMING IS PRIMARILY OF PASTURE FOR THE ORGANIC HERD, WITH ANY EXCESS ACRES PLANTED TO GRANOL AND SILOAGE CROPS FOR HARVEST. EXCESS ACRES HARVESTED 1-2 TIMES PER YEAR

5. Please provide a description of your monitoring procedures as they pertain to ensuring that your Organic Compliance Plan is followed and organic integrity is maintained at every step in your process.

This is to be a description of how, and how often, you will review your own handling and processing system to ensure that the organic plan is being implemented effectively. NOP 205.201(a)(3)

WITH EVERY CROP WE WILL MONITOR THE PLANTS FOR COLOR AND VIGOR, TESTING PLANT SAMPLES AND SOIL SAMPLES WHEN NEEDED. ALSO AT THIS TIME WE WILL REVIEW OUR PLAN TO ENSURE WE ARE IN COMPLIANCE.

☐ OCP in monitored monthly. ☐ 5/25/18 email
6. Please describe the individual elements of your record keeping system established to track crops by identity and volume from the field to distribution or sale.

Describe the types of documents used in your audit trail system. If desired, you may also attach a flow chart explaining how one document is linked to the next. This audit trail system must fully disclose all activities pertaining to organic production and will need to be available to the inspector during the on-site visit.
NOP 205.201(a)(4), 205.103(b)(2), (b)(4)

SCALE TICKETS, TRUCKING AFFIDAVITS WILL BE USED FOR ALL ORGANIC FEED ENTERING THE PREMISES. IN ADDITION A FEED BOOK IS KEPT DETAILING THE PRODUCER THE COMMODITY THE QUANTITY THE DATE DELIVERED AND THE AMOUNT PAID.

B) Product Protection

1. Has all land seeking certification been free of prohibited materials for at least three years immediately preceding harvest of the organic crops?

   You must be able to demonstrate that the land seeking certification has been free from prohibited substances for 3 years. If you have not managed this land for three years, please obtain relevant statements from previous owner/manager.

   NOP 205.202(b), 205.105(a), 205.601, 205.602

   ☑ Yes ☐ No, please explain:

   ____________________________

2. If growing both organic and non-organic crops, what management practices and/or physical measures are in place to prevent contamination or commingling of organic crops during crop production, harvest and storage? Check all that apply.

   To prevent commingling and contamination, all equipment used in organic crop production must be free of non-organic crops and prohibited materials. Equipment used for both organic and non-organic farming must be cleaned and/or flushed prior to use on organic lands or crops. Records must be kept of these cleaning and/or flushing activities.

   NOP 205.201(a)(3)

   ☑ Only produce and store organic goods ☑ Dedicated equipment

   ☑ Buffer zones/physical barriers between organic and non-organic crops

   ☑ Documented rinse/purge of equipment prior using on organic fields/crops

   ☑ Lot coding ☐ Dedicated containers ☑ Sealed packaging

   ☑ Dedicated organic storage ☑ Documented employee training

Other: ____________________________
3. If you re-use any bags or containers for harvest, storage or transport, what measures are in place to ensure the materials/containers will not compromise the integrity of the organic product?

   The re-use of any bag or container that has been in contact with a substance that may compromise the organic integrity of the product is prohibited unless it has been thoroughly cleaned. NOP 205.201 (a)(5)

☑ No packaging material or containers are re-used.
☐ Cleaning ☐ Residue testing ☐ Documented employee training

Other: ________________________________

4. What measures are in place to prevent commingling or contamination of organic crops, products and packaging by non-organic crops/products or prohibited substances such as sanitation or pest control materials during transport? Check all that apply.

   When organic goods are stored in permeable packaging, bulk tanks, bins, hoppers or other open containers while in transport, care must be taken to protect the integrity of the organic goods. NOP 205.201(a)(5)

☐ Do not provide transportation ☐ Segregated transport ☐ Physical barriers
☐ Impermeable packaging ☐ Clear product identity
☒ Inspecting transport units prior to loading ☐ Documented complete cleanout
☒ Use of Clean Truck Affidavits ☐ Documented employee training

Other: ________________________________

5. Describe the buffer zones maintained to prevent contamination of organic crops from prohibited substances if adjoining land is not under organic management. Check all that apply.

   Organic production areas must have distinct boundaries and buffer zones to prevent the unintended application of a prohibited substance, genetically modified organisms or contact with a prohibited substance that is applied to adjoining land not under organic management. Adjoining land includes crop land, pastures, residential property, fallow land, etc. Buffer areas may change annually, depending on contamination potential from adjoining land uses. The width of the minimum buffer is dependent on contamination risk. The buffer must be sufficient in size or other features (windbreaks, diversion ditches) to prevent the unintended contact by prohibited substances applied to adjacent land areas. NOP 205.202(c)

☐ Not Applicable, no need for buffer zones due to nature of adjoining land use
☐ Tree Line ☐ Buffer crop ☐ Native vegetation
☐ Diversion ditch ☐ Hedge Rows ☐ Cultivated barrier

Other: A DRY WASH AND DESERT VEG. ON THE NORTH, UNFARMABLE LAND AND DRAIY ON THE WEST, IRRIGATION LATERAL AND PAVED ROAD ON THE EAST, DIRT ROAD AND FIELD DITCH ON THE SOUTH.
6. If crops are harvested from the buffer zones with equipment that is also used for harvesting organic crops, what safeguards do you use to protect organic crops from contact with buffer crops during harvest?

*Crops within the required buffer must not be sold as organic and may be left un-harvested or harvested, stored, or disposed of as non-organic crop, with records kept of crop disposition. Indicate buffer zones and show all adjoining land uses on your farm maps. NOP 205.202(c)*

☐ Not applicable, no crops grown in the buffer zones

Please explain:

7. What additional safeguards do you use to prevent accidental contamination? Check all that apply.

*Accidental contamination may occur if others are unaware that your operation is organic. NOP 205.201(a)(5)*

☐ Posting signs ☐ Drainage diversion

Written notification to:

☐ Local governments ☐ Utility companies ☐ Aerial spray companies/airports

☐ Adjoining neighbors

Other: _________________________

8. Can you verify that new installations or replacement lumber in contact with soil is not treated with prohibited materials?

*Wood treated with arsenate or other prohibited substance may not be used for new installations or replacement purposes where it comes into contact with soil, livestock or crops. This does not apply to wood that is isolated from production, such as fence posts or buildings. NOP 205.206(f)*

☐ Not Applicable

☐ Yes ☐ No, please explain:

______________________________
C) Soil Fertility and Crop Nutrient Management.

1. What are the major components of your soil and crop fertility plan? Check all that apply.
   Note, you must list each input material applied to organic fields/crops on the Annual Input Record.

   Crop nutrients and soil fertility must be managed through use of crop rotations, cover crops, and application of plant or animal materials, whether composted or uncomposted, as is applicable and appropriate for each operation. Please note that all synthetic materials on the National List 205.601 may only be used in accordance with annotations, where appropriate, and in such a manner that they must not contaminate crops, soil or water. If you use an approved synthetic material, you must provide evidence of how you address the materials' annotation. NOP 205.203(b), 205.601

   [X] Green manure/covers crops  [X] Crop rotation  [ ] Inter-planting
   [X] Tillage and cultivation practices  [ ] Soil inoculants  [ ] Compost
   [ ] Incorporation of volunteer crops  [ ] Summer fallow  [ ] Soil amendments
   [X] Non-factory farm manure  [X] Factory farm manure  [ ] Fertilizers
   [X] Incorporation of crop residues  [ ] Biodynamic preparations

   Other: ________________________________

2. How do you monitor the effectiveness of your fertility management program? Check all that apply.

   The NOP specifically requires that soil quality be improved or maintained, and that any materials applied must not contribute to contamination of crops, soil or water by plant nutrients, pathogenic organisms, heavy metals or residues of prohibited substances. NOP 205.203(c), 205.205

   [X] Soil testing  [X] Tissue testing  [X] Observation of soil  [X] Crop quality testing
   [X] Observation of crop health  [X] Comparison of crop yields

   Other: ________________________________
3. Do you employ a crop rotation?

*The NOP requires a crop rotation plan that maximizes soil organic matter content, prevents weed, pest, and disease problems, and manages deficient or excess plant nutrients. Your crop rotation may include sod, cover crops, green manure crops, and catch crops. NOP 205.203(c), 205.205*

☐ Not applicable, produce perennial crops
☒ Yes ☐ No, please explain:

4. Do you apply composted manure or other animal products to the organic land?

*The composting process must include a C:N ratio of between 25:1 and 40:1 and maintenance of temperatures between 131°F and 170°F for a specific number of days plus turnings, depending on the method of composting. Compost production records to verify compliance need to be maintained. If you purchase compost, please maintain documentation from the vendor verifying compliance to the NOP. NOP 205.203 (c)(2)*

☒ Yes ☐ No
If yes, is your compost produced in accordance with the requirements of the NOP:
☒ Yes ☐ No, please explain:

**Hickman's Dried Poultry Waste is composted and OMRI listed, do not use very often**

5. If you are applying raw animal manure or compost that is not in compliance with the NOP requirements for composting, please complete the following questions.

*Raw manure must be fully composted unless applied to land with crops not for human consumption or incorporated into the soil 120 days prior to harvest for crops whose edible portions have direct contact with the soil, or 90 days prior to harvest for all other crops for human consumption. NOP 205.203(c)(1)*

☐ Not applicable, do not apply raw or partially composted animal manure (please go to Section D)

(a) What types of crops do you grow? **Check all boxes that apply.**

☒ Crops not used for human consumption
☐ Crops for human consumption whose edible portion has direct contact with the soil or soil particles
☐ Crops for human consumption whose edible portion does not have direct contact with the soil or soil particles

(b) Are your uncomposted manure handling practices in compliance with the 120 and/or 90 “days prior to harvest” soil incorporation requirements?

☒ Yes ☐ No, please explain:
D) Natural Resources and Water Quality

1. What soil erosion problems do you experience (why and on which fields/lands)? ☑ none

2. What soil conservation practices are used?

   Production practices are meant to maintain or improve the natural resources of the operation, including soil and water quality. All tillage and cultivation activities must maintain or improve the physical, chemical and biological conditions of the soil and minimize the potential for soil erosion. Good timing with respect to soil moisture, implement depth, frequency, and implement selection all influence how tillage and cultivation activities impact soil quality. NOP 205.200, 205.203(a), 205.205(d)

   ☑ Crop rotation ☑ Terraces ☑ Contour farming ☑ Strip cropping
   ☑ Windbreaks ☑ Firebreaks ☑ Tree lines ☑ Retention ponds
   ☑ Undersowing/Interplanting ☑ Conservation tillage ☑ Permanent waterways
   ☑ Riparian management ☑ Maintain wildlife habitat ☑ Winter cover crops
   Other:

3. How is water used in the production of organic crops on your operation? Check all that apply.

   Water should not contaminate crops with prohibited materials. NOP 205.203(c)

   ☑ Not applicable, water not used (please go to Section E)
   ☑ Irrigation ☑ Foliar sprays ☑ Rinsing crops in field
   ☑ Washing crops post-harvest ☑ Greenhouse
   Other:

4. Source of water:

   ☑ On-site well(s) ☑ River/creek/pond ☑ Spring ☑ Municipal/region
   ☑ Irrigation district
   Other:

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5. What practices are used to protect water quality?

*Inputs and cultural methods used need to protect water quality. NOP 205.203 (c)*

- [X] Fencing livestock from waterways
- [X] Minimize irrigation runoff
- [ ] Minimize ponding by laser leveling/land forming
- [ ] Minimize runoff from compost/manure piles
- [ ] None, please explain:

Other:

6. If you irrigate your crops, please answer the following questions:

*The producer must protect against contamination from prohibited materials applied through the irrigation system. NOP 205.203(e)(1)*

- [ ] Not applicable, do not irrigate crops (please go to section E)

(a) Are input products applied through the irrigation system?
- [X] Yes [ ] No
  
  If yes, please include these inputs on your Annual Input Record

(b) Are products used to clean irrigation lines/nozzles or to lubricate irrigation equipment?
- [X] Yes [ ] No
  
  If yes, please include these inputs on your Annual Input Record

(c) Is the system shared with a non-organic operator?
- [X] Yes [ ] No
  
  If yes, and there is a potential that prohibited inputs are added to the irrigation water by another upstream operator, is the system flushed and documented between non-organic and organic use?
  - [X] N/A no inputs are applied through the irrigation system
  - [ ] Yes [ ] No, please explain how contamination is avoided:
E) Crop Pest, Weed and Disease Prevention

1. Using the Matrix below, indicate your management practices for preventing pests, weeds and diseases.

   Preventative management practices such as crop rotations, nutrient management and use of non-synthetic materials should be used as a first resort to manage insects, diseases and weeds. Approved synthetic materials on the National List 205.601 may be used when management practices are insufficient to prevent or control problems. All weed, pest, and disease inputs must be approved. A "restricted" input has specific annotations for its use. If you use a "restricted" material, you must provide evidence of how you address the materials' annotation. Burning may not be used as a means to dispose of crop residues. However, it may be used to suppress diseases or stimulate seed germination.

   NOP 205.206

Pest Management Matrix - Check (√) which basic strategies you use for each category of pest.

<table>
<thead>
<tr>
<th>Strategy:</th>
<th>Used for which type of pests:</th>
<th>Weeds</th>
<th>Insects &amp; invertebrates</th>
<th>Diseases &amp; nematodes</th>
<th>Vertebrate pests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pests</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crop Rotation</td>
<td></td>
<td>√</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cover cropping</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strip cropping, interplanting or planting mixed species</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trap crops</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crop nutrient management</td>
<td></td>
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<tr>
<td>Sanitation, cleaning up debris, nesting areas, removal of disease</td>
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<tr>
<td>Vectors, weed seed sources, etc</td>
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<td>Growing location</td>
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<td>Timing of planting</td>
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<td>Resistant varieties or rootstock</td>
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<td>Remove pest by hand (hoeing, pruning, picking)</td>
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<td>Mechanical cultivation (disc, harrow, rotary hoe, etc)</td>
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<tr>
<td>Mowing or grazing</td>
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<td>Irrigation method (drip, overhead, flood, etc)</td>
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<td>Mulching with biodegradable materials</td>
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<td>Plastic or synthetic mulches (must be removed at end of production)</td>
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<tr>
<td>Solarization</td>
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<tr>
<td>Plant beneficial habitat areas</td>
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<tr>
<td>Construct predator habitat</td>
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<tr>
<td>Release beneficial organisms</td>
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<tr>
<td>Strategy:</td>
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<tr>
<td>Construct barriers (fences, raised platforms, etc)</td>
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<td>Trept</td>
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<tr>
<td>Flame weeding</td>
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<td>Other physical or mechanical means</td>
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<td>Burning crop residues</td>
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<td>Allowed substances (insecticides, fungicides, etc)</td>
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</table>

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F) Recordkeeping and Audit Trail

1. Are the records pertaining to your operation maintained on-site and organized in a manner that can be fully audited and available on-site for inspection during regular business hours?

   The appropriate personnel must be available during the inspection to grant access to the required documents (e.g. accounting, management, etc). QAI recognizes that great diversity exists among organic handlers and that a wide variety of record keeping systems may demonstrate compliance with the regulation. In addition to verifying records on-site, sample copies of relevant records may be collected at the inspection to allow QAI to verify compliance with the regulation. NOP 205.103

   ☑ Yes ☐ No, please explain:

2. Which of the following records do you keep for organic production?

   You must be able to account for quantities of all organic products produced, sold or disposed of and in storage. Organic products must be tracked back to the location where they were produced/harvested. NOP 205.103

   ☐ Field activity log(s)
   ☐ Field history sheets (previous three years) that show rotations and/or crops and plantings
   ☑ Documentation of previous land use for leased and/or newly purchased land
   ☑ Input records for soil amendments, seeds, manure, foliar sprays, and pest control products
   ☑ Documentation of attempts to source organic seeds and/or planting stock
   ☐ Equipment cleaning records
   ☐ Monitoring records (soil tests, tissue tests, water tests, quality tests, observations)
   ☑ Harvest records that show field numbers, date of harvest, and harvest amounts (including custom harvest records)
   ☑ Receipts for inputs used for crop production
   ☐ Documentation of organic seedlings
   ☑ Organic certification documents
   ☐ Storage records that show storage location, storage identification, field ID, amounts stored, and cleaning activities
   ☑ Shipping records (scale ticket, dump station ticket, bill of lading)
   ☐ Sales records (purchase order, contract, invoice, cash receipts, cash receipt journal, sales journal, etc.)

   Other:
3. Please describe how your documents are linked together to form a complete audit trail from harvest through storage to sale.

Your records must clearly link the production unit with the harvest, storage, shipping and sales of the organic crop. Some system for ensuring audit trail clarity, such as linking lot numbers from one document to the next, is necessary. NOP 205.103

Provide an example of your lot numbering or other system and describe or how it works (Example: Lot Number 5219O32, where "5" signifies the year 2005, "219" is the Julian date of Harvest, "O" depicts that the product is Organic, and "32" is the field or bed from which the crop was harvested):

Harvested or purchased feed will have scale tickets/truck-er affidavits, and will be logged into the (our) Organic Feed Book. All Organic Feed is stored on a separate (organic) facility.

4. Please indicate the types of activities for which you maintain written policies and procedures? Check all that apply.

Documented procedures, also known as Standard Operating Procedures (SOPs), will be reviewed to determine if your practices that maintain and protect the integrity of organic products are being consistently applied. Documents may be written in any format applicable to your specific operation. NOP 205.103

☐ Soil fertility  ☑ Pest, weed, disease control  ☑ Inputs purchase  ☐ Harvest procedures
☐ Storage  ☑ Equipment Cleaning  ☐ Shipping  ☐ Sales

Other:

5. If contracting handling operations are used (e.g. storage, cleaning facilities, etc), do you maintain current organic certification documentation for each contracted facility?

Producers that use the services of contract warehouses, packing facilities, storage or other handling facilities must make sure that those facilities are maintaining the organic integrity of the goods they handle. Any such facility should either be certified independently or approved under your certification. NOP 205.103

☒ Not applicable, no contracted facilities
☐ Yes  ☐ No, please explain:

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6. If you use contracted storage facilities that are not required to be certified do you maintain affidavits confirming the operator protects the integrity of organic goods in storage?

Storage facilities that receive product in enclosed impermeable packages, and do not repackage or process the product further, are not required to be certified. However, the certified operator must ensure that the integrity of organic goods is maintained during storage at non-certified facilities. Measures must be in place that would prevent the integrity of the organic product from being compromised. NOP 205.101(b)

☐ Not applicable, no contracted facilities
☐ Yes ☐ No, please explain:

7. Do you maintain all organic records for a minimum of five years?

If your operation is less than five years old, you must have a plan in place to comply with this requirement. NOP 205.103(b)(3)

☐ Yes ☐ No, please explain:

8. Do you have a procedure for documenting and addressing complaints relating to compliance with organic standards?

This is not a requirement of the NOP, however it is a requirement of ISO Guideline 65 and is relevant to other QAI standards and policies.

☐ Yes ☒ No, please explain:

GROUND IS PRIMARILY FOR PASTURE WITH THE POSSIBILITY OF SOME HARVESTED CROPS. ALL RECORDS WILL BE KEPT ON FILE TO DEFEND THE OPERATION

G) Organic Planting Stock

1. Do you sell organically produced planting stock?

Non-organic perennial plants (planting stock) must be managed organically for at least one year prior to harvest of crop or sale of the plant as certified organic planting stock. NOP 205.204(a)(4)

☐ Yes ☐ No

If yes, do you have verification that planting stock was managed organically for at least one year prior to the harvest and/or sale of the planting stock as certified organic?

☐ Yes ☐ No, please explain:
2. Do you produce your own organic planting stock on farm?

☐ Yes ☒ No

If yes, please include all materials used to produce the organic planting stock on the Annual
Input Record.

H) Applicant Explanations Section – Use the space below to explain your responses as needed
for clarity.
DAIRY ORGANIC COMPLIANCE PLAN (OCP)

Under the USDA National Organic Program (NOP), any production or handling operation seeking certification to sell, label or otherwise represent goods with any organic claim must develop an organic compliance plan that is approved by an accredited certifying agent, in this case QAI. Any changes you make to your organic compliance plan need to be documented and approved by QAI prior to implementation.

Physical Location Name  SHAMROCK FARMS Co.
Physical Address  40034 W. CLAYTON Rd.
City  STRATHFIELD  State/Province  ARIZONA  Zip/Postal  85172  Country  USA
Contact Person At Location  John Voss
Phone No.  480-988-1452  Fax No.  480-988-1634  E-Mail  john-voss @ shamrockfoods.com
Name of Person Completing This Form  John Voss  Date  12/06/2010
Name of Certified Entity (C.E.)  SHAMROCK FARMS Co.

To assist you in completing your OCP, you will find guidelines for each question along with references to the relevant subsections of the National Organic Program (NOP), 7 CFR Part 205, in italics following each question below. Please refer to those subsections of the regulation for the source of each question appearing in this Organic Compliance Plan.

You will also be asked to complete and attach additional QAI documents to verify product, procedure and material compliances as applicable.

If you find a question is not applicable to your operation, please clearly indicate this in the space provided after the question with explanation. If needed for clarity, please provide further explanation as to why the question does not pertain to your operation in Section M.

The QAI Inspector will be verifying on-site that you have documented all procedures indicated in this Organic Compliance Plan. Please be advised that your inspection must occur when the land, facilities and activities that demonstrate compliance, or the ability to comply, can be observed. NOP 205.403(b)

A) Organic Compliance Plan Overview

1. Please complete a Livestock Farm Profile (LFP) form.

The farm profile form should describe the scope of your farming operation, including all land used, whether owned or leased. NOP 205.201(a)(6)

☐ LFP form Attached
2. Please **attach a whole farm map** to the Livestock Farm Profile showing the relative location of all land used in your operation, whether owned or leased.

*The map should include the field numbers and adjoining land uses. NOP 205.201(a)(6)*

☒ Whole Farm Map Attached

3. Please attach completed, current **Livestock Individual Field Profiles (LIFPs)** and **Annual Input Record (AIR)** for each field or farm parcel under organic management that is used in your dairy operation, whether for pasture; producing crops to be fed to your livestock or sold; or land used for the production of crops for ruminant grazing. Please attach certificates or labels for each input listed on the Annual Input Record.

*NOP 205.201(a)(2)(6)*

☒ LIFP's Attached

☒ AIR’s Attached

4. Please **attach a field map** to each Livestock Individual Field Profile(s) (LIFP).

*The map should include all surrounding land activity, buffer zones, boundaries, roads, tracks, direction indicator (north, south), cropping areas, all buildings and structures, wells, irrigation channels, fertigation injection locations, and the field numbers and area in acres. For fields that are to be used as pasture, please mark the locations of all fences, types of fencing, sources of shade, and sources of water. NOP 205.201(a)(6), 205.240(c) (6)*

☒ Individual Field Map Attached

5. Please **attach an accurate flow chart** that includes all steps of milking, refrigerated storage and product flow of milk.

*The chart should indicate each of the steps in the milking of the organic herd from the milk parlor through to the point where you relinquish custody of the milk products. If desired, you may also attach a facility map to clarify processes involved. NOP 205.201(a)(6)*

☒ Flow chart Attached

6. Please **attach a completed, current Dairy Herd Profile (DHP)** and **Medical Input Record (MIP)** for each herd.

*The Dairy Herd Profile should represent your entire organic herd, including all classes and subclasses (if any). The Medical Input Record will provide an overview of the medical inputs used, or intended to be used, to manage health concerns. Please be sure to attach certificates, labels, and/or technical information for each input and/or treatment used on livestock. NOP 205.201(a)(2), 205.201(a)(6)*

☒ DHP Attached

☒ MIP Attached
7. If you plan to sell any livestock for organic slaughter, have you completed a QAI Livestock Organic Compliance Plan?

   A Livestock OCP must be submitted if any livestock are to be sold as organic slaughter stock. NOP 205.201 (a)(1)

   □ Yes □ No, livestock will be sold as organic slaughter stock ☑ No, please explain:
   
   All animals are sold as conventional beef.

8. Please provide a description of organic production practices and procedures. Include the estimated frequency and volume of milk produced.

   Provide a general overview of the activities and processes your operation conducts.
   Please include the expected rate and volume of organic milk production and the number of milking dairy animals to be certified. You may reference your flow chart as applicable.

   NOP 205.201(a)(1)

   The organic herd is milked 2x/day. As of Dec. 1, 2010 there are 758 animals in the herd. There are 578 milking cows, 78 dry and 12 young heifers and 2 bulls. All equipment is in contact with the milk is washed and rinsed and purged after each milking.

9. Please provide a description of your monitoring procedures as they pertain to ensuring that your Organic Compliance Plan is followed and organic integrity is maintained at every step in your process.

   This is to be a description of how, and how often, you will review your own handling and processing system to ensure that the organic plan is being implemented effectively.

   NOP 205.201(a)(3)

   The OCP is reviewed at least monthly to ensure that we are following our plan. All required logs are updated daily or when activity occurs. Any changes are communicated to QAI in a timely manner.
B) Origin of Livestock

1. Please identify the **herd conversion method** employed by your operation.

   *Dairies that were converted to organic management prior to the October 2002 implementation of the National Organic Program are considered compliant to the standards.*

   *After October 2002, when a conventional dairy is converting to organic practices, there are three conversion provisions allowed under the Rule. Each of these provisions requires use of medical inputs and living conditions compliant to the USDA NOP Livestock Standards for the entire conversion period. The following feed requirements may be used during the conversion period.*

   *The first option allows dairies to convert dairy animals with continuous organic management for one year prior to milking. This includes all 100% organic feed. NOP 205.236(a)(2)*

   *Options 2 and 3 are a “fast track conversion”. Note that these can only be employed for one distinct herd, meaning that the conversion period may only last 1 year and that all subsequent replacement livestock must come from animals that were managed organically from the last 1/3rd of gestation. NOP 205.236(a)(2)(iii)*

   *Option 2 allows the use of feed produced on land in the last year of transition (i.e., have passed 24 full months with no prohibited inputs) in addition to feed that is already certified organic. NOP 205.236(a)(2)(i)*

   *Option 3 is known as the 80/20 exemption, was only allowed if the conversion was complete by June 9th 2007. This method allowed feeding of only 80% organic feed for the first 9 months and 100% organic feed for the last 3 months. NOP 205.236(a)(2)(ii).*

☐ Completed herd conversion prior to implementation of the National Organic Program (October 21, 2002).

☒ Used Option 1 - Converted dairy cows with 100% certified organic feed for one-year.

☐ Used Option 2 - Converted a herd using a combination of 100% organic feed supplemented with crops and pasture from land in the Organic System Plan in the third year of transition (24 – 36 months).

☐ Used Option 3 - Prior to June 9, 2006, began conversion of an entire distinct herd using the 80% organic feed for the first 9 months, 100% organic feed for the remaining 3 months.
2. Please provide information regarding replacement animals brought into the organic herd. Check all that apply.

   For operations that converted an entire herd using 100% organic feed for 12 months, replacement animals may be bought from a conventional operation if so desired. These animals must then be managed as organic for no less than 12 months prior to milking as “organic.” If your herd was converted using one of the two “fast track conversion methods” as explained above in B1, your replacement animals must be managed as organic from the last third of gestation. If “last third of gestation” replacement animals are purchased from another certified operation there must be verification of the animals’ organic management. Please note: your replacement records should include the animal ID, dates of purchase or birth, date organic management commenced and date of first organic milking. NOP 205.236(a)(2),(i-iii)

☐ One year conversion with 100% organic feed completed; replacement animals born into the organic herd on-farm and managed organically.

☒ One-year conversion with 100% organic feed completed; conventional replacement animals born into the conventional herd on-farm or bought and managed organically 12 months prior to milking.
Source: _SHAMROCK FARMS CONVENTIONAL HEIFER OPERATION_

☐ Used one of the fast track conversion options (Options 2 or 3) and all replacement animals are from on farm and raised organic from the last 1/3rd of gestation or bought from certified operation with verification of last third of gestation management (Organic certificate attached)
Source: 

3. Do you have a system in place to ensure animals from your organic herd are not managed by a non-organic operation, including your own conventional management, and then brought back into your organic herd at a later date?

   livestock or edible livestock products that are removed from organic management and subsequently managed as non-organic are prohibited from sale, labeling, or representation as “organic.” Please note that calves born into the organic herd intended for use as milking animals must remain under organic management from the day of birth. Any conventional management of these calves – on-farm or off-farm – would result in the animals’ ineligibility to produce “organic” milk or milk products, regardless of the completion of a one-year transition prior to milking. NOP 205.236(b)(1)

☒ Yes ☐ No, please explain:
   Calves are identified with a special tag prefix to ensure that they will not enter the organic herd again.
4. What management practices and/or physical measures are in place to protect the herd from potential **commingling of organic and non-organic animals during production and handling activities**? Check all that apply.

   *In operations producing or handling organic and non-organic livestock, there may be several opportunities for accidental commingling to occur. Preventive measures will be verified at every step in your process.*
   
   NOP 205.201(a)(5), 205.272(a)

- [x] N/A, Handle only organic livestock
- [] Animal ID program and/or visual ID tag/marking system
- [] Documented employee training
- [Other:] The organic farm is a stand alone entity and no commingling occurs whatsoever.

C) **Livestock Feed**

1. Are your livestock provided with a Total Feed Ration that is composed of organic agricultural products, including pasture and forage, along with other NOP-compliant additives and supplements? NOP205.237 (a)

   - [x] Yes  [ ] No, please explain:

2. Do you produce or mix livestock feed on-site?

   *Feed rations must be composed of agricultural products that are organically produced and, if applicable, organically handled. Feed additives and / or feed supplements used must be approved for use per the National List, 205.603 and 205.604. Feed produced or mixed on-site must be submitted to QAI on the Individual Feed Ration (IFR) profile.*
   
   NOP 205.237

   - [ ] No: feed rations bought from certified farm or feed mill and provided to herd as is. Organic certificate for certified farm or feed mills attached.

   - [x] Yes, feed produced or mixed on-site. IFR form is attached.
3. How do you ensure your livestock feed is sufficient to meet nutrient requirements?

Nutrition requirements in the Rule include vitamins, minerals, protein and / or amino acids, fatty acids, energy sources, and fiber. NOP 205.238(a)(2)

☐ Nutritionist employed to review and formulate feed rations
☐ Formulate feed with feed mill to herd specifications
Other: ________________________________

4. Please confirm that your operation does not utilize the following prohibited practices in livestock feed provided to the herd.

Certified operations must ensure that prohibited practices and materials are not present in feed for organic livestock herds. NOP 205.237(b)(1-8)

☐ Do not use animal drugs, including hormones, to promote growth
☐ Do not provide feed additives or feed supplements in amounts above those needed for adequate nutrition and health maintenance for the species at its specific stage of life
☐ Do not feed plastic pellets or roughage
☐ Do not feed formulas containing urea or manure
☐ Do not feed mammalian or poultry slaughter by-products
☐ Do not use feed, feed additives, and / or feed supplements in violation of the Federal Food, Drug, and Cosmetic Act
☐ Do not provide feed or forage to which any antibiotic including ionophores has been added, and
☐ Do not prevent, withhold, restrain, or otherwise restrict ruminant animals from actively obtaining feed grazed from pasture during the grazing season, except for conditions as described under 205.239(b) and (c).

If you have not checked all of the above boxes, please explain:

________________________________________

5. Does your operation use salt in feed or salt blocks provided to the herd?

Salt provided to the herd via feed or salt blocks must be free from prohibited free-flowing or anti-caking additives. NOP 205.603

☐ Yes, specification sheet for salt used attached
☐ No, salt is not used
6. During the **grazing season**, does your operation provide not more than an average of 70% of dry matter demand (DMD) as dry matter fed, and not less than an average of 30% of DMD from grazing over the entire grazing season, including residual forage?

   Please note that ruminant animals must be grazed throughout the entire grazing season for the geographical region, which shall not be less than 120 days per calendar year. Due to weather, season, and/or climate, the grazing season may or may not be continuous. Ruminant animals may be denied pasture in accordance with 205.239(b)(1) through (8), and §205.239(c)(1) through (3), but shall be provided with an average of not less than 30 percent of their **dry matter intake (DMI)** from grazing throughout the periods that they are on pasture during the grazing season. Please note, breeding bulls are exempt from the 30% DMI requirement but if maintained under this exemption, may not be sold as organic slaughter stock. Please complete and submit to QAI the **Planned Dry Matter Demand and Intake Summary (DMD) and Average Dry Matter Intake (DMI) from Pasture Worksheet** for each type, class, sub-class of animal listed on your Herd Profile form. Please note that your specific method for calculating dry matter demand must be provided. NOP 205.237 (c)(d)

   □ Yes  ☒ No, please explain:

   Our trial for the (60 days at 20% DM from the pasture (2009-2010 season) was successful. We will have better, more complete data for the 2010-2011 grazing season.

   □ Planned Dry Matter Demand and Intake Summary form attached

   □ Average Dry Matter Intake (DMI) from Pasture Worksheet attached

7. Does your operation document the amount and type of feed actually fed to each type and class of animal, and document changes that are made to all rations throughout the year in response to seasonal grazing changes?

   You may use the **Dry Matter Fed Calculation Worksheet** provided by QAI to document the actual Dry Matter Fed each type and class or sub-class of animal, as well as document the changes made to rations. In addition, QAI has provided an Average DMI form that you may complete to demonstrate that the average DMI over the entire grazing season is compliant with the 30% average requirement. Alternatively, you may use your own forms if all the information required on the QAI forms is provided. NOP 205.237 (d) (2)(3)

   □ Yes  ☒ No, please explain:

   We use a computerized feeding system under the management of our nutritionist, Dr. Theo Lyres, PhD., dairy ruminant nutrition.

   □ Dry Matter Fed Calculation Worksheet attached

   To be available at inspection – see response at back of OCP (jj – 1/13/11)
D) Livestock Health Care Practice Standard

1. Please explain how your health management practices include selection of species and types of livestock with regard to suitability for site-specific conditions and resistance to prevalent diseases and parasites.

   Access to the outdoors is required for all livestock, and access to pasture is required for all ruminants. The ability of the livestock species to withstand the elements should be considered when selecting animals for the herd, in order to ensure that animals can be managed as organic in all aspects without restriction due to type of species selected. NOP 205.238(a)(1)

   SEE SECTION M

2. How do you ensure your livestock housing and pasture conditions minimize the occurrence and spread of diseases and parasites? NOP 205.238(a)(3)

   ☑ Good sanitation practices ☑ Good manure management
   ☑ Protection from pathogens introduced by visitors (clean boots / shoe covers / boot baths)
   ☑ Animal foot baths     ☑ Proper Ventilation when indoors

   Other:

3. Please provide a description detailing the practices in place that allow for exercise, freedom of movement, and reduction of stress?

   Proper living conditions, such as ability to exercise, freedom of movement and reduction of stress, are important to organic livestock production, as these conditions minimize the occurrence of disease and increase immunity in the herd. These conditions are also relevant to the humane treatment of the animals. Reduction of stress is a required practice in organic livestock production. There are many instances during which livestock can incur stress, including during weaning and transportation. NOP 205.238(a)(4)

   SEE SECTION M
4. Please provide information regarding any **physical alterations performed on animals** in the herd. Any medical inputs used must be listed on the Medical Input Profile

   *Physical alterations may be necessary in order to promote the welfare of the animal and the herd; however, the age of the animal at the time of physical alteration must be considered in order to minimize pain and stress. NOP 205.238(a)(5)*

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<tr>
<th>Alteration performed:</th>
<th>N/A</th>
<th>Animal's age:</th>
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<td>Alteration performed:</td>
<td></td>
<td>Animal's age:</td>
</tr>
<tr>
<td>Alteration performed:</td>
<td></td>
<td>Animal's age:</td>
</tr>
</tbody>
</table>

   Please explain why this procedure is necessary to promote the welfare of the animal, and how you minimize pain and stress during these procedures:

   *All animals are dehorned prior to transition.*

5. Do you administer **vaccines and/or other veterinary biologics**?

   *The use of vaccines is a common preventative medical practice. Vaccines are allowed without restriction. NOP 205.238(a)(6), 205.105(e), 205.603*

   - [ ] No vaccines and/or other veterinary biologics used
   - [x] Yes, all vaccines and/or other veterinary biologics used are listed on the Medical Input Profile

   Other:

6. Are **synthetic medicines**, approved per section 205.603, administered to animals in your herd?

   *Synthetic medicines are allowed for use only when preventative practices and veterinary biologics are inadequate to prevent sickness. All synthetic medicines used, when applicable, must be listed as approved on the National List, section 205.603. Documentation should be maintained to demonstrate verification that the use of synthetic medicine is in compliance with the National List and administered only after preventative practices and veterinary biologics are determined to be inadequate for animal health. NOP 205.238(b), 205.238(c)(1)*

   - [ ] N/A, no synthetic medicines administered
   - [x] Yes, synthetic medicines, approved per 205.603, are administered only when preventative practices and veterinary biologics are inadequate to prevent sickness; all synthetic medicines are listed on the Medical Input Profile.

   If yes, please explain your system for documenting that synthetic medicines are administered to organic livestock only when preventative practices and veterinary biologics are inadequate to prevent sickness:

   *We follow our SOP to manage and prevent disease. If we have an animal that needs synthetic medicines it is recorded in our Treatment Log.*
7. Please explain your use of parasiticides in the organic herd. Any parasiticides used must be listed on the Medical Input Profile.

The use of parasiticides, when listed under section 205.603, is approved for emergency uses only. Routine use of parasiticides in dairy animals is prohibited. Should an emergency parasiticide treatment be needed for a dairy animal, documentation must be in place to demonstrate the emergency use situation, as well as verification that milk produced from a treated animal is not sold as “organic” for ninety (90) days following treatment. Emergency use of parasiticides in breeder stock is allowed when used prior to the last third of gestation. NOP 205.238(b)(1-2), 205.238(c)(4)

☐ Not applicable, parasiticides are not administered
☐ Parasiticides administered in cases of emergency only; milk products from treated animals are not sold as “organic” until at least ninety (90) days following treatment

Other: Pygainc 5.0 is used as an external parasiticide to control tail head lice. A log for Pygainc usage is maintained.

8. Please confirm that your operation does not utilize the following prohibited practices.

Certified operations must ensure that prohibited medical practices and materials are not in use in the management of organic livestock herds. NOP 205.238(c)(1-4, 6-7)

☒ Do not administer any animal drug, other than vaccinations, in the absence of illness
☒ Do not administer hormones for growth promotion
☒ Do not administer synthetic parasiticides on a routine basis
☒ Do not administer animal drugs in violation of the Federal Food, Drug, and Cosmetic Act
☒ Do not sell livestock or edible livestock products as “organic” from an animal treated with an antibiotic, any substance that contains a synthetic substance not allowed under § 205.603, or any substance that contains a non-synthetic substance prohibited in § 205.604
☒ Do not withhold medical treatment from a sick animal in order to preserve its organic status

If you have not checked all of the above boxes, please explain:

9. Please provide a written description of your antibiotic use policy.

Milk or milk products produced from an animal treated with antibiotics are prohibited from sale, labeling, or representation as “organic.” NOP 205.236(a)(2), 205.237, 205.238(c)(1,2,7)

No antibiotics are used on the organic herd. Any animal requiring treatment with antibiotics are removed from the organic herd to the conventional herd and treated. These animals are never returned to the organic herd. Records are maintained in DMS.
10. Please describe your management system in place that ensures milk or milk products from livestock treated with a prohibited substance (e.g., antibiotic, synthetic medicine not listed on 205.603) are not sold, labeled, or represented as "organic." NOP 205.238(c)(1)

SEE Section D.9.

E) Livestock Living Conditions

1. Please confirm that the following components are provided to your livestock when outdoors:

Year round outdoor access for all livestock in organic production is required.
NOP 205.239(a)(1)

☒ Shade ☒ Shelter ☒ Exercise Areas ☒ Fresh Air ☒ Clean drinking water
☒ Direct sunlight suitable to the animal’s stage of production, climate and the environment

2. Is access to the outdoors or to pasture temporarily denied at any time?

All organic livestock must be provided with access to the outdoors and access to pasture. Access may be restricted for temporary confinement under prescribed conditions as mandated by the NOP, under section 205.239(b)(1-8)(c)(1-3)

☐ No, access is not restricted
☒ Yes, access is restricted for the following reasons (please check all that apply):
☐ Inclement weather
☐ Risk to soil or water quality
☐ Conditions under which the health, safety or well being of the animal could be jeopardized, please describe conditions: Sick, injured, lame animals and during times of severe heat stress during non-grazing season.
☒ Animal's stage of production (ruminants not exempt during lactation). Please provide stage of production: Close-up cows, Jinks prior to calving, Fresh cows 1st lactation.
☒ Preventative healthcare procedures or treatment of illness or injury
☐ Sorting or shipping animals and livestock sales (organic management must be maintained during this practice)
☐ Breeding
☐ Youth projects (max. 1 wk before event, during event, and 24 hours after return. Organic management must be maintained during this event)
☐ Dry off period (max. 1 wk.)
☒ Birthing (max. three weeks prior and one week after)
☐ Calves less than 6 months (confinement or tethering cannot restrict ability to lie down, stand up, fully extend limbs, and move about freely)
☒ For short periods during milking
☐ Other:

Our access to outdoors is never denied because of our Saudi-style barns.
3. If access to the outdoors or to pasture is temporarily restricted, which of the following details does your pasture temporary confinement log contain?

A confinement log is one method for recording the duration period and justification for confining animals. Please identify the components of your confinement log or describe other procedures used for documenting the temporary confinement of animals, if applicable. NOP 205.103(b)(4), 205.201(a)(6)

☐ Schedule, including date ☒ Specific Reason for confinement
☐ Herd information (milking cows, young stock, etc) ☒ Signature line
☐ Confinement Log is not used, other documented procedures in place as described here:

Other: All animals are outdoors 365 days per year. Pasture access is denied only as allowed in the NOP, under section 205.239(a)(1-861-3)

4. Please describe livestock living conditions that provide appropriate, clean, and dry bedding for all animals.

When roughages (agricultural) are used as bedding, they shall have been organically produced except as provided in 205.236(a)(2)(i), NOP 205.239(a)(3)

☐ Bedding provided is clean and dry
☐ Organically produced roughage (Organic Certificate Attached). Describe: 

☐ Other bedding material - Composition of livestock bedding: Sun-dried organic manure on site.

Source of livestock bedding: SHRDF SHRDF UNITS from Organic Farm

5. Please describe how your operation is able to provide the following to animals by means of the shelter structure in use:

- Natural maintenance, comfort behaviors, and opportunity to exercise;
- Temperature level, ventilation, and air circulation suitable to the species; and
- Reduction of the potential for livestock injury.

NOP 205.239(a)(4)(i-iii)

SEE SECTION M same answer for D.3.
6. Please describe how you provide outdoor access to your animals during the non-grazing season, and provide access for supplemental feeding during the grazing season. Check all that apply.

If yards, feeding pads, and feedlots are used for feeding, they shall be large enough to allow all ruminant livestock occupying the yard, feeding pad, or feedlot to feed simultaneously without crowding and without competition for food. Continuous total confinement of any animal indoors is prohibited. Continuous total confinement of ruminants in yards, feeding pads, and feedlots is prohibited. NOP 205.239 (a)(1)

☐ Yards
☐ Feeding pads
☐ Feedlots
☒ Other: All animals are under SAUDI BARNs

Please describe how you ensure the space requirements are met: SEE SECTION M answer for D.3.

7. Please describe your management of yards, feeding pads, feedlots and laneways to ensure they are well-drained, kept in good condition (including frequent removal of wastes), and managed to prevent runoff of wastes and contaminated waters to adjoining or nearby surface water and across property boundaries. NOP 205.239 (a)(5)

Lanes and feed pads and water trough pads are concrete. They are scraped daily. The sheds have gutters and drain onto the cemented lanes which then drain to holding ponds.

8. Please describe your manure management practices that ensure it does not contribute to contamination of crops, soil, or water by plant nutrients, heavy metals, or pathogenic organisms and optimizes recycling of nutrients.

Pastures and other outdoor access areas must be managed in a manner that does not put soil or water quality at risk. NOP 205.239(e)

Manure that is not used for bedding is hauled away under contract.
F) Pasture Management Plan

1. Please describe the following:
   a) Types of pasture provided to ensure the feed requirements of 205.237 are being met.
      The pasture is planted with a mix of oats, rye, and vetch.
   b) Cultural and management practices to be used to ensure pasture of a sufficient quality and quantity is available to comply with the regulations. Pasture must be managed to annually provide a minimum of 30% of a ruminant’s DMI, on average, over the course of the grazing season, to minimize the occurrence and spread of diseases and parasites, and to refrain from putting soil or water quality at risk. Testing will be done on a routine basis to ensure quality and quantity is available to comply to the rule.
   c) The types of grazing methods to be used in the pasture system.
      Intensive rotation.

<table>
<thead>
<tr>
<th>Types of fences, sources of shade, and sources of water. Please mark the locations of fences, shade, and water on your field maps.</th>
<th>Wire and cable fences on the perimeter, using hotwire and posts in each paddock. We also have fixed and portable water troughs and shades.</th>
</tr>
</thead>
<tbody>
<tr>
<td>d) Soil fertility and seeding systems</td>
<td>We have purchased organic seeds for the pasture. We also apply manure to the fields and manure water is blended in the ditch for irrigation.</td>
</tr>
<tr>
<td>e) Erosion control and protection of natural wetlands and riparian areas practices.</td>
<td>No runoff from the fields enter any wetlands or riparian areas.</td>
</tr>
<tr>
<td>f) Use of irrigation in managing pasture</td>
<td>We use a pivot system on Beryl 320 and flood irrigate the other fields.</td>
</tr>
</tbody>
</table>
G) Pasture/Crop Land

1. Has all land seeking certification been free of prohibited materials for at least three years immediately preceding certification of the pasture/crops?

   You must be able to demonstrate that the land seeking certification has been free from prohibited substances for 3 years. Please complete, or have the previous owner/manager complete, QAI's Land Use History Verification Form and submit a notarized copy to QAI. NOP 205.202(b), 205.105(a), 205.601, 205.602

   ☑ Yes  ☐ No, please explain:

2. If growing both organic and non-organic crops, what management practices and/or physical measures are in place to prevent contamination or commingling of organic crops during crop production, harvest and storage? Check all that apply.

   To prevent commingling and contamination, all equipment used in organic crop production must be free of non-organic crops and prohibited materials. Equipment used for both organic and non-organic farming must be cleaned and/or flushed prior to use on organic lands or crops. Records must be kept of these cleaning and/or flushing activities. NOP 205.201(a)(5)

   ☐ Only produce and store organic goods  ☐ Dedicated equipment
   ☐ Buffer zones/physical barriers between organic and non-organic crops
   ☐ Documented rinse/purge of equipment prior using on organic fields/crops
   ☐ Lot coding  ☐ Dedicated containers  ☐ Sealed packaging
   ☐ Dedicated organic storage  ☐ Documented employee training

   Other: We grow only organic crops/pasture

3. If you re-use any bags or containers for harvest, storage or transport, what measures are in place to ensure the materials/containers will not compromise the integrity of the organic product?

   The re-use of any bag or container that has been in contact with a substance that may compromise the organic integrity of the product is prohibited unless it has been thoroughly cleaned. NOP 205.201(a)(5)

   ☑ No packaging material or containers are re-used.
   ☐ Cleaning  ☐ Residue testing  ☐ Documented employee training

   Other:  

   ☐ Yes  ☐ No, please explain:

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4. What measures are in place to **prevent commingling or contamination** of organic crops, products and packaging by non-organic crops/products or prohibited substances such as sanitation or pest control materials during transport? Check all that apply.

   - Organic goods are stored in permeable packaging, bulk tanks, bins, hoppers or other open containers while in transport, care must be taken to protect the integrity of the organic goods. **NOP 205.201(a)(5)**
   - [X] Segregated transport
   - [ ] Impermeable packaging
   - [ ] Do not provide transportation
   - [X] Inspecting transport units prior to loading
   - [X] Clear product identity
   - [X] Documented complete cleanout
   - [ ] Physical barriers
   - [X] Use of Clean Truck Affidavits
   - Other: Wash up tags from the plant are recorded and color coded. Organic milk is color coded and the numbers on the tags are recorded.

5. If crops are harvested from the buffer zones with equipment that is also used for harvesting organic crops, what safeguards do you use to protect organic crops from contact with buffer crops during harvest?

   - **Crops within the required buffer must not be sold as organic and may be left un-harvested or harvested, stored, or disposed of as non-organic crop, with records kept of crop disposition. Indicate buffer zones and show all adjoining land uses on your farm maps. NOP 205.202(c)**
   - [X] Not applicable, no crops grown in the buffer zones
   - Please explain:

6. What additional safeguards do you use to prevent accidental contamination? Check all that apply.

   - Accidental contamination may occur if others are unaware that your operation is organic. **NOP 205.201(a)(5)**
   - [ ] Posting signs
   - [ ] Drainage diversion
   - Written notification to:
     - [ ] Local governments
     - [ ] Utility companies
     - [X] Aerial spray companies/airports
     - [X] Adjoining neighbors
   - Other: ________________________________
7. If you are applying raw animal manure or compost that is not in compliance with the NOP requirements for composting, please complete the following questions.

Raw manure must be fully composted unless applied to land with crops not for human consumption or incorporated into the soil 120 days prior to harvest for crops whose edible portions has direct contact with the soil, or 90 days prior to harvest for all other crops for human consumption. NOP 205.203(c)(1)

☐ Not applicable, do not apply raw or partially composted animal manure (please go to Section D)

(a) What types of crops do you grow? Check all boxes that apply.
☒ Crops not used for human consumption
☐ Crops for human consumption whose edible portion has direct contact with the soil or soil particles
☐ Crops for human consumption whose edible portion does not have direct contact with the soil or soil particles

(b) Are your uncomposted manure handling practices in compliance with the 120 and/or 90 “days prior to harvest” soil incorporation requirements?
☐ Yes ☒ No, please explain:

We are not growing crops for human consumption.

8. Describe the buffer zones maintained to prevent contamination of organic pastures/crops from prohibited substances if adjoining land is not under organic management. Check all that apply.

Organic production areas must have distinct boundaries and buffer zones to prevent the unintended application of a prohibited substance, genetically modified organisms or contact with a prohibited substance that are applied to adjoining land not under organic management. Adjoining land includes crop land, pastures, residential property, fallow land, etc. Buffer areas may change annually, depending on contamination potential from adjoining land uses. The width of the minimum buffer is dependent on contamination risk. The buffer must be sufficient in size or other features (e.g. windbreaks, diversion ditches) to prevent the unintended contact by prohibited substances applied to adjacent land areas. NOP 205.202(c)

☒ Not Applicable, no need for buffer zones due to nature of adjoining land use
☐ Tree Line ☐ Buffer crop ☐ Native vegetation
☐ Diversion ditch ☐ Hedge Rows ☐ Cultivated barrier

Other: Adjacent land use is a feedlot, conventional farm, road and washes.
9. What are the major components of your soil and pasture/crop fertility plan? Check all that apply. Note, you must list each input material applied to organic fields on the Annual Input Record (AIR).

Pasture/crop nutrients and soil fertility must be managed through use of rotations, cover crops, and application of plant or animal materials, whether composted or uncomposted, as is applicable and appropriate for each operation. Please note that all synthetic materials on the National List 205.601 may only be used in accordance with annotations, where appropriate, and in such a manner that they must not contaminate crops, soil or water. If you use an approved synthetic material, you must provide evidence of how you address the materials’ annotation. NOP 205.203(b), 205.601

☐ Green manure/cover crops ☒ Pasture/grazing rotations ☐ Compost
☐ Tillage and cultivation practices ☐ Soil inoculants ☐ Inter-planting
☐ Incorporation of volunteer crops ☐ Soil amendments ☐ Fertilizers
☒ Non-factory farm manure ☐ Factory farm manure ☒ Crop rotations

Other:

10. How do you monitor the effectiveness of your fertility management program? Check all that apply.

The NOP specifically requires that soil quality be improved or maintained, and that any materials applied must not contribute to contamination of pastures, crops, soil or water by plant nutrients, pathogenic organisms, heavy metals or residues of prohibited substances. NOP 205.203(c), 205.205

☒ Soil testing ☐ Tissue testing ☒ Observation of soil ☒ Pasture quality testing
☒ Observation of pasture health ☒ Observation of crop health

Other:

11. Do you employ rotations (e.g. grazing rotations or crop rotations, as applicable)?

The NOP requires a rotation plan that maximizes soil organic matter content, prevents weed, pest, and disease problems, and manages deficient or excess plant nutrients. NOP 205.203(c), 205.205

☐ No, please explain:
☒ Yes, please provide an explanation of your rotation program:

We do intense rotational grazing.
12. Do you apply **composted manure** or other animal products to the organic land?

The composting process must include a C:N ratio of between 25:1 and 40:1 and maintenance of temperatures between 131°F and 170°F for a specific number of days plus turnings, depending on the method of composting. Compost production records to verify compliance need to be maintained. If you purchase compost, please maintain documentation from the vendor verifying compliance to the NOP. NOP 205.203 (c)(2)

☐ Yes  ☒ No

If yes, is your compost produced in accordance with the requirements of the NOP:

☐ Yes  ☐ No, please explain:

__________________________________________________________________________

13. What **soil erosion** problems do you experience (why and on which fields/lands)?  ☒ None

__________________________________________________________________________

14. What soil conservation practices are used?

*Organic production practices are meant to maintain or improve the natural resources of the operation, including soil and water quality. NOP 205.200, 205.203(a), 205.205(d)*

☒ Grazing management  ☐ Terraces  ☐ Retention ponds  ☐ Firebreaks
☐ Windbreaks        ☐ Tree lines  ☐ Conservation tillage  ☐ Permanent waterways
☐ Undersowing/Interplanting  ☐ Maintain wildlife habitat
☐ Riparian management

Other: ___________________________________________________________  

__________________________________________________________________________

15. What practices are used to protect water quality?

*Production practices implemented in accordance with this subpart must maintain or improve the natural resources of the operation, including soil and water quality. The producer must manage plant and animal materials to maintain or improve soil organic matter content in a manner that does not contribute to contamination of crops, soil, or water by plant nutrients, pathogenic organisms, heavy metals, or residues of prohibited substances. The use of yards, feeding pads, feedlots and laneways that shall be well-drained, kept in good condition (including frequent removal of wastes), and managed to prevent runoff of wastes and contaminated waters to adjoining or nearby surface water and across property boundaries. NOP 205.200, 205.203(c),205.239(a)(5), 205.239(b)(4), 205.239(e), 205.240(b)*

☒ Fencing livestock from waterways
☒ Minimize irrigation runoff

__________________________________________________________________________
- Minimize ponding by laser leveling/land forming
- Minimize runoff from compost/manure piles
- Maintenance of yards, feeding pads, laneways
- Grazing management to ensure no harm to soil or water quality

None/Other please explain:
16. Using the Matrix below, indicate your management practices for preventing pests, weeds and diseases.

Preventative management practices such as grazing management, crop rotations, nutrient management and use of non-synthetic materials should be used as a first resort to manage insects, diseases and weeds. Approved synthetic materials on the National List 205.601 may be used when management practices are insufficient to prevent or control problems. All weed, pest, and disease inputs must be approved. A "restricted" input has specific annotations for its use. If you use a "restricted" material, you must provide evidence of how you address the materials' annotation. Burning may not be used as a means to dispose of crop residues. However, it may be used to suppress diseases or stimulate seed germination.

NOP 205.206

Pest Management Matrix - Check (✓) which basic strategies you use for each category of pest.

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Used for which type of pests:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Rotations</td>
<td>Weeds</td>
<td>Insects &amp; invertebrates</td>
</tr>
<tr>
<td>Cover cropping</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strip cropping, interplanting or planting mixed species</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pasture nutrient management</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Crop nutrient management</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Sanitation, cleaning up debris, nesting areas, removal of disease</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Vectors, weed seed sources, etc</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Growing location</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Timing of planting</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Remove pest by hand (hoeing, pruning, picking)</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Mechanical cultivation (disc, harrow, rotary hoe, etc)</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Mowing or grazing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Irrigation method (drip, overhead, flood, etc)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mulching with biodegradable materials</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plastic or synthetic mulches (must be removed at end of production)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solarization</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant beneficial habitat areas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construct predator habitat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Release beneficial organisms</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construct barriers (fences, raised platforms, etc)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traps</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flame weeding</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Other physical or mechanical means</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Burning crop residues</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allowed substances (insecticides, fungicides, etc)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
17. Can you verify that new installations or replacement lumber in contact with soil, pasture/crops or livestock is not treated with prohibited materials? 

Wood treated with arsenate or other prohibited substance may not be used for new installations or replacement purposes where it comes into contact with soil, livestock or pasture. This does not apply to wood that is isolated from production, such as fence posts or buildings. NOP 205.206(f)

☑ Not Applicable
☐ Yes ☐ No, please explain:

H) Product Protection

1. What management practices and/or physical measures are in place to protect the herd and commodities from potential commingling of organic and non-organic, ingredients or products during production and handling activities? Check all that apply.

In operations producing or handling organic and non-organic goods, there may be several opportunities for accidental commingling to occur. Preventive measures will be verified at every step in your process from milk production to storage and final distribution. In addition to noting below the measures in place, you may also include a facility map to demonstrate barriers. 

NOP 205.201(a)(5), 205.272(a)

☑ Produce only organic milk
☐ Dedicated milk parlor/tanks
☐ Rinse/purge prior to organic runs
☐ Tagged lockouts
☐ Clearly identified organic designations
☐ Documented employee training

The organic dairy farm is a stand-alone facility.

2. What measures are in place to prevent commingling or contamination of organic milk by non-organic products or prohibited substances such as sanitation materials during transport? Check all that apply.

During transport, care must be taken to protect the integrity of the organic goods. NOP 205.201(a)(5), 205.272(a)

☑ Segregated transport
☑ Clear product identity
☑ Documented complete cleanout
☑ Documented employee training

Other: Tankers are cleaned to organic standards by Shamrock Foods Dairy Division.
I) Cleaning and Sanitation

1. What measures are in place to prevent contamination of milk products and food contact surfaces by sanitation materials and cleaners during handling activities? Check all that apply.

   When using sanitation materials in the milking facility, care must be taken to prevent contact with organic products. Preventive measures will be verified at every step in your process from receiving, through processing to storage and final distribution. NOP 205.201(a)(5), 205.272(a)

   - ☑️ No sanitation/cleaning materials used
   - ☑️ Residue testing of food contact surfaces
   - ☑️ Documented employee training
   - ☑️ Sanitation materials listed on 205.605
   - ☑️ Rinse prior to organic runs
   - ☑️ A documented system purge is done

   Other:

2. Please attach the QAI Addendum Materials List document for all cleaners and sanitizers used on surfaces, equipment or utensils which are not rinsed or purged prior to contact with organic products or containers (e.g. processing equipment, tanks, bins & other storage vessels, containers used for works-in-progress (WIP), etc.).

   Synthetic cleaners or sanitizers may not contact organic product unless they are on the NOP National List of allowed synthetics or approved as an FDA food contact substance or FDA indirect food additive for that specific use. NOP 205.201(a)(2), NOP 205.272(a)

   If you claim that cleaners or sanitizers used are food contact substances, as defined by the FDA, you must provide documentation to that effect. NOP Synthetic Substances Policy Statement 12/12/2002 www.ams.usda.gov/nop/NOP/PolicyStatements.htm

   - ☑️ Not applicable, all cleaners/sanitizers are rinsed or purged and residue tests are performed.
   - ☐ Attached, I have completed the QAI Addendum Materials List.
   - ☐ Not Attached, please explain:

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3. Which of the following details does your sanitation log include? Check all that apply.

A sanitation log is one method for demonstrating that sanitation procedures are consistently applied. Please identify the components of your sanitation log or describe the procedures used for ensuring sanitation is adequate and consistent. NOP 205.272(a)

- Schedule [ ] Materials used [ ] Procedures used
- Equipment cleaned/purged [ ] Residue Test verification [ ] Signature line
- Sanitation Log is not used, other documented procedures in place as described here:

J) Facility Pest Management

1. What measures are in place to prevent contamination of milk products and food contact surfaces by pest control materials during milk production and handling activities? Check all that apply.

When using pest control materials in the barn or milk parlor, care must be taken to prevent contact with organic products. Preventive measures will be verified at every step in your process from production to final distribution. NOP 205.201(a)(5), 205.272(a)

- No pest control materials used [ ] Rinse prior to organic runs
- Residue testing [ ] Documented employee training

Other:

2. Please indicate the preventative management practices in place to address pest control concerns at your facility. Check all that apply.

Preventive pest control measures are essential prior to the use of mechanical or chemical means. NOP 205.271(a)(1),(2),(3)

- No pest pressure [ ] Removal of pest habitat, food sources and breeding areas
- Barriers [ ] Good sanitation [ ] Monitoring
- Management of environmental factors (e.g. temperature, humidity, light)

Other:
3. Please indicate the **mechanical or physical pest controls** in place. Check all that apply.

   *If using lures and repellents, you must first attempt to use only non-synthetic materials or materials approved for handlers on the National List. NOP 205.271 (b)*

   - None  □ Traps  □ Light  □ Sound  □ Motion  □ Lures  □ Repellents
   
   Other: **Scraping areas of manure accumulation to keep the area dry and prevent breeding of flies.**

4. Please confirm that all of the non-synthetic substances and/or synthetic substances used inside or around the facility have been listed on the QAI Addendum Materials List.

   *Only after preventative management and mechanical and physical practices have proven ineffectual can you use these substances. Monitoring documentation must be maintained and might be verified sightings of pest loads, and/or records of the prior attempts with documented negative results of the non-chemical measures prior to the use of these materials. NOP 205.271(c)*

   □ Not applicable, no pest control materials are used.
   □ Attached, for all pesticides used inside the facility, I have attached copies of the labels or other supporting documentation to QAI for prior approval before using; and am maintaining documentation of times, locations, and rates of application for the inspector to verify at the time of the inspection.

**K) Water**

1. In which capacity do you use water? Check all that apply:

   *Water that comes in contact with an organic product must not contaminate the product with prohibited substances. NOP 205.272*

   - □ No water used
   - □ Irrigation for crops or pasture land
   - □ Foliar sprays
   - □ Cleaning Equipment
   - □ Hydration for herd
   - □ Rinsing crops in field
   
   Other:
2. Source of water used in fields/pasture:

☑ On-site well(s)  ☐ River/creek/pond  ☐ Spring
☐ Municipal/region  ☐ Irrigation district

Other: Lagoon water is mixed with well water for irrigation.

3. If you irrigate your pasture (or crops, if applicable), please answer the following questions:

The operator must protect against contamination from prohibited materials applied through the irrigation system. NOP 205.203(e)(1)

☐ Not applicable, do not irrigate pasture

(a) Are input products applied through the irrigation system?

☑ Yes  ☐ No
If yes, please include these inputs on your Annual Input Record

(b) Are products used to clean irrigation lines/nozzles or to lubricate irrigation equipment?

☐ Yes  ☒ No
If yes, please include these inputs on your Annual Input Record

(c) Is the system shared with a non-organic operator?

☐ Yes  ☒ No
If yes, and there is a potential that prohibited inputs are added to the irrigation water by another upstream operator, is the system flushed and documented between non-organic and organic use?

☐ N/A no inputs are applied through the irrigation system
☐ Yes  ☐ No, please explain how contamination is avoided:

4. Is water used for the milk parlor and other off-field activities derived from a municipal source?

When municipalities provide your water, the water quality is assumed to be compliant unless otherwise noted by the inspector. Operations using wells or other private water sources should be able to demonstrate that water does not present a contamination risk to organic products. NOP 205.272

☑ Yes  ☐ No

If NO, please indicate how water is monitored to ensure that it does not present a contamination risk to organic products:

☐ Water does not come into contact with milk products
☐ Water does not come into contact with crops to be sold
☑ Potable water is used, please list source: On-site well.
Other: State inspector tests water quality to ensure it meets drinking water standards.
5. Is water chemically treated in your operation?

You must have a system in place to monitor use of chemical treatments to verify they are in compliance with the NOP National List and the annotations. NOP 205.605

☐ Yes and I have attached the QAI Addendum Materials List. ☒ No
Other:

L.) Recordkeeping and Audit Trail

1. Which of the following records do you keep for organic production?

The appropriate personnel must be available during the inspection to grant access to all required documents (e.g. accounting, management, etc). QAI recognizes that great diversity exists among organic producers and that a wide variety of record keeping systems may demonstrate compliance with the regulation. In addition to verifying records on-site, sample copies of relevant records may be collected at the inspection to allow QAI to verify compliance with the regulation. NOP Rule requires that records disclose all activities and transactions of the operation, be maintained for 5 years, and demonstrate compliance with the NOP Rule. Organic products must be tracked back to the location where they were produced/harvested. NOP 205.103

☒ Field activity log(s)
☐ Field history sheets (previous three years) that show rotations and/or crops and plantings
☐ Documentation of previous land use for leased and/or newly purchased land
☒ Input records for soil amendments, seeds, manure, foliar sprays, and pest control products
☐ Documentation of attempts to source organic seeds and/or planting stock
☒ Equipment cleaning records
☒ Monitoring records (soil tests, tissue tests, water tests, quality tests, observations)
☒ Harvest records that show field numbers, date of harvest, and harvest amounts (including custom harvest records)
☒ Receipts for inputs used for crop production
☐ Documentation of organic seedlings
☒ Organic certification documents
☐ Storage records that show storage location, storage identification, field ID, amounts stored, and cleaning activities
☒ Shipping records (scale ticket, dump station ticket, bill of lading)
☐ Sales records (purchase order, contract, invoice, cash receipts, cash receipt journal, sales journal, etc.)

Other:
2. Please describe how your documents are linked together to form a complete audit trail from harvest through storage to sale.

   You must be able to account for quantities of all organic products produced, sold or disposed of and in storage. Your records must clearly link the production unit with the harvest, storage, shipping and sales of the organic crop. Some system for ensuring audit trail clarity, such as linking lot numbers from one document to the next, is necessary. NOP 205.103

Provide an example of your lot numbering or other system and describe or how it works (Example: Lot Number 5219032, where “5” signifies the year 2005, “219” is the Julian date of Harvest, “O” depicts that the product is Organic, and “32” is the field or bed from which the crop was harvested):

   All feed receipts and scale tickets are attached to invoices, posted to the ledger and recorded in the feed book. All hay stacks and silage bags are numbered. Inventory reconciliation is done on a monthly basis.

3. If contracting handling operations are used (e.g. storage, cleaning facilities, etc), do you maintain **current organic certification documentation** for each **contracted facility**?

   Producers that use the services of contract warehouses, packing facilities, storage or other handling facilities must make sure that those facilities are maintaining the organic integrity of the goods they handle. Any such facility should either be certified independently or approved under your certification. NOP 205.103

   □ Not applicable, no contracted facilities
   □ Yes □ No, please explain:

4. If you use contracted **storage facilities** that are not required to be certified do you maintain **affidavits** confirming the operator protects the **integrity of organic goods** in storage?

   Storage facilities that receive product in enclosed impermeable packages, and do not repackage or process the product further, are not required to be certified. However, the certified operator must ensure that the integrity of organic goods is maintained during storage at non-certified facilities. Measures must be in place that would prevent the integrity of the organic product from being compromised. NOP 205.101(b)

   □ Not applicable, no contracted facilities
   □ Yes □ No, please explain:

____________________________

____________________________

____________________________
5. Are the records pertaining to your operation maintained:
   - In a manner sufficient to preserve the identity of all organically managed livestock and all edible and non-edible organic livestock products produced on your operation;
   - On-site; Organized in a manner that can be fully audited; and Available for inspection during regular business hours?

   The appropriate personnel must be available during the inspection to grant access to the required documents (e.g. accounting, management, etc). QAI recognizes that great diversity exists among organic producers and that a wide variety of record keeping systems may demonstrate compliance with the regulation. In addition to verifying records on-site, sample copies of relevant records may be collected at the inspection to allow QAI to verify compliance with the regulation. NOP 205.103

   ☒ Yes  ☐ No, please explain:

6. Please describe the individual elements of your record keeping system established to comply with section 205.103 that
   - Tracks milk products by identity and volume from milking through distribution or sale;
   - Documents medical procedures performed, or medications used, on each animal;
   - Tracks certified feed produced or mixed on-site, or bought from a certified operation, including amounts provided to the herd;
   - Describes Total Feed Ration for each type and class of animal
   - Documents Dry Matter Demand and actual and average Dry Matter Intake for each type and class of Animal
   - Documents Outdoor access for each type and class of animal both during and outside the grazing season, and documentation of temporary confinement.
   - Documents replacement animals brought into the herd, including birth/death records, animal ID, sales receipts, and organic certificates (if applicable).

   Describe the types of documents used in your audit trail system. This audit trail system must fully disclose all activities pertaining to organic production and handling and will need to be available to the inspector during the on-site visit. Please attach additional page(s) to answer this question, as needed. NOP 205.201(a)(4), 205.103(b)(2), (b)(4)

   See section 1.7 for records maintained to meet the

   OCP

List of documents for different activities provided - see response at back of OCP [55 - 1/13/11]
7. Please indicate the **types of activities** for which you **maintain consistent documentation** allowing the auditing of organic goods throughout your title or possession.

Check all that apply.

*You must be able to account for quantities of all finished organic products sold, quantities of organic feed received and used in production. Some system for ensuring audit trail clarity, such as linking lot numbers from one document to the next, is necessary.*

**NOP 205.103**

- [x] Certification of organic feed
- [x] Feed purchase
- [x] Feed receipt
- [ ] Certification of organic replacement animals
- [x] Replacement animal purchase
- [x] Replacement animal receipt
- [x] Animal Sales
- [x] Pasture Access
- [x] Temporary Confinement Logs
- [x] Birth Records
- [x] Medical Records
- [x] Vaccination Schedule
- [x] Milk Production
- [x] Lot coding
- [x] Product sales
- [x] Shipping & distribution
- [x] Cleaning and sanitation
- [x] Pest control
- [x] Dry Matter Intake

Other (including records maintained for crop production, if applicable):

______________________________

8. Please indicate the types of activities for which you maintain **written policies and procedures**? Check all that apply.

**Documented procedures, also known as Standard Operating Procedures (SOPs), will be reviewed to determine if your practices that maintain and protect the integrity of organic products are being consistently applied. Documents may be written in any format applicable to your specific operation. NOP 205.103**

- [x] Total feed ration management (during and outside of grazing season)
- [x] Herd health protocols
- [x] Purchasing replacement animals
- [x] Livestock living conditions
- [x] Pasture management plan
- [x] Animal birth, death, and culling
- [x] Administering medication
- [x] Temporary confinement
- [x] Milk production
- [x] Receiving
- [x] Transportation
- [x] Sanitation
- [x] Pest control

Other (including policies and procedures for crop production, if applicable):

______________________________

9. Do you **maintain all organic records** for a minimum of **five years**?

*If your operation is less than five years old, you must have a plan in place to comply with this requirement.*

**NOP 205.103(b)(3)**

- [x] Yes
- [ ] No, please explain:

______________________________
10. Do you have a procedure for documenting and addressing complaints relating to compliance with organic standards?

   This is not a requirement of the NOP, however it is a requirement of ISO Guideline 65 and is relevant to other QAI standards and policies.

☑ Yes  ☐ No, please explain:

11. Do you have procedures in place for verifying that all suppliers of organic feed or replacement animals are currently certified by a USDA Accredited Certifier and to the National Organic Program?

   Certification agencies certify to multiple standards. Your certification documents for suppliers of NOP products, such as organic feed, must indicate that they were certified to the National Organic Program. Additionally, you will need to demonstrate how your procedures verify the certification is current. NOP 205.100 NOP 205.2-Certified Operation

☑ Yes  ☐ No, please explain:

☐ N/A no organic feed or replacement animals purchased.

M) Applicant Explanations Section – Use the space below to explain your responses as needed for clarity.

D.1. Holstein cows function well in this climate. During the hot summer months the animals are cooled with fans and misters to alleviate heat stress. All animals are outdoors 365 days per year and have access to shade and water at all times. Internal parasites have not been observed. External parasites, when observed, are treated with Pyganic 5.0. All corrals are scraped daily. Wet manure from the bedding and feeding areas is spread out to be sun dried at the back of the corral and used again for bedding when dry.

D.3. All animals are maintained in Saudi barns. A Saudi barn is a large open air pitched roof shade. The shades cover the feed bunks, stanchions, concrete standing pads, water troughs, and bedding areas. There are fans with misters on the outside edge of the shades used to alleviate heat stress in the summer. The shades cover only a portion of the entire corral. Each animal has access to a minimum of 80sq.ft. per head of shade and 500sq.ft. per head of exercise space. There are currently 3 Saudi shades. The organic farm has the capacity for 1500 animals. As of December 01, 2010 we have 758 animals housed in the three units, 578 milking cows, 78 dry cows, 100 heifers, and 2 breeding bulls.
INSPECTION WORK ORDER #9362
367184

This Organic Inspection Record and supporting documentation must be submitted to QAI by the inspector within 10 business days after the completion of the inspection.

Auditor name: John Joseph 858-792-3531 x148
CPM name: 
Work Order number: #9362
Name of Certified Entity: Shamrock Farms Co.
Facility Name: Same
Date assigned: February 15, 2011

To be completed by QAI:
Location (City, State): Stanfield, AZ

To be completed by auditor:
Location(s) visited by auditor: Stanfield, AZ
Preparation Time Total: 4.5 Hours Follow-up Time Total: 20 hrs
Time arrived: 8:30 AM/8:00 AM
Time departed: 8:30 PM/3:30 PM
Date(s) Audited: 3/17/11
Submitted: 3/21/11

Type of Compliance Plan:
(Producer, Processor, etc.) Dairy
Contact person: John Voss, 480-988-1452; john_voss@shamrockfoods.com
Cell Phone is 480-226-7122
Personnel (& titles) present:
Shamrock dairy is a vertically integrated company with a conventional and an organic dairy farm, processing facility (in Phoenix) and distribution network. The conventional dairy includes about 9,600 milk cows and the organic dairy includes about 600. The operation has been working towards implementing a grazing system for the organic herd, and have installed water lines and shade structures to accommodate the cows needs.

Similarly, it was noted that the operation has focused on improving forage production, which utilizes annual crops. The pasture season started 46 days late, on December 14th due to planting and irrigation delays. Also, the grazing season was interrupted due to a historic period of low temperatures (down to 16 degrees F) in December greatly impacted the state’s crop production. By this time of the year, the applicant stated that they normally would have already had 1 hay cutting but the new crop was just coming in at the time of inspection. The applicant provided pictures of the frost damage to the annual pasture mix of oats, vetch and beardless wheat that was damaged by the frost (see attached). These fields had recovered at the time of inspection and were providing good forage for the cattle. Up until the time of inspection, average DMI from pasture is below the 30% with about 58 days of access. With another 60 days of the grazing season, the challenge will be to have enough forage to exceed 30% pasture DMI so that on average the operation can be in...
CE Name: Shamrock Farms Co

compliance. The applicant is aware of the June 2011 deadline and preparing a strategy for coming into compliance for the next grazing season start in fall 2011. All facilities were visited.

Section 1: SPECIFIC INSTRUCTIONS

**Auditor:** Please address each specific instruction appearing below. If the item has been addressed in any of the sections below, please just indicate the relevant section and number where that issue is addressed. If completing form by hand, please use extra sheets if required.

<table>
<thead>
<tr>
<th>SPECIFIC INSTRUCTIONS</th>
<th>1. QAI contract to be verified by Auditor to be on file if plant being inspected is deemed the Corporate/Headquarters. (If CE BOX is checked above then it is the corporate location)</th>
<th>On file and verified.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Please verify stocking rates for livestock and include specific information in your inspection report.</td>
<td></td>
<td>See Dairy OCP Section E</td>
</tr>
<tr>
<td>3. Please ensure that the client has current NOP certificates and specification sheets for all purchased feed on file and return copies to QAI with your report.</td>
<td></td>
<td>See Dairy OCP Section C</td>
</tr>
<tr>
<td>4. Please comment on DMD and DMI calculations. Please comment on the client's ability to comply with the 30% DMD from pasture grazing requirement by 06/2011.</td>
<td></td>
<td>See Dairy OCP Section C</td>
</tr>
<tr>
<td>5. Please comment on the computerized feeding system. Specifically, please describe how this system calculates DMI and DMD, as well as how justified the calculations are.</td>
<td></td>
<td>See Dairy OCP Section C</td>
</tr>
<tr>
<td>6. Please comment on the Saudi style barns. Specifically please verify whether they enclosed and how they facilitate outdoor access. Please comment on the animals ability to move freely, engage in comfort behaviors, and exercise.</td>
<td></td>
<td>See Dairy OCP Section E</td>
</tr>
<tr>
<td>7. Please verify that buffer zones are not necessary to protect organic pasture from contamination.</td>
<td></td>
<td>See Dairy OCP Section F</td>
</tr>
<tr>
<td>8. Please verify that purges and / or residue tests are sufficient to verify the absence of sanitizers, specifically mandate Plus.</td>
<td></td>
<td>See 2010 RFI #3</td>
</tr>
<tr>
<td>9. Please verify at what level residual chlorine is present in effluent rinse water. Levels in the water must not exceed the maximum residual disinfectant limit allowed under the Safe Drinking Water Act.</td>
<td></td>
<td>See Dairy OCP Section I</td>
</tr>
<tr>
<td>10. Please note that due to directives received from the NOP, only verify pest control materials in use on or around the milking parlor.</td>
<td></td>
<td>OK, See Dairy OCP Section J</td>
</tr>
<tr>
<td>11. Please verify that the information provided on the Herd Pasture Profile is correct. Please</td>
<td></td>
<td>See Profile Section, Dairy Profiles, Dairy Herd Profile Form and Livestock Farm Profile Form.</td>
</tr>
<tr>
<td>CE Name: Shamrock Farms Co</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>12.</strong> Please verify that the information provided on the Individual Feed Ration(s) is correct. Please initial or check the Inspector Use Only Section on IFR(s) for each point verified. **** If the IFR’s are revised and/or new IFR’s submitted please provide a clean copy with the report for the client's file.</td>
<td>See Profile Section, Dairy Profiles IFR</td>
<td></td>
</tr>
<tr>
<td><strong>13.</strong> Please verify that the information provided on the Medical Input Profile(s) is correct. Please initial or check the Inspector Use Only Section on MIP(s) for each point verified. **** If the MIPs are revised and/or new MIPs submitted please provide a clean copy with the report for the client's file.</td>
<td>See Profile Section, Dairy Profiles MIP</td>
<td></td>
</tr>
<tr>
<td><strong>14.</strong> Please verify the information provided on the Annual Input Record is correct. Please initial or check the Inspector Use Only Section on Annual Input Record for each point verified.</td>
<td>See Profile Section, Crop Profile AIR</td>
<td></td>
</tr>
<tr>
<td><strong>15.</strong> Please review all seed purchase documents to verify organic status of the seeds. Perform an audit for seeds planted/ per acre against purchase invoices and seed tags to verify that enough seed was purchased to plant the numbers of acres.</td>
<td>See Crop OCP Section F, Seed audit</td>
<td></td>
</tr>
<tr>
<td><strong>16.</strong> If non-organic seeds have been used, please submit documents with your inspection report verifying that Non-GMO, Non-Treated seeds have been used.</td>
<td>See Crop OCP Section F</td>
<td></td>
</tr>
<tr>
<td><strong>17.</strong> If non-organic seeds have been used, please verify that the producer has the Commercial Availability Worksheet retained in the audit trail records, and that there is clear documentation from suppliers of known organic seeds in the types and varieties grown by the producer verifying that organic seeds were not available. Include documentation that the producer is performing trials with organic seeds, if applicable, and include the producer’s future plans to plant only organic seeds.</td>
<td>See Crop OCP Section F</td>
<td></td>
</tr>
<tr>
<td><strong>18.</strong> Please verify that this is an optimal time of year to inspect this client. If not, please identify what time of the year would be best and why.</td>
<td>This is an optimal time for the inspection, but in order to verify compliance to the pasture rule, it may be necessary to in the future require an in season inspection and an end of season inspection.</td>
<td></td>
</tr>
<tr>
<td><strong>19.</strong> Please verify information on the certificate and Organic System Plan Summary (OSPS) is correct. If applicable please note any changes. Both you and the applicant must sign and date.</td>
<td>Both verified signed and dated. Acreage figures were adjusted slightly per the LIFP.</td>
<td></td>
</tr>
<tr>
<td><strong>20.</strong> Please provide the total number of pasture acres provided and please provide the total number of animals that have access to that (those) pasture(s); if access to pasture is restricted at any time, please provide details regarding the applicant’s justification for temporary confinement</td>
<td>See Dairy OCP Section E</td>
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</tr>
<tr>
<td>21.</td>
<td>Please conduct a complete audit of origin of livestock for all dairy livestock, as follows: a) If the dairy began operating as a 100% organic feed transitional dairy, please include with your inspection report a copy of the audit to verify that the all dairy replacement animals have completed a full one year of transitioning prior to selling, labeling, or otherwise representing the milk as ‘organic’. b) If the dairy began operation under the former &quot;80-20&quot; feed exemption rule, please include a copy of the audit to verify that all replacement animals were from animals raised as organic from last 3rd of gestation. c) If the dairy began operating as an organic dairy after June 9, 2007, please include a copy of the audit which verifies that all replacement animals have been transitioned for one year prior to selling, labeling, or otherwise representing the milk as ‘organic’.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>See Dairy OCP Section A</td>
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</tr>
<tr>
<td>22.</td>
<td>Please conduct a complete audit of milk records to verify that there is enough organic animals in production to justify the sale of the organic milk using a statistically accurate method for determining days of production. Please include the audit results with your inspection report.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>See Dairy OCP Section</td>
<td></td>
</tr>
<tr>
<td>23.</td>
<td>If any form or documentation is updated during your inspection, please include both your initials and the client’s initials on the updated document. This process will allow QAI to update the documents on file at QAI. Please inform the client that initial changes will be made to their Organic Plan on file at QAI for them. If the client would rather update their own documents, please include updates with your inspection report.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OK</td>
<td></td>
</tr>
<tr>
<td>24.</td>
<td>Please conduct a trace-back audit using the attached Sample Audit Worksheets. Return all calculations with your report.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>See Dairy OCP Section B, origin of livestock, and C, livestock feed audit and L for the milk traceback and balance.</td>
<td></td>
</tr>
<tr>
<td>25.</td>
<td>Please conduct an input / output balance using the attached Sample Audit Worksheets. Return all calculations with your report.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>See dairy OCP section C</td>
<td></td>
</tr>
<tr>
<td>26.</td>
<td>Please verify that a complaint log is in place which has documented any incoming complaints regarding organic compliance, actions taken to correct any deficiencies with products or services of the relevant standard and that all complaints have been resolved.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>P. 32 of the Dairy OSP indicates that a procedure is in place. The applicant had a copy of the correspondence related to their only complaint in October of 2008.</td>
<td></td>
</tr>
<tr>
<td>27.</td>
<td>As it is sometimes difficult to communicate a discrepancy or observation in written form, it may be helpful or necessary to photograph an area, or areas, of an operation for sight review at QAI. If the client will not allow you to take photographs, please make a note of this in your report, providing the client’s explanation or reasoning for lack of permission. If pictures are not allowed, please do your best to fully explain</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pictures are attached.</td>
<td></td>
</tr>
</tbody>
</table>
CE Name: Shamrock Farms Co

| the discrepancy or observation without a picture, and why you felt a picture would best assist QAI in the review.” |
| 28. Please provide photographs of pasture areas including animals, barns, etc. with descriptions of each photograph including the location of the photograph. |
| Pictures are attached. |

Section 2: PREVIOUS NON-COMPLIANCES

**Auditor:** Please address each previous noncompliance below and verify whether or not they have been mitigated. Please also include a description of the practices and documentation you observed in verifying their compliance. If the item has been addressed in another section above or below, please just indicate the relevant section and number where that issue was addressed. If completing form by hand, please use extra sheets if required.

**NON-COMPLIANCE ISSUES**

**Prior to Adding Fields**

1. Please be advised that Individual Field Profiles (IFPs) for each field or farm parcel must accurately represent the crops produced under organic management. The following discrepancies were noted with the IFPs for Red River fields 1 and 2: a. A very thin planting of alfalfa was noted during the recent inspection, but section L of the IFP did not include alfalfa. b. It was noted that the crop rotation should be fallow in 2010 with annual pasture planned for 2011, but this was not noted in section N of the IFP. Please submit to QAI for review updated IFPs, which include all crops, pasture, and crop rotations for all fields under organic management. Alternatively, you may confirm in writing that the specific changes can be made by QAI staff as appropriate.  

7 CFR 205.201(a)(2)  

**Request for More Information**

2. Please note that the following crops are listed on the Producer Organic System Plan Summary (OSPS), but are not listed on any of the current Individual Field profiles (IFPs): a. Hay b. Silage It was noted that Hay may be Sudan Grass Hay and that Silage may be Sorghum Silage and so these would be duplicate listings. Please verify in writing how these products are to be listed on the Producer Organic System Plan Summary.  

7 CFR Part 205.201(a)(2)  

3. Please be advised that sanitizers used on food contact surfaces or utensils prior to the handling of organic product must be LFPs are discussed below and are consistent with the operation’s scope.

| The applicant confirmed that the listing is accurate. |

<p>| This is discussed below in the Dairy Organic Compliance Plan section 1. |</p>
<table>
<thead>
<tr>
<th>List Item</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>listed on the National List of Allowed and Prohibited Substances, 7 CFR Part 205.605.</strong> Alternatively, an intervening event (rinse, purge, complete drainage/drying of equipment) must be employed between the sanitizing step and organic handling to ensure no sanitizer residues are present on surfaces that contact organic product. Mandate Plus, which contains the active ingredients, phosphoric acid, octanoic acid and decanoic acid, is used without a rinse on food contact surfaces prior to the handling of organic milk. While this sanitizer has been allowed in the past, there is concern that there may be residues of octanoic and/or decanoic acid on milk handling equipment and that they may contact the organic milk. It was noted in an email from Shamrock Farms dated May 26, 2010 that SSOPs, which include rinse and purge, are currently in place. Please provide to QAI for review a copy of SSOPs that document the measures in place to protect organic milk from contamination by the decanoic and octanoic acids in the Mandate Plus sanitizer (such as an appropriate rinse, drain, residue test or purge).</td>
<td></td>
</tr>
<tr>
<td><strong>7 CFR Part 205.272(a)</strong></td>
<td></td>
</tr>
<tr>
<td>4. Please be advised that your organic compliance plan must accurately describe the practices and materials used in your facility. It was noted that an Addendum Materials List was not completed to supplement the Dairy Organic Compliance Plan. Please submit an updated AML, which includes all cleaners and sanitizers. Alternatively, you may confirm in writing that the specific changes can be made by QAI staff as appropriate. Please include an MSDS or specification sheet for each material used.</td>
<td></td>
</tr>
<tr>
<td><strong>7 CFR Part 205.201</strong></td>
<td>The AML provided this year accurately lists materials used in the milking operation.</td>
</tr>
<tr>
<td>5. Please forward to QAI written confirmation from aerial applicators that they have been advised, in writing, that Shamrock Farms is an organic operation.</td>
<td></td>
</tr>
<tr>
<td><strong>7 CFR Part 205.201(a)(5)</strong></td>
<td>The letter was verified at the time of inspection as well.</td>
</tr>
<tr>
<td>6. An audit trail must be in place to ensure that all activities and transactions are disclosed in sufficient detail as to be readily understood and audited. During your inspection, the following record keeping deficiencies were noted: a. Barley: 380, 50-lb bags of Barley Nebula were purchased from Helena Chemical Co.; 179 acres of</td>
<td>See seed audit below.</td>
</tr>
</tbody>
</table>
Red River fields RR 4, 5 and 6 were planted with barley seed at rate of 130 lbs per acre. i. 179 acres x 130 lbs per acre = 23,270 lbs required - 19,000 lbs purchased = 4,270 lb discrepancy. Please explain this discrepancy. ii. The planting dates were not noted in the field records. b. Oats: 360, 50-lb bags of Oat Cayuse from Helena Chemical Co. i. The oat seed was used to plant field Beryl 320 in February 2010, but the exact planting date was not recorded. ii. An invoice from Hart Brothers custom operator confirms the number of acres planted, but this was not documented by Shamrock. c. Sudan Grass: 24,000-lb purchased from Tee Pee Seed Co. i. The date of purchase and receipt was not recorded. ii. 65 acres of Red River field 4 was planted in early May 2010, but the exact date was not recorded. d. Clean Down Affidavits: It was noted that Clean Down Affidavits are completed for equipment prior to usage by a contracted operator on the Shamrock Organic Farm. However, the Clean Down Affidavit from T & K for the movement of manure to fields was not completed on two separate occasions. If Clean Down Affidavits are not required for the movement of manure, there should be some documentation on file to account for this field activity. e. Field Activity Log: Specific operational records for crop production activities are not recorded and maintained. Please establish and maintain a field activity log, which documents: - planting, inputs, weeding, harvesting, etc. - dates and types of field activities - the name of the operator doing the specific field activity and whether they are employees or custom. Once complete, please send a sample of the field activity log to QAI for review. In addition, please notify QAI in writing, of how you intend to improve your record keeping system so that it meets the USDA NOP standards.

7 CFR Part 205.103(b)(2), 205.201(a)(1-3)

7. Please send to QAI copies of current organic certification documentation for: a. Organic Pasture Seed Mix from Lockwood Seed b. Sudan Grass from Saddleshorn Ranches Please verify in writing that you will not use any seed or feed ingredient as organic unless you have proof of organic certification issued by a USDA-Accredited certification agent on file.

7 CFR Part 205.103(b)(4) See seed audit below.
8. Please be advised that the Herd Pasture Profile should represent your entire organic herd, including milking cows, young stock, and dry cows. Please clarify the following discrepancies noted with HPP on file: a. The inspector noted 742 organic animals, but the HPP accounts for 722 animals, specifically: i. Dry Cows: the inspector notes 66, but the HPP notes 22. ii. Milking Cows: the inspector notes 626, but the HPP notes 658. iii. The inspector notes 6 springing heifers and 2 bulls, which are not noted on the HPP. b. The inspector noted 273 acres available for pasture: i. Section C of the HPP notes that 334 acres are available for pasture. ii. The Acreage of Pasture Fields Provided column of the HPP accounts for 285 acres. While it is understood that there will some natural small variation in the various sub-populations of cows and the amount of available pasture on a given day, if the totals observed on the day of the inspection represent a shift in your target numbers, please submit to QAI an updated HPP, which includes all of the fields and the revised number of organic animals seeking certification. Alternatively, you may confirm in writing that the specific changes can be made by QAI staff as appropriate.

7 CFR 205.201(a)(2), 205.201(a)(6)

<table>
<thead>
<tr>
<th>Prior to Annual Monitoring Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>9. Please be advised that your organic compliance plan must accurately describe the practices and materials used in your facility. The response to section D7 of the Dairy Organic Compliance Plan indicates Not applicable, parasiticides are not administered. However, 5.0 is listed on the Medical Input Profile as an external parasiticide. Please submit the updated page of the Organic Compliance Plan and Addendum as referenced above. Alternatively, you may confirm in writing that the specific changes can be made by QAI staff as appropriate.</td>
</tr>
</tbody>
</table>

7 CFR Part 205.201

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The HPP has been replaced by new forms. Animal numbers are provided in that and accurately describe the number of animals on site as of the day of inspection.</td>
<td></td>
</tr>
</tbody>
</table>

| This section of the plan was amended as requested, per review of the plan during inspection. See below |

<table>
<thead>
<tr>
<th>The MIP is discussed below in the profile section of the report.</th>
</tr>
</thead>
</table>

| 7 CFR 205.201(a)(2) | 205.201(a)(6) |

| 10. Please be advised that the Medical Input Profile (MIP) should provide an overview of the medical inputs used, or intended to be used, to manage health concerns. The following discrepancies were noted with the MIP on file: a. Electrolyte 7 is noted as a current input and a specification sheet is on file, but is not listed on the 2010 MIP. b. Calcium Gluconate is noted as a current |

| | |
CE Name: Shamrock Farms Co

input and a specification sheet is on file, but is not listed on the 2010 MIP. c. Mineral Oil is only to be used as lubricant, but the reason for use noted on the 2010 MIP is calving issues. Please submit to QAI for review updated MIP, which includes all Medical inputs that are currently, or intended to be, administered to livestock. Please be sure to specify the accurate reason for use. Alternatively, you may confirm in writing that the specific changes can be made by QAI staff as appropriate.

7 CFR 205.201(a)(2), 205.201(a)(6)


7 CFR Part 205.201(a)(2), 205.301, 205.605, 205.606

Customer Service Advisement

12. Please provide your written procedure for documenting and addressing customer complaints relating to compliance with organic standards.

ISO Guide 65 15(a)(b)(c)

See SI section above.

13. Please be advised that, on 2/17/10, several sections of the NOP were modified and published. These changes directly affect all certified organic livestock operations. The revised Regulation is effective 6/17/10. Currently certified livestock operations must comply with this new Regulation by 6/17/2011. QAI is working with the NOP to develop workable calculation worksheets and is also developing new Organic Compliance Plans and Profiles which will be sent out to certified organic livestock operations in the very near future. QAI will work with Shamrock Farms to ensure that you understand the new requirements and the new forms. Please contact your CPM if you have any questions or concerns. Please note that land used for pasture must be managed under the organic crop requirements of the NOP.

7 CFR 205.2, 205.237, 205.239

This aspect has been a central focus of the inspection.

Section 3: ORGANIC SYSTEM PLAN

Auditor: Please indicate any discrepancies or relevant inspector observations pertinent to the Application, OCP(s) and Product Profile(s) by listing a reference number from the question then your description. If completing form by hand, please use extra sheets if required.

A: Application

<table>
<thead>
<tr>
<th>Ref #</th>
<th>Description of Discrepancy/Relevant Observation</th>
</tr>
</thead>
</table>

AESOP 10637; ISSUE 2; STATUS-PUBLISHED; EFFECTIVE 21 OCT 2010; AUTHORITY JACLYN BOWEN
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<table>
<thead>
<tr>
<th>B1: Product Additions</th>
<th>No changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>B2 &amp; 3 Field Number / Acreage Changes</td>
<td>No changes</td>
</tr>
</tbody>
</table>

B: Compliance Plan

<table>
<thead>
<tr>
<th>Ref #</th>
<th>Description of Discrepancy / Relevant Observation</th>
</tr>
</thead>
</table>

Producer Compliance Plan

A.) Overview

| 4 | All of the crops grown on the farm are for the dairy organic dairy herd, whether it is forage for pasture or in some cases, it may be harvested as a crop. The applicant stated that it can be more cost effective for them to grow their own silage than purchase it depending on the market price and freight. |
| 5 | The applicant provided a log that documented the reviews of the OSP. |

B.) Product Protection

| 8 | Fences are either metallic or plastic, no wood. |

C.) Soil Fertility and Crop Nutrient Management

| 1 | Soils on the Beryl piece are poor but improvements have been noted from past inspections. The applicant has started using legumes in the pasture mix and intensive grazing should also help contribute to further improvements. |
| 4 | The poultry compost has not been used since the OCP was first filled out. They rely on their own manure at this time. Invoices for the Jenner 8 humic acid were tallied up and confirmed that a total of 2300 gallons were purchased. The applicant stated that this was applied in April and September 2010, to the Beryl field (120 ac) so the rate of application came out at 19.16 gal/ac. The AIR lists 5gal/ac. We went to look at the bulk tank of the material and confirmed that it was empty. The applicant confirmed that the material was only applied to the Beryl field so the AIR was not correct. The applicant updated the AIR inspector copy to show 20 gal/ac. |

D.) Natural Resources and Water Quality

| General | The farm is located in an arid region that supports agricultural enterprises via the available irrigation. Natural habitat is very limited in the desert. Surrounding operations consist of confined livestock producers, cotton and some grains/forages. |

E.) Crop Pest, Weed and Disease Prevention

| 1 | The main weeds in the pasture fields included mallow and mustards. These are not controlled in any way other than pre planting cultivation, deep tillage and grazing. |
F. Record Keeping and Audit Trail

Non organic untreated Tee Pee variety Sudan grass seed was found in storage, purchased a couple of years back. The applicant stated he may use it this year and we discussed the need to do a commercial availability search prior to doing so. Organic hybrid Sorghum seed was seen on site.

<table>
<thead>
<tr>
<th>SI 16 Non GMO &amp; Commercial Availability Organic Certificates Treatments &amp; Inoculants</th>
<th>The Pasture mix seed planted in 2010 was audited:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Acres Planted</td>
</tr>
<tr>
<td></td>
<td>Seed mix</td>
</tr>
<tr>
<td></td>
<td>Seed rate</td>
</tr>
<tr>
<td></td>
<td>Rate in AIR</td>
</tr>
</tbody>
</table>

SI 15: Seed Audit

The seed receipts from Lockwood were on file and confirmed the organic status of the pasture mix used.

Dairy Compliance Plan

A.) Overview

<table>
<thead>
<tr>
<th>1</th>
<th>LFP dated 1/10/2011 is on file and verified. See notes below.</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>The OSP includes an accurate map of the Beryl piece with regards to the location of permanent fencing. The maps for the Red River pieces also include the main fences though there are few as the operation relies on electric fencing.</td>
</tr>
</tbody>
</table>

B.) Origin of Livestock

The following animal numbers were recorded during the field visit and were used to randomly verify origin of livestock and transition data in the DHI plus recordkeeping system. The table includes the date when a heifer was brought into organic management and when it had its first calf and the days it was under organic management prior to providing milk. The location listed on the last column is where the animal started the transition, either from AZ or from the organic certified dairy in Oregon:

<table>
<thead>
<tr>
<th>Animal #</th>
<th>Pen</th>
<th>OG Mgmt</th>
<th>1st Calf</th>
<th>Days</th>
<th>Loc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1643</td>
<td>3</td>
<td>2/2/09</td>
<td>6/3/10</td>
<td>486</td>
<td>AZ</td>
</tr>
<tr>
<td>Y465</td>
<td>4</td>
<td>9/21/07</td>
<td>1/27/09</td>
<td>494</td>
<td>AZ</td>
</tr>
<tr>
<td>T158</td>
<td>4</td>
<td>7/18/06</td>
<td>10/2/07</td>
<td>441</td>
<td>OR</td>
</tr>
<tr>
<td>U765</td>
<td>4</td>
<td>11/20/06</td>
<td>12/14/07</td>
<td>389</td>
<td>OR</td>
</tr>
<tr>
<td>R991</td>
<td>4</td>
<td>7/18/06</td>
<td>12/14/07</td>
<td>514</td>
<td>OR</td>
</tr>
<tr>
<td>T999</td>
<td>4</td>
<td>9/1/06</td>
<td>12/18/07</td>
<td>473</td>
<td>OR</td>
</tr>
<tr>
<td>7231</td>
<td>4</td>
<td>1/5/10</td>
<td>3/4/11</td>
<td>423</td>
<td>AZ</td>
</tr>
<tr>
<td>2122</td>
<td>8</td>
<td>6/19/08</td>
<td>9/21/09</td>
<td>459</td>
<td>AZ</td>
</tr>
<tr>
<td>T726</td>
<td>8</td>
<td>9/1/06</td>
<td>10/2/07</td>
<td>396</td>
<td>OR</td>
</tr>
<tr>
<td>T508</td>
<td>9</td>
<td>9/1/06</td>
<td>9/22/07</td>
<td>386</td>
<td>OR</td>
</tr>
</tbody>
</table>
CE Name: Shamrock Farms Co

<table>
<thead>
<tr>
<th>Cow</th>
<th>Date In</th>
<th>Date Out</th>
<th>Test</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>7195</td>
<td>9</td>
<td>1/5/10</td>
<td>2/25/11</td>
<td>416</td>
</tr>
<tr>
<td>U653</td>
<td>7</td>
<td>11/20/06</td>
<td>1/19/08</td>
<td>425</td>
</tr>
<tr>
<td>4470</td>
<td>2</td>
<td>2/2/09</td>
<td>4/16/10</td>
<td>438</td>
</tr>
<tr>
<td>R568</td>
<td>2</td>
<td>6/9/06</td>
<td>5/24/07</td>
<td>349</td>
</tr>
<tr>
<td>B422</td>
<td>2</td>
<td>12/16/10</td>
<td>open heifer</td>
<td>NA</td>
</tr>
</tbody>
</table>

Note that cow R568 shows less than 365 days prior to her first lactation on 5/25/07. The applicant provided a copy of the first load ticket that was delivered to the processing plant and it shows that they started shipping milk on 6/11/2007. This means that the milk from this particular fresh cow was bucketed and fed to calves, it was stated.

The applicant provided a document titled “Shamrock Farms Organic Animal Birth, Death and Culling” and a document titled “Shamrock Farms Replacements”

Previously, the organic calves were tagged with a Z but now they are tagged with a W and digits. During the inspection, no Z or W tagged animals were noted in the organic herd.

C.) Livestock Feed

The feed mixing equipment was seen on site and verbally confirmed that it is dedicated to the organic operation. A pull behind box and tractor were added to the operation approximately 6 months ago and is now primarily used for the feed mixing and delivery. The truck is a backup.

A document was provided during the inspection, titled “Shamrock Farms Organic – Total Feed Ration Management”. This describes the processes utilized to manage and track feed on the operation. Below is an analysis of these processes in more detail.

DHIA records were verified and showed average production right around 52 pounds/Holstein cow for the past 4 months and a butterfat percent of 3.25. The operation milks 2x/day. (See milk audit below in section L)

DMD: The OSP does not include details on how the DMD and DMI are determined/calculated as required in 205.237 (d)(4). The applicant provided a statement from the nutritionist along with a description of the Spartan computer software used.

The applicant stated that a nutritionist retained by the company determines the DMD from the “Spartan” computer software developed by Michigan State University from the NRC method. The formulations are specific to the following cow groups:

- High Producing Cows
- Low Producing Cows
- Far Off Dry cows
- Heifers (Open and bred are averaged)

The rations provided are calculated with consideration of pasture DMI and several formulations are devised to accommodate the availability of forage, from no pasture, to 15% pasture and finally 30% pasture. The formulations assign a dry matter content to ingredients such as water and mineral, in order for them to show up in the formulation. The inclusion of these does not significantly impact the result of the formulation. New rations are created each time there is a change in the available ingredients. Specifically,
early in the grazing season they were using canola meal, then switched to dry roasted beans and cotton seed in early summer. For the current Far Off Dry Cow, no pasture ration where the applicant changed per nutritionist recommendations the 4 pounds of alfalfa/head to 2 pounds of alfalfa and 2 pounds of Sudan hay per head to address milk fever problems.

An MS Excel workbook was created during the last pasture season and was finalized as of the inspection and updated to include data from the start of the pasture season on December 14th. It is used to track pasture DMI based off of the actual amount fed and the DMD from the nutritionist’s rations. The workbook is built for each pen from data on the daily feed sheets that list all of the pens and numbers of cows/pen, generated from the Feedwatch program on the mix truck. The pen summaries for the month for each pen are tallied on the spreadsheets.

Based on the above spreadsheet, actual pasture DMI for the days that the animals were actually on pasture this year were as follows:

<table>
<thead>
<tr>
<th></th>
<th>Dec</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Days</td>
<td>%</td>
<td>Days</td>
<td>%</td>
</tr>
<tr>
<td>High Cows</td>
<td>17</td>
<td>26</td>
<td>14</td>
<td>31</td>
</tr>
<tr>
<td>Low Cows</td>
<td>17</td>
<td>31</td>
<td>14</td>
<td>31</td>
</tr>
<tr>
<td>Dry cows</td>
<td>14</td>
<td>31</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Heifers</td>
<td>18</td>
<td>31</td>
<td>31</td>
<td>53</td>
</tr>
</tbody>
</table>

Pastures are now providing up to 2T/acre based on tests and plans are to shift to the 30% pasture ration from here on out.

The rest of the season: Two more months of grazing will help them get close or slightly above the 120 day minimum. As long as pastures recover sufficiently between grazing, there should be enough biomass to meet the herd’s needs.

Animals were kept off of pasture from November 1st to December 14th because of fieldwork and the timing of irrigations. The calendar field log pages of which are attached from mid September to December. This shows that by the time Beryl and the RR fields were planted and irrigated, they had barely 1 month to grow in order to meet the target date of November 1st to turn cows out. The applicant stated that realistically, to hit this target, it would be necessary to start field operations and planting sooner to capture the longer days and have at least 10” of forage to graze. In order to hit the 30% minimum he also stated that the forage should be about 18” tall.

Plans for coming into compliance:
Based on the DHP and as confirmed during the inspection, the operation has reduced the number of animals to match these to the available pasture. The herd size is now stable.
The upcoming grazing season may be extended in the fall by planting forages in late summer that can tolerate the heat and be grazed in the fall.
The LFP defines the grazing season as 137 days. The applicant is re-evaluating this and may shorten or redefine the grazing season based on when crops are available. The need to update the OSP to reflect any changes in that regard was discussed.
Request from the Nutritionist rations higher than 30% DM from pasture.
See the feed audit below for the validation of the above-mentioned spreadsheet to feed rations and availability of corn.

Whole corn for the month of February was audited. The company maintains running inventories of all commodities handled. Corn can be difficult because it is received whole, ground on site (dedicated grinder) and placed in piles, which are difficult to inventory. Therefore, inventories are reconciled and adjusted when there is no corn left. The amount used is generated from the Feed watch computer system for each of the rations and used to obtain the ending inventory. This explains why in the table below, the amount available exactly matches the used amount:

<table>
<thead>
<tr>
<th>Date</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/1/2011 BI</td>
<td>459,455.00</td>
</tr>
<tr>
<td>2/28/2011 EI</td>
<td>573,186.00</td>
</tr>
<tr>
<td>Purchase</td>
<td>382,020.00</td>
</tr>
<tr>
<td>Available</td>
<td>268,289.00</td>
</tr>
<tr>
<td>Usage</td>
<td>268,289.00</td>
</tr>
</tbody>
</table>

Purchase documentation for the corn confirmed that the vendors are consistent with those on the approved list, that the corn was organic and that the quantity in the calculation was correct. Note that the quantity used in the calculations is the quantity that the vendor bills on based on their weight tickets. In both instances, the weights on the Shamrock Farms tickets were different than the ones on the vendor’s tickets. If one were to use the Shamrock weight tickets, the total purchased would be 10,940 pounds higher than what is recorded.

Based on an average of 88% dry matter in the whole corn or 236,094 pounds, the above usage was validated using the feed rations and amounts fed during the month of February. This was accomplished using the daily total dry matter intake for each pen from the Pasture Dry Matter workbook described above. Several of the groups were fed a “no pasture” ration while others got a 15% pasture ration. Taking this number and multiplying by the average number of head fed during that time generated the total amount of DM fed for the whole month. The % of dry matter from corn was determined based on the specific rations provided to each pen.

<table>
<thead>
<tr>
<th>Pen</th>
<th>14 - H</th>
<th>5 - H</th>
<th>3 - CU</th>
<th>2 - D</th>
<th>7 - L</th>
<th>8 - H</th>
<th>9 - H</th>
<th>4 - Fr</th>
<th>Total #</th>
</tr>
</thead>
<tbody>
<tr>
<td>TMR NP</td>
<td>365</td>
<td>653</td>
<td>749</td>
<td>771</td>
<td>805</td>
<td>902</td>
<td>926</td>
<td>1,265</td>
<td></td>
</tr>
<tr>
<td>Corn % DM</td>
<td>0.08</td>
<td>0.08</td>
<td>0.26</td>
<td>0.07</td>
<td>0.26</td>
<td>0.30</td>
<td>0.30</td>
<td>0.30</td>
<td></td>
</tr>
<tr>
<td>#/head</td>
<td>27.63</td>
<td>52.26</td>
<td>196.11</td>
<td>56.61</td>
<td>210.94</td>
<td>270.96</td>
<td>278.01</td>
<td>379.80</td>
<td></td>
</tr>
<tr>
<td>Head</td>
<td>115.00</td>
<td>64.00</td>
<td>49.00</td>
<td>67.00</td>
<td>95</td>
<td>216.00</td>
<td>190.00</td>
<td>35.00</td>
<td></td>
</tr>
<tr>
<td>3,177</td>
<td>3,344</td>
<td>9,609</td>
<td>3,793</td>
<td>20,039</td>
<td>58,527</td>
<td>52,822</td>
<td>13,292</td>
<td>164,606</td>
<td></td>
</tr>
<tr>
<td>TMR 15%</td>
<td></td>
<td>423.54</td>
<td>521.67</td>
<td>522.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corn% DM</td>
<td></td>
<td>0.25</td>
<td>0.31</td>
<td>0.31</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#/head</td>
<td></td>
<td>106.95</td>
<td>160.37</td>
<td>160.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Head</td>
<td></td>
<td>110.00</td>
<td>212.00</td>
<td>185.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11,764</td>
<td>33,999</td>
<td>29,729</td>
<td>75,493</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tot</td>
<td></td>
<td>240,099</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### SI 3 - Feed Certificates and Specification Sheets

The above calculation validates the amount of corn used, as well as the pasture DM tables used to track the amount of feed derived from pasture and fed. The numbers are not exact because the actual amount of dry matter in the corn could vary, etc.

Certificates were provided in the inspection file and were all current. The IFR list provided in the inspection package was out dated so a more recent one, approved by the CPM was provided and is attached. Certificates for Grain Millers and Saddlehorn Ranches are attached because they were not provided in the inspection package.

Milk cow mineral is provided by Modesto Milling, a certificate for which was included in the inspection package.

The applicant provided a document titled “Shamrock Farms Organic Receiving” which describes the process of receiving organic commodities and the records generated from this process. The generation of these records was confirmed during the verification of the receiving records for the corn during the audit.

### D.) Health Care

1

The applicant provided a document titled “Shamrock Farms Organic Administration of Medications Protocol”. During the inspection, we met with the herdsman and visual verification of medicines on hand at the organic barn confirmed that these procedures are carried out as described.

4

No docked tails or other alterations were noted in the herd.

The applicant provided a document titled “Shamrock Farms Organic Herd Health Protocols” which describes the typical ailments experienced by the herd and their treatments. The ailments listed are consistent with those mentioned by the applicant during the interview and noted during the inspection of the hospital/fresh cow pen (mastitis and foot problems). It was noted that the treatments listed are consistent with those included on the MIP and found on site.

Health treatments are chronologically documented in a 3 ring binder and include the use of oxytocin, vaccines and milk fever treatments (calcium gluconate). Because the records are chronological, it is not feasible to audit the treatments provided to a cow throughout its life.

5/6

When the professional hoof trimmer treats animals for foot problems, trims hoofs etc, if the infection is bad enough, he may apply copper sulfate to the wound prior to wrapping. The use of the copper sulfate in this instance is not documented in the health log.

7

Pyiganic use: The log was on file and verification confirmed the it is used for tail head lice in June and October predominantly. An invoice for the pyiganic purchased was verified.

9

There were no antibiotics found in the medicine room of the organic operation.

### E.) Living Conditions

The Saudi style barns are steel structures (with no stalls), open on all sides. Industrial style fans automatically track the sun’s progress and shade and provide ample airflow throughout the facility. Similarly, curtains on the W. side of the barn automatically lower so that at sunset, when the sun’s angle is low, the cows are still in the shade. See attached pictures. A document titled “Livestock Living Conditions” describes the maintenance of the loafing areas in the Saudi Style barns. The activities described within that document.
were confirmed during the inspection.

As noted above, pasture access is restricted based on the availability of forage. In addition, the OSP describes how pasture access is denied during the off season/summer months when it is too hot for the cows to graze them.

The document provided in the OSP application titled “Proposed Pasture SOP for Shamrock Farms Organic Dairy” w/ a fax date of 11/19/2008 and in response to a PAMD request, is now out of date and along with the Organic Pasture Log – Lactating, and Organic Pasture Log – Dry Cows, and Organic Pasture Log – Heifers, is marked for removal from the file. This was replaced by “Shamrock Farms Organic Pasture Management” description which lists, rain/ Irrigation, Frost, High Day time temperatures and inclement weather as reason for confinement of animals off of pasture. This is accompanied by a pasture log that shows the date, the pen, the paddock, time in, time out and signature. The completed pasture logs were verified to be consistently used. For the frost period, the applicant made notes on daily temperatures (see attached copies).

Accompanying this is the Temporary Confinement Log which lists the date, the Cow ID, the Pen and the reason for confinement.

Currently, animals are on pasture up to 6 hours from about 9 AM to 3 PM as noted on RR 5. They may adjust milk times to capture more of the cooler temperatures as the weather heats up.

Water risers were installed on RR 5 for watering troughs at each paddock. Animals on the W. end of Beryl are provided with water at the freestall barn. However, feed stanchions are locked out so they are forced to go back out to pasture after hydration.

It was confirmed during the inspection that dry manure is spread over concrete walkways, in areas where the cows bed down, etc. No straw or other plant matter or sand is used as bedding.

**F.) Pasture Management Plan**

Intensive rotational grazing is utilized on the 2 acre paddocks on the RR pieces and continuous type of grazing is used on the Beryl pasture which is broken down into larger areas of 15-30 acres. The company is discussing the possibility of changing the configuration of the center pivot to allow some flood irrigation on the E. end of Beryl. This would allow them to implement rotational grazing in this section.

It was noted that the pastures are being very carefully managed to avoid over grazing. As such, DM intake from pasture for various groups this grazing season ranged from zero during certain portions of the month to 20% as stated above.

Forage quantities are determined using the following method; it consists of taking 3x1’ square samples, cutting @ 3” high, drying it down to determine the weight of the dry matter in the samples. This is converted to an acre figure. (Weight of sample in pounds/3 samples x % DM x 43,560 = pounds DM/ac).

Based on visual observation, during the inspection, some of the pastures approximately had between 1 and 2 T/ac of dry matter biomass. See attached photographs.

Overall, there are 688 head of livestock that are eligible for grazing (excludes the hospital
CE Name: Shamrock Farms Co

Stocking Rates
/fresh cows and the close-up cows). There are 351 acres of available pasture as of the inspection date, so it excludes RR 1 and 2 which are fallow. On average, that gives 1.96 head/acre of grazing.

G. Pasture/Crop land

All of the certified fields/pastures were visited and it was confirmed that none are directly adjacent to conventional production; Fields are separated by roads, field roads, and large dry, uncultivated areas from conventional agriculture.

2, SI 7

2,

H. Product Protection

The applicant provided a letter dated 12/1/2010 that addressed the cleaning and sanitation of all milk tankers by the Phoenix AZ plant.

2

I. Cleaning & Sanitation

The applicant provided a document titled “Shamrock Farms Organic Milking Procedure” which was confirmed during the inspection. Teat dips used are those listed in the OSP. The Ecolab Ecoplus 100 listed on the OSP is not currently used but it is a back up in case they encounter wet conditions.

1

The Ecolab cleaning materials listed in the Addendum Materials List were found on site. The sodium hypochlorite it was stated, is used not only for sanitizing the towels but also to boost the caustic Conquest CIP cleaner.

2 SI 9

3

The sanitation log and the pH meter described in the OCP were both seen on site and confirmed that they are being used.

J. Pest management

No traps or bait stations were noted near the milk parlor. Sticky fly strips and fly bait traps may be used in the summer.

1

K. Water

Confirmed water is from the on site wells.

2

L. Records

Milk production for the month of February was audited using the sight glass from the milk tanks as the beginning inventory and the settlement summary from Sharmrock Dairy processing plant.

<table>
<thead>
<tr>
<th>February Milk Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/1/2011 BI</td>
</tr>
<tr>
<td>Shipped</td>
</tr>
<tr>
<td>Produced</td>
</tr>
<tr>
<td>Per day</td>
</tr>
<tr>
<td># head</td>
</tr>
<tr>
<td>#/head</td>
</tr>
</tbody>
</table>

The pounds per head are higher here than in the DHIA testing sheets because it was stated those are derived from a snapshot of 1 day sampling in a month. The pounds were corroborated with the desk calendar maintained in the milk barn where animal numbers and pounds/head average are jotted down every day. The number of head milking is an average that was derived from the pick up summary. It was noted that that number is lower than what is in the updated DHP which actually is a snapshot of 3/15/2011. Weight
tickets for all of the pick ups were also on file and used to validate the figures in the pick up summary.

C: Product Profile(s)

Crop Profiles

<table>
<thead>
<tr>
<th>Ref #</th>
<th>Description of Discrepancy /Relevant Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIFP</td>
<td>The acreage for RR4 was 65 acres in 2010, it is now listed as 66. The acreage for RR5 was 63 ac in 2010 and it is now 64.7 ac. The applicant confirmed that these figures are accurate and it was noted during the inspection, that no land was added to the operation.</td>
</tr>
<tr>
<td>2: AIR, SI 14</td>
<td>The DeLaval Feedtech silage inoculant was found on site and the label confirmed OMRI compliance.</td>
</tr>
</tbody>
</table>

Dairy Profiles

<table>
<thead>
<tr>
<th>Ref #</th>
<th>Description of Discrepancy /Relevant Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: SI 10 - IFR</td>
<td>The IFR lists the milk cow mineral mixed into the TMR as “Animal Feed Dairy”.</td>
</tr>
<tr>
<td>2: SI 11 - HPP</td>
<td>This information is now included on the Livestock Farm Profile Form and the Dairy Herd Profile Form. The livestock LFP lists 475.8 acres which does not include the 40 ac of dry corners on the Beryl piece. The materials listed in the MIP are consistent with those found on site. A total of 4x50# bags of copper sulfate are used in footbaths every week. The applicant stated that they had not noted any build-up of copper in their soils as a result. There were no emollients on site, such as bag balm etc. The applicant stated that they did not need these in this climate and that he felt that they contribute to the spread of mastitis in the herd. The teat dips have emollients in them.</td>
</tr>
<tr>
<td>4: SI 13 MIP</td>
<td></td>
</tr>
</tbody>
</table>

Section 4: ATTACHMENTS

Please list attachments to your report below.

1. Photographs
2. Crop Production Records, calendar
3. E-mail from John Voss to John Joseph alerting him of the frost and some of the implications.
4. Pasture logs showing frost conditions.
5. E-mail communication and description of DMD calculation from the Nutritionist, Theo Lykos
6. Feed Rations from Theo Lykos
7. Sample Daily Recipe sheets from Feedwatch for 3/16/11
8. Monthly Pasture Dry Matter Intake sheets since the beginning of the grazing season.
9. Organic Certs for Saddlehorn Ranches and Grain Millers
10. Updated IFR
11. Updated DHP
12. Replacements Policy
13. Birth, death and culling policy
14. Total feed ration policy
15. Feed ingredient receiving policy
16. Pasture management policy
17. Administration of medications protocol
18. Herd health protocols
19. Vaccinations protocols
20. Pasture Log
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>21.</td>
<td>Temporary confinement log</td>
</tr>
<tr>
<td>22.</td>
<td>Living conditions description</td>
</tr>
<tr>
<td>23.</td>
<td>Milk Tanker cleaning procedure from the plant</td>
</tr>
<tr>
<td>24.</td>
<td>Milking procedure</td>
</tr>
</tbody>
</table>
Section 5: Applicant Authorization: NOP 205.403(a)(2)

I, the client, hereby acknowledge that I have reviewed and accept these observations of the Auditor and that all information is true and correct to the best of my knowledge. I understand that additional unannounced visits by QAI may be required, for which I hereby give my permission. I hereby acknowledge that all corrective actions noted by the auditor are recommendations only and may be overturned or added to by QAI, and that I will implement corrective actions only after receiving formal notification from QAI.

[Signature]
3/17/11
DATE

Section 6: Auditor Authorization:

Under penalty of perjury, I swear that I have reviewed the application and its supporting documents; and that all of the information I have collected and submitted with this audit package is true to the best of my knowledge. I understand that if I fraudulently misrepresent information, or violate the terms and conditions of the Audit Agreement, I am liable for all damages rendered by a court of law. I further indemnify and hold harmless Quality Assurance International, its agents and all others from liability for mistakes I knowingly commit. In addition, I attest to the following (please initial):

1. [ ](b)(5)(C) I understand that neither I nor an immediate family member are currently providing consulting services or in any way involved commercially with this operation. Furthermore, I understand that neither I nor an immediate family member may engage in such activities within the next 12 months without first informing QAI.

2. [ ](b)(6)(C) I attest that I have not accepted payment, gifts, or favors of any kind from the operation audited.

3. [ ](b)(6)(C) I understand that I am required to submit my audit report to QAI within 7 days of audit. If I am not able to submit my report in the allotted time frame it must be approved by QAI or my audit fee will be subject to a delayed payment penalty of 30 days.

4. [ ](b)(8)(C) I attest that I am an active member of a recognized auditor/inspector training organization IOIA.

5. [ ] I attest that I have not inspected this operation for more than four consecutive years.

6. [ ](b)(10)(C) I attest that neither I nor an immediate family member have provided consulting services for, or had a commercial interest in, the applicant/operation (within the last (24) twenty-four months).

[Signature]
3/17/11
DATE

Section 7: Report Copy:

A copy of this completed report will be provided to you by QAI per NOP 205.403(e)(2).
ORGANIC COMPLIANCE PLAN (OCP) ADDENDUM MATERIALS LIST

This addendum should be used to disclose all materials used by your operation during handling activities, such as sanitation, pest control and processing. As part of the OCP, any change you make to materials used needs to be documented and approved by QAI prior to implementation.

Physical Location Name  Shamrock Farms
Name of Person Completing This Form ___________________________ Date ____________
Name of Certified Entity (C.E.)  Shamrock Farms

These questions relate to the QAI Organic Compliance Plan (OCP). You only need to complete the sections that are applicable to your operation.

1. **Boiler Additives** – If steam comes into contact with either food, food contact surfaces, and/or packaging, complete this section if boiler additives are used. Please also attach a product label and/or specification sheet showing product ingredients and use instructions for each boiler treatment used.

<table>
<thead>
<tr>
<th>List Chemical Names (e.g. Sodium Hydroxide)</th>
<th>Does boiler additive carry over in steam?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes ☐ No ☐</td>
</tr>
<tr>
<td></td>
<td>Yes ☐ No ☐</td>
</tr>
<tr>
<td></td>
<td>Yes ☐ No ☐</td>
</tr>
</tbody>
</table>

2. **Salt** – If salt is used in the certified products, please provide the name of the salt used and the supplier. Please also attach a specification sheet for the salt to confirm that it does not contain any synthetic materials as flow agents or anti-caking agents other than those included on the National List of Allowed Nonagricultural Substances.

<table>
<thead>
<tr>
<th>Salt Brand Name</th>
<th>Supplier</th>
<th>Specs for Salt Attached</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Attached N/A</td>
</tr>
</tbody>
</table>

3. (a) **Cleaners and Sanitizers** - Please list all cleaners and sanitizers that are used on food, food contact utensils or food contact surfaces. If rinsing or purging your equipment prior to handling organic products, you must have documentation demonstrating the rinse or purge was adequate to remove sanitizer residues prior to organic handling (see section “3b” below). Please also attach a product label and/or specification sheet showing product ingredients and use instructions for all cleaners and sanitizers used.

<table>
<thead>
<tr>
<th>Chemical Name (e.g. chlorine)</th>
<th>Location (e.g. packing table)</th>
<th>Purpose (e.g. for disinfection)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mandate Plus</td>
<td>Lines, claws, receivers, tanks</td>
<td>Sanitizer</td>
</tr>
<tr>
<td>Conquest</td>
<td>Lines, claws, receivers, tanks</td>
<td>Cleaner</td>
</tr>
<tr>
<td>Hypochlorite (Hills Bros)</td>
<td>Towel Washer</td>
<td>Sanitizer</td>
</tr>
<tr>
<td>Liquid Lustersuds (Detergent)</td>
<td>Towel Washer</td>
<td>Detergent</td>
</tr>
</tbody>
</table>
(b) Cleaners and Sanitizers – Residue Analysis: For cleaners/sanitizers used on food contact surfaces that are not listed on the National List 205.605, please provide your system for verifying that all cleaner/sanitizer residues are completely removed from equipment prior to organic handling. Please also provide documentation verifying the type, range, and specificity of residue tests in use. *Please note that for quaternary ammonium sanitizers, the residue test kit in use must be sensitive enough to test down to 0-5 ppm and the results of the residue test must confirm a “zero” result; for acids/caustics, the final pH test result must demonstrate that the rinseate is back to the same pH as the pure water used in the plant.

<table>
<thead>
<tr>
<th>Chemical Name (e.g. Quat)</th>
<th>System for verifying “0” residue on equipment</th>
<th>Specs for Test Kit Attached</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mandate Plus</td>
<td>pH test verifying same as tap water.</td>
<td>Attached N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Attached N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Attached N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Attached N/A</td>
</tr>
</tbody>
</table>

(e) If using Chlorine Materials: Chlorine materials are included on 205.605 with a specific annotation. As such, residue tests must confirm less than 4 ppm free chlorine remains in the effluent water (i.e., in the rinse water at the point of discharge). Please indicate the system in place to verify compliance with this annotation. You may attach an SOP or Written Procedure.

<table>
<thead>
<tr>
<th>System for verifying compliance to 205.605</th>
<th>Specs for Test Kit Attached</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Attached N/A</td>
</tr>
</tbody>
</table>

4. Synthetic Substances - If you are using any synthetic substances that contact organic product and are not listed as approved on the National List, 205.605, but are defined or classified by the FDA as food contact substances (FCS), please list and clarify their use below. Examples include ion exchange resins, equipment coatings, material filters, etc. Refer to QAI’s FCS Policy for more information. Please also attach a product label and/or specification sheet showing product ingredients and use instructions.

<table>
<thead>
<tr>
<th>Substance</th>
<th>Where / How used</th>
<th>Provide the FDA CFR Ref. #</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. Pest Control Substances – If it is necessary to use Pest Control materials in the facility, please complete the table below (use more sheets if necessary).

<table>
<thead>
<tr>
<th>Substance Used (Brand Name)</th>
<th>Method of Application (Crack &amp; Crevice, Fog)</th>
<th>Location of Use (eg, exterior, office, warehouse)</th>
<th>Measures to protect organic products/ingredients during treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
01/11/2011

Shamrock Farms Co. Organic

Response to QAI request for information
OCP

Question C.7
The computerized feed system will be available for review at our next inspection.

Question L.6 (Description of individual elements of record system)
Raw organic milk production and tanker seals are recorded in the tanker log on the computer. I record a copy at the end of the month and it is kept in the sanitation log book.

Medical treatments and medicines used on each animal are recorded in the treatment log kept in the organic barn office.

Feed purchase and usage is tracked in the organic feed book using invoice numbers to track commodities billed by the vendors, the Julian date is used to track hay and silage purchases. The feed book is reconciled on a monthly basis.

Feed rations are obtained from our nutrition consultant, and then the changes are made to the recipe file on the Feed Watch program in our computer. The new ration is sent to the feed wagon via modem and the ration is fed. The computer receives feedback from the feed wagon and the dry matter amounts are recorded.

We record the dry matter amounts fed to each pen on a spreadsheet called Daily Organic Pasture Compliance, compare it to the DM requirements for each pen (determined by our nutritionist) and record a running percentage of DM derived from the pasture.

Our cows have access 365 days/year. We do not house any animals in enclosed buildings. Our animals are kept in open Saudi style barns. Pasture access is recorded in the Pasture Log. Confinement for animals that will not have access to pasture is recorded in the Confinement Log during the grazing season.

Replacement animals are transitioned over 1 year and are obtained from Shamrock Farms' heifer operation. The replacement animals are recorded with the date, id number, and age in the DHIA program. I receive a printed recap of the activity and it is kept in a file in the organic barn office.
Organic/Standard Operating Procedure (O/SOP)

Organic Dairy Livestock

Pre-and-Post Use Teat Dip

Notice To: Organic Dairy Herd Manager and Milking Team

Product: Ecolab Eco-Plus Sanitizing Teat Dip

Active Ingredient(s): Iodine

Use: External Udder Sanitation Use Only

Directions For Use: Carefully Read and Follow Label Mixing & Use Directions

Application: Follow All Product Label Directions

Pre-Milk Dipping: Fill teat dip cup with Eco-Plus. Do not dilute. Before each cow is milked, dip each teat full-length into the teat dip cup containing Eco-Plus. Wipe teats dry after dipping, using single-service towels to avoid contamination of milk.

Post-Milk Dipping: Immediately after each milking use Eco-Plus at full strength. Dip each teat full length into the teat dip cup containing Eco-Plus. Allow to air dry. Do not wipe. Always use fresh, full strength Eco-Plus. Do not turn cows out in freezing weather until Eco-Plus is completely dry.

Note: Continue to follow Ecolab Product Use Directions: Use only fresh product daily – keep good records. Maintain up-to-date Organic System Plan (OSP) and Dairy Materials Use Records! Notify certifier of all material and/or sanitation procedure changes. Be sure to submit the product label, MSDS form, and O/SOP to your certifier for review and approval!

Ecolab 5-06
<table>
<thead>
<tr>
<th>Category</th>
<th>C</th>
<th>Ctrl No</th>
<th>Age</th>
<th>Birth</th>
<th>User19</th>
<th>Transfer Date</th>
<th>Date Calved</th>
</tr>
</thead>
<tbody>
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<td>7150</td>
<td>13.1</td>
<td>12-05-08</td>
<td>7 13</td>
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42 Animals Selected, 42 Data Lines

List of heifers in transition
SHAMROCK FARMS ORGANIC DAIRY
SSOP

Any and all stainless fittings, clamps, gaskets or caps removed during wash cycles are to be washed and then placed into sanitizer located in the sink in the milk house. All components are to be rinsed prior to reassembly.

Milk lines, claws and receivers

After Milking
1. Fold down jetter cup tray
2. Attach claw to tray
3. Hook up return line to milk tank/wash vat
4. Disconnect elbow from milk line to bulk tank, place cap on that outlet
5. Remove milk filters
6. Turn CIP control to wash and push start button
7. Wash system will go through 4 cycles; rinse, wash, rinse, and sanitize.

Prior to milking at next shift.
8. Manually run first rinse cycle 2 times. [Mandatory]
9. After second manual rinse take ph sample to verify sanitizer removed from system.
10. Install new milk filters.
11. Remove claws from jetter cup holders and fold trays back to upright position.
12. Disconnect return line from milk/wash vat.
13. Remove cap from milk line to bulk tank.
14. Once milking has started purge entire system with milk. [Mandatory]
15. Reconnect elbow to bulk tank.

Bulk Storage Tank

After tank is empty
1. Crack open lid/manhole on bulk tank.
2. Connect wash line to bulk tank with wash elbow.
3. Open butterfly valve on wash line.
4. Remove cap on sight glass and connect sight glass to nipple on wash line.
5. Switch agitator on bulk tank to hand.
6. Go to control box for bulk tank CIP and push start.
7. Wash system will go through 4 cycles: rinse, wash, rinse, and sanitize. [Mandatory]
8. To insure sanitizer removed manually run first rinse cycle until PH is equivalent to tap water.
9. Close lid/manhole on bulk tank. [Mandatory]
10. Close butterfly valve on wash line.
11. Disconnect sight glass from nipple and replace cap.
12. Turn agitator to off position.
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Farm Equipment SOP

All tillage, planting, and harvest equipment will be brought to Shamrock Farms shop for cleaning prior to entering any organic fields.

Cleaning shall include

- Blowing off any dirt and debris
- Blowing out any seed or plant matter
- Washing out with the 1” hose
- Steam cleaning if necessary

All cleaning must be supervised by a member of Shamrock Farms staff and inspected by a Shamrock Farms manager prior to being released to the fields.
Organic Input SOP

Procedure for delivery of Organic Products:

- Organic Certification must be current and on file prior of delivery
- All delivers must scale across Shamrock Farms scale
- All deliveries must complete a Clean Truck Affidavit before entering dairy
- All cargo containers must be inspected by office staff for broken seals prior to entering dairy
- All organic deliveries must proceed directly to Shamrock Farms Organic
- All unloading equipment must be cleaned in accordance of the Farm Equipment SOP prior to unloading organic products
Proposed Pasture SOP for Shamrock Farms
Organic Dairy

Animals shall have access to pasture except for the following reasons:

1. Pasture development
   • Irrigation
   • Planting
   • Manure application

2. Inclement weather
   • Daily temperature exceeds 90 degrees F.
   • Severe monsoon storms

3. Health Issues
   • Dry animals and heifers in the last 30 days of gestation
   • Fresh animals less than 45 days in milk
   • Animals that are weak or sick, and in need of close monitoring

205 239 (c) 1 → 1 week @ dry off
   → 3 weeks pre partum
   1 week post partum
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<th>Reason for Denial</th>
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ORGANIC FLOW CHART

STEP 1. Cows enter the wash pen and are washed with clean water.

STEP 2. Cows are moved to the drip dry pen to dry and await entry into milking parlor.

STEP 3. Cows enter milking parlor. They are predipped with teat dip and milk is stripped from the teat to look for abnormal milk. After 60 seconds, the teat dip is wiped off and the milking unit is attached. When the milking unit senses that the cow is finished milking, it is removed and the teats are dipped with a teat dip. The cows are then returned to their pen or to the pasture.

MILK FLOW

Milk is harvested from the cow into the milking unit. From the unit, the milk flows into the pipeline, then into receiver tanks in the breeze way. The milk is then pumped into a surge tank in the milk house. A variable speed pump pushes the milk through a plate heat exchanger lowering the milk temp. from 101° to 36° and from there it is stored in one of two 6000 gallon storage tanks until a full load is accumulated. Full loads of milk are then pumped into Shamrock tankers that have been washed and sealed by Shamrock Farms processing plant. The tanker load of organic milk is sealed and delivered to Shamrock Foods Dairy Division.
OXYTOTOCIN INJECTION
Purified Oxytocic Principle (20 USP Units per ml)
FOR ANIMAL USE ONLY
HAZARDOUS
KEEP OUT OF REACH OF CHILDREN
DESCRIPTION: Oxytocin injection is a sterile aqueous solution of highly purified oxytocin principle derived by synthesis or obtained from the posterior lobe of the pituitary gland of healthy domestic animals used for food by humans. Oxytocin injection contains 20 USP Units of oxytocin and less than 0.4 units of preservative activity per ml. Each ml of sterile solution also contains 0.9% w/v sodium chloride, 0.3% w/v chlorobutanol (as a preservative), with water for injection q.s. and pH adjusted to 3.0 to 5.0 with acetic acid.

ACTION: Oxytocin acts directly on the smooth muscle of the uterus in all species to induce rhythmic contractions, although in some species the uterine cervix does not respond to oxytocin. The responsiveness of the uterine musculature to oxytocin varies greatly with the stage of the reproductive cycle. During the early phases of pregnancy, the uterus is relatively insensitive to the effects of oxytocin, while in the late phases the sensitivity is markedly increased. Most authorities attribute this varying response to the varying levels of estrogen and progesterone during the course of pregnancy. Oxytocin also has been shown to exert a milk ejecting effect, occasionally referred to as the galactagogic effect. The actual mechanism by which oxytocin stimulates the release of milk from the mammary glands is not known with certainty, but oxytocin is presumed to act on certain smooth muscle elements in the gland.

INDICATIONS: Because of the specific action of oxytocin upon the uterine musculature, it is recommended as an aid in the management of the following conditions:
1. To precipitate labor
2. To accelerate normal parturition
3. Postpartum evacuation of uterine debris
4. Postoperative contraction of the uterus following a cesarean section and control of uterine hemorrhage.

Oxytocin will contraindicate the smooth
SALMONELLA TYPHIMURIUM BACTERIN-TOXOID
Re-17 Derived Mutagenically

ENDOVAC-Bov

with IMMUNE PLUS

FOR VETERINARIAN USE ONLY

The MUTANT SALMONELLA TYPHIMURIUM BACTERIN-TOXOID is for vaccination of healthy cattle to aid in the prevention of clinical mastitis caused by E. coli and the effects of endotoxinemia in cattle due to Escherichia coli, Salmonella typhimurium, Pasteurella multocida and Pasteurella haemolytica.

U.S. Veterinary License No. 345
U.S. Patent No. 5641492

IMMVAC, Inc.
Columbia, MO
65201, USA

SHAMROCK FARMS CO

Shake well before use. Inject 2ml into the musculature of healthy cattle. Repeat in 2 or 3 weeks. Administer a 2 mL booster dose annually. Recommended for vaccination of cows during the dry period and heifers during the third trimester of pregnancy. CAUTION: Store at 2°-7°C (35°-45°F). Do not freeze. Use entire contents when opened. Not recommended for administration to mastitic cows or to septicemic cattle. Do not use within 60 days of slaughter. This product contains an oil adjuvant. DO NOT USE IN HORSES. Local tenderness at the injection site may occur with the use of this vaccine. If anaphylactoid reaction occurs, administer epinephrine.

PRESERVATIVE: Formaldehyde.

RXVD
4/18/10
AT
MATERIAL SAFETY DATA SHEET (MSDS)

Need a Printable Version? or Download a File? >> Printable

Copper Sulfate

24 HR EMERGENCY TEL [COLLECT]
CHEM-TEL INC 1-800-255-3924 1-813-248-0573

CONTINENTAL INDUSTRIES GROUP, INC.
245 EAST 58TH STREET
SUITE 12-A
NEW YORK, NEW YORK 10022

TELEPHONE
212-752-2020

TELEX
211585 CIG UR

FAX
212-355-1507

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200).

SECTION I. MATERIAL IDENTIFICATION

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Copper Sulfate</th>
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<tbody>
<tr>
<td>Synonyms</td>
<td>Blue Vitrol, Bluestone, Cupric Sulfate</td>
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<tr>
<td>Molecular Formula</td>
<td>CuSO₄ • 5H₂O</td>
</tr>
<tr>
<td>EPA Reg. Number</td>
<td>46923-4</td>
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<tr>
<td>CAS Number</td>
<td>7758-99-8</td>
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<td>SIC Number</td>
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SECTION II. PHYSICAL DATA
<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
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<tbody>
<tr>
<td>Physical State</td>
<td>Blue crystals or powder</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>-5 H₂O @ 150°F</td>
</tr>
<tr>
<td>Melting Point</td>
<td>-4 H₂O @ 110°F</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>2.284</td>
</tr>
<tr>
<td>Solubility in H₂O</td>
<td>22.37% @ 0°C, 117.95% @ 100°C</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>Soluble in methanol, glycerol and slightly soluble in ethanol</td>
</tr>
<tr>
<td>Appearance</td>
<td>Blue crystals or powder</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
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SECTION III. FIRE AND EXPLOSION DATA

<table>
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<tr>
<th>Property</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Flash Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammable Limits</td>
<td>Not flammable. If heated above 400°C it can decompose to emit toxic fumes of oxide and sulfur.</td>
</tr>
<tr>
<td>Extinguishing Media</td>
<td>Copper Sulfate does not burn nor will it support combustion. If stored with other combustible products use water, CO₂ or dry chemical.</td>
</tr>
<tr>
<td>Special Fire Fighting Instructions</td>
<td>If dry heated above 600°C, SO₂ is evolved. If water is used it will solubilize the Copper Sulfate and care should be taken to keep such water out of streams or other water bodies.</td>
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<tr>
<td>Fire and Explosion Hazards</td>
<td>None</td>
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SECTION IV. REACTIVITY DATA

<table>
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<tr>
<th>Property</th>
<th>Description</th>
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<tbody>
<tr>
<td>Stability</td>
<td>Stable</td>
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<tr>
<td>Conditions to Avoid</td>
<td>Product is highly soluble, but does not react with water.</td>
</tr>
<tr>
<td>Incompatibility</td>
<td>None know when product remains dry. Product readily dissolves in water. Solutions are mildly corrosive to steel. Store solutions in plastic or rubber or 304, 347 or 316 stainless steel. Iron and moisture should be avoided. Store in a dry area. With exposure to air it will oxidize and turn whishful.</td>
</tr>
<tr>
<td>Hazardous Decomposition</td>
<td>None at normal production temperatures and pressures. If dry heated above 600°C toxic sulfur may evolve.</td>
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<tr>
<td>Products</td>
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<tr>
<td>Polymerization</td>
<td>Will not occur.</td>
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</table>
SECTION V. HEALTH AND HAZARD INFORMATION

Swallowing: Toxic orally in accordance with FHSLA regulations. Acute oral LD50 (male rats) = 472 mg/kg.

Skin: Non-toxic. Skin irritation index is zero in accordance with FHSLA regulations.

Eyes: Corrosive in accordance with FHSLA regulations. Eye irritation score: 24 hours = 41.57; 48 hours = corrosive.

Inhalation: Inhalation of dust may cause irritation to the upper respiratory tract.

Carcinogenicity: None as per NTP, OSHA, and IARC.

This product contains Copper Sulfate subject to the reporting requirements of Section 13 of the Emergency Planning and Community-right-to-Know-Act of 1986 (40 CFR 372).

SECTION VI. FIRST AID PROCEDURES

Swallowing: Give large amounts of milk or water. Induce vomiting. Call Poison Control Center or a physician.

Skin: Wash thoroughly with soap and water. Remove and wash contaminated clothing before reuse.

Eyes: Immediately flush eyes with plenty of water for 15 minutes. Hold eyelids apart during irrigation. Call a physician.

Inhalation: Remove person to fresh air and call a physician.

Carcinogenicity: None

SECTION VII. HANDLING PRECAUTIONS

Personal Protective Equipment: Chemical safety goggles. Rubber gloves and rubber apron may be worn.

Ventilation: TWA = 1 mg/l for Copper Sulfate. When TWA exceeds this limit in the workplace, provide appropriate ventilation. Wear an approved respirator for dusts or mists. MSHA/NIOSH approved number prefix TC-21C, or a NIOSH approved respirator with any R, P or HE filter.

Alternatively, provide respiratory protection equipment in accordance with Paragraph 1910.134 of Title 29 of the Code of Federal Regulations.

SECTION VIII. ENVIRONMENTAL AND DISPOSAL INFORMATION
Aquatic Toxicity

LC50, 24 hours, Daphnia magna equals 0.182 mg/l. Rainbow Trout equals 0.17 mg/l. Blue Gill equals 1.5 mg/l. All values are expressed as Copper Sulfate Pentahydrate. Test water was soft.

Spills and Leaks

Comply with Federal, State and local regulations on reporting spills. Do not wash away crystals or powder. Recover dry if possible. If product is in a confined solution, react with soda ash to form an insoluble Copper Carbonate solid that can be scooped up.

Waste Disposal

Do not reuse container. Comply with Federal, State and local regulations. Sweep up crystals, powder or insoluble Copper Carbonate and dispose of in an approved landfill.

Environmental Effects

May be dangerous if it enters the public water systems. Follow local regulation. Toxic to fish and plants. Fish toxicity critical concentration is 235 mg/l and plant toxicity is 25 mg/l.

SECTION IX. SPECIAL PRECAUTIONS

Storage

Store in a dry place.

Other Precautions

None other than those stated in the MSDS or on the package.

SECTION XI. REGULATORY INFORMATION

NOTICE: The information herein is presented in good faith and believed to be accurate. However, no warranty, expressed or implied, is given. Regulatory requirements are subject to change and may differ from one location to another. It is the buyer's responsibility to ensure that its activities comply with Federal, State and local laws.

U.S. REGULATIONS: SARA 313 Information. This product contain the following substance subject to the reporting requirements of Section 313 of Title II of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372: COPPER COMPOUND 63.3%.

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendments and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following category: AN IMMEDIATE HEALTH HAZARD.

SECTION XII. SHIPPING INFORMATION

## IMO-DANGEROUS GOODS DECLARATION

**CONTINENTAL INDUSTRIES GROUP, INC.**
255 E. 58th Street 25th Floor
New York, New York 10022

**Consignee:**
Southern California Equipment
7000 Medallion Avenue Building 4
China CA, 91710

**Shippers Declaration:**
I hereby declare that the contents of this consignment are fully and accurately described below by the Proper Shipping Name, and are classified, packaged, marked and labeled/packaged and are in all respects in proper condition for transport according to the applicable International and national governmental regulations.

**Vessel/Flight & Date:**
"OOGI SAN FRANCISCO"

**Additional Handling Information:**

**Shipping Mode:**
"100% X 25% Bulk COPPER SULFATE PENTAHYDRATE (kg) CUBE (m³)

**ENVIRONMENTALLY HAZARDOUS SUBSTANCE SOLID N.O.S.:**
COPPER SULFATE PENTAHYDRATE

**Marine Pollutant:**
Class 9, UN 3007, PGI
Corrosive
24 HR Emergency TEL [COLLECT]
Chem-Tel Inc. 1-800-255-3524 1-813-248-0573

---

**Container/Vehicle Packing Certificate:**
I hereby declare that the goods described above have been packed/loaded into the container/vehicle identified above in accordance with IMDG code 5.4.2.

**Receiving Organization Receipt:**
Received the above number of packages/containers/vehicles in apparent good order and condition, unless stated herein.

**Receiving Organization Remarks:**

**Name/Address of Declarant:**
Continental Industries Group, Inc.

**Vehicle Registration No.:**
Muster's Name

**Name/Address of Company Preparing Note:**

**Place and Date:**
New York

**Driver Name and Date:**

**Driver's Signature:**

**Signature of Declarant:**

COPPER SULPHATE PENTAHYDRATE
N.W.: 50
LOT NO.
UN 3077
MADE IN TAIWAN
MATERIAL SAFETY DATA SHEET

MANUFACTURED FOR DURVET, INC.
BY FM RESOURCES, INC.
MANUFACTURER: FM RESOURCES, INC.
13001 ST. CHARLES ROCK ROAD
BRIDGETON, MO 63044
PHONE: 314/291-6724
AFTER HOURS: #60/424-9300
DATE: 06/21/95
REPLACES: None
PRODUCT NAME: Mineral oil

1. HAZARDOUS INGREDIENTS

MINERAL OIL

2. PHYSICAL/CHEMICAL CHARACTERISTICS

SOLUBILITY IN WATER: insoluble
APPEARANCE AND ODOR: clear liquid

3. FIRE AND EXPLOSION HAZARD DATA

EXTINGUISHING MEDIA: Water, Dry Chemical, Foam, Carbon Dioxide.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Nonflammable, Nonexplosive.

4. REACTIVITY DATA

Stable
HAZARDOUS POLYMERIZATION: Will not occur.

5. HEALTH HAZARD DATA

INUSSION: Yes
CONSIDERABILITY: No
IARC: No
OSHA: No
EMERGENCY AND FIRST AID PROCEDURES:
INGESTION: None necessary

6. PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:
Sweep up and place in a suitable container.
WASTE DISPOSAL METHOD: Disposal must be made in accordance with federal, state and local regulations.

7. CONTROL MEASURES

None listed.

While the information and recommendations set forth herein are believed to be accurate as of the date hereof, Durvet Inc. makes no warranty with respect thereto and disclaims all liabilities from reliance thereon.

APPROVED BY: Andrea Cappuzzo
REPRESENTING: Durvet, Inc.
DATE: 03/14/96
COMPAS Code: 54200562
MATERIAL SAFETY DATA SHEET

PRODUCT NAME:
Aspirin Bolus

AS SOLD BY DURVET

A Service of

COMPAS
www.compasmsds.com
MATERIAL SAFETY DATA SHEET
DURVET – ASPIRIN BOLUS

SECTION 1 – PRODUCT INFORMATION

Manufacturer: Sparhawk Laboratories
Address: 12340 Santa Fe Trail Drive, Lenexa, KS 66215
Emergency Telephone Number: 800-424-9300
Telephone Number for Information: 913-888-7500
Product Name/Identity: Aspirin Bolus
Chemical Family: 2-(Acetylbxy) Benzoic Acid
D.O.T. Hazard Classification: Not considered Hazardous
Date Prepared: 3/19/93

SECTION 2 – HAZARDOUS INGREDIENTS

Hazardous Components (Specific Chemical Indentity, Common Names): None Hazardous: Main Ingredient: Aspirin (CAS# 000050-78-2)

SECTION 3 – PHYSICAL DATA

Boiling Point: N/A
Vapor Pressure (mm Hg): N/A
Vapor Density (Air = 1): N/A
Specific Gravity: N/A
Melting Point: N/A
Evaporation Rate: N/A
Solubility in water: Slightly
Appearance, Color, Odor: White solid dose bolus.

SECTION 4 – FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used): N/A
Flammable Limit: N/A
SPECIAL FIREFIGHTING PROCEDURES: Positive-pressure, self-contained breathing apparatus and protective clothing.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Aspirin dust, when suspended in air, is flammable and if ignited, poses a fire and explosion hazard.

SECTION 5 – REACTIVITY INFORMATION

Stability: Stable
Conditions to Avoid: Extreme heat and fire.
Incompatibility (Materials to avoid): Oxidizing materials
Hazardous Decomposition of Byproducts: Carbon dioxide, Acetic acid and Salicylic acid
Hazardous Polymerization: Will no occur

SECTION 6 – HEALTH HAZARD INFORMATION

ROUTES OF ENTRY: Skin, Eyes, Ingestion

HEALTH HAZARD (Acute & Chronic): Skin/Eyes: May cause slight transient (temporary) eye irritation. Prolonged or repeated exposure may cause skin irritation.
INGESTION: Single dose oral toxicity is low to moderate. Ingestion of large quantities could cause gastrointestinal irritation and interfere with normal blood clotting.

CARCINOGENICITY:
TOXICITY: Oral LD50: 600-1400 mg/kg (rat)

SIGNS AND SYMPTOMS OF EXPOSURE: Ingestion: Repeated exposure may cause gastrointestinal irritation. High doses may cause nausea, vomiting, ringing in ears and metabolic disorder.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

EMERGENCY AND FIRST AID PROCEDURES:
EYES/SKIN: Flush eyes immediately with water for at least 5 minutes. Wash off exposed skin with water.
INGESTION: Induce vomiting if large amounts are ingested.

SECTION 7 – PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Sweep up and shovel into clean dry containers. Keep possible ignition sources away from dust.

WASTE DISPOSAL METHOD: Incinerate in compliance with all local, state and federal regulations.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: N/A

OTHER PRECAUTIONS: Dust, when suspended in air, is flammable and if ignited, may pose an explosion hazard. Good house keeping and dust control are essential.

SECTION 8 – CONTROL MEASURES

Respiratory Protection: None needed with normal use with product.
Ventilation: Local Exhaust
Protective Gloves: Cloth or Rubber
Eye Protection:
Other Protective Clothing or Equipment:
Work/Hygienic Practices: Wash hands and exposed skin thoroughly after using product.

The above information is believed to be accurate and represents the best information available to us at the time that this Material Safety Data Sheet was prepared. The information is provided to our customers in good faith; however, no warranty, expressed or implied, is made.
Material Safety Data Sheet

SECTION 1: Chemical Product and Company Identification
Manufacturer: Cumberland Swan
One Swan Drive
Smyrna, TN 37167

Date: November 1999
Product: Hydrogen Peroxide 3%

Telephone: (615) 459-8900
24hr. Emergency: (615) 459-8900 ext. 5270

SECTION 2: Composition / Information in Ingredients
Name: Hydrogen Peroxide, H₂O₂
CAS#: 7722-84-1
OSHA PEL: 1ppm (TWA)
Name: Water

SECTION 3: Hazards Identification
Colorless, odorless liquid that is slightly acidic. Hydrogen peroxide in this concentration is a mild oxidizer, prolonged exposure to elevated concentrations of vapors may result in irritation of the eyes, nose, and throat. Prolonged dermal exposure can result in mild skin irritation.

Potential Routes of Exposure: Ingestion, inhalation, dermal contact, eye contact
Target Organs: Eyes, skin, respiratory system
Symptoms of Overexposure:
Inhalation: Irritation of eyes, nose and throat.
Ingestion: Irritation of the upper G.I. tract, possible distension of the esophagus or stomach.
Dermal Contact: Vesicles on skin, bleaching hair, general irritation of skin
Acute Effects: Irritation of skin as noted above
Chronic Effects: No data
Pre-existing disorders of the skin may be exacerbated by exposure of hydrogen peroxide

HMIS: H=2, F=0, R=1 See Section 8 for PPE information

SECTION 4: First Aid Measures
Eye: Flush eyes with copious amount of water for at least 15 minutes
Skin: Flush with water. If irritation persists, seek medical attention.
Ingestion: Drink plenty of water or milk immediately to dilute. Do not induce vomiting. Seek medical attention or contact the poison control center.
Inhalation: Remove victim to fresh air and seek medical attention

Hydrogen Peroxide MSDS Page 1 of 3
SECTION 5: Fire Fighting Measures
Extinguishing Media: Use water fog, alcohol foam, dry chemical or CO2
Unusual Fire or Explosion Hazards: Decomposition releases oxygen which may intensify fire (see section 9)
Recommendations: Extinguish fire using agent suitable for surrounding fire. Cool containers exposed to fire with flooding quantities of water.

SECTION 6: Accidental Release Measures
Large Spills: Evacuate the area of unprotected personnel. Utilize appropriate level of personal protective equipment. Contain source if it is safe to do so. Dike or otherwise confine spilled product. Keep away from open flame.
Small Spills: Dilute with large amounts of water and if possible, direct solution to diked area and hold until decomposed.

SECTION 7: Handling and Storage
Storage Requirements: Store in tightly closed containers in a cool, dry area away from heat and other possible ignition source.
Handling Precautions: Maintain appropriate class of fire extinguishers nearby in case of fire.

SECTION 8: Exposure Controls / Personal Protection
OSHA PEL=1ppm (TWA) OSHA STEL=N/A IDLH=75ppm

Recommended Engineering Controls: Use ventilation equipment as necessary.
Recommended Admin Controls: Train employees on the hazards of Hydrogen Peroxide
PPE: Wear chemical goggles where the threat of exposure exists. Gloves should be worn if the user has sensitive skin or frequently use the product. Eye wash fountains should be provided for personnel in areas where eye exposure is possible.
Recommended Hygiene Practices: Clean PPE and work clothing contaminated with hydrogen peroxide prior to reuse.

SECTION 9: Physical and Chemical Properties
Appearance: Colorless liquid Freezing Point: <0 °C Autoignition: N/A
Odor: Slightly Sharp Water Solubility: Miscible LEL: N/A
Odor Threshold: No Data Molecular Weight: 18.5 (app) UEL: N/A
Vapor Pressure: 10.1 mm Specific Gravity: 1.0 Vapor Density: .63(app)
Boiling Point: 214 °F Flash Point: >200 °F

SECTION 10: Stability and Reactivity
Stability: Slightly unstable
Polymerization: Will not occur
Conditions to avoid: Heat, sparks, and open flame, contact with incompatible materials. Hydrogen Peroxide in great concentrations is incompatible with reducing agents, rust, dirt, organic materials.
Hazardous Products: of Decomposition
De decomposition releases oxygen which may intensify fire.
SECTION 11: Toxicological Information
LD50: 4060 mg/kg (dermal rat)  LC50: 2000 mg/m3 (4hr inhalation, rat)
LDLo: 227 ppm (inhalation- mouse)
Carcinogenicity: Not identified as a carcinogen by OSHA, IARC, or NTP
Mutagenicity: Not Indicated
Reproductive Effects: Not Indicated

SECTION 12: Ecological Information
Ecotoxicity: N/A  Environmental Fate: N/A  Soil Absorption/Mobility: Highly Mobile
Environmental Degradation: Should be removed readily from soils and water by volatilization and biodegradation.

SECTION 13: Disposal Considerations
Disposal: Contact your supplier or a licensed contractor for detailed recommendations.
Disposal Regulatory Requirements: Follow applicable federal, state and local regulations.

SECTION 14: Transport Information
Shipping Name: Hydrogen Peroxide (Non Regulated in concentrations <8%)

SECTION 15: Regulatory Information
RCRA Hazardous Waste Number/Classification: N/A
CERCLA Substance: N/A
CERCLA Reportable Quantity: 10,000 lbs (Default)
SARA 311/312 Codes: N/A
SARA Toxic Chemical: N/A

SECTION 16: Other Information
Prepared by: Cumberland Swan


Disclaimer: While reasonable care has been taken to ensure the accuracy and completeness of the information regarding the material described herein, it is the purchaser's responsibility to ensure the suitability of such information as it applies to the purchaser's intended use of the material.
**Bovine Rhinotracheitis-Virus**  
**Diarrhea-Parainfluenza3-**  
**Respiratory Syncytial Virus Vaccine**  
Modified Live Virus  
**Leptospira Canicola-Grippotyphosa-**  
**Hardjo-Icterohaemorrhagiae-Pomona Bacterin**  
**Bovi-Shield GOLD® FP 5 LS**

**INDICATIONS:** Bovi-Shield GOLD FP 5 LS is for vaccination of healthy cows and heifers prior to breeding to prevent persistently infected calves caused by bovine virus diarrhea (BVD) virus types 1 and 2 and as an aid in preventing abortion caused by infectious bovine rhinotracheitis (IBR), bovine herpesvirus Type 1 virus; respiratory disease caused by IBR, BVD Types 1 and 2, parainfluenza3 (PI3) and bovine respiratory syncytial virus (BRSV); BVD Type 2 testicular infection; and leptospirosis caused by *Leptospira canicola*, *L. grippotyphosa*, *L. hardjo*, *L. icterohaemorrhagiae*, and *L. pomona*. A 12-month duration of immunity has been demonstrated against IBR-induced abortion and persistently infected calves caused by BVD Types 1 and 2. Bovi-Shield GOLD FP 5 LS may be administered to pregnant cattle provided they were vaccinated, according to label directions, with any Bovi-Shield GOLD FP or PregGuard® GOLD FP vaccine within the past 12 months. Do not use in calves nursing pregnant cows unless their dams were vaccinated within the past 12 months as described above.

**PRODUCT DESCRIPTION:** Bovi-Shield GOLD FP 5 LS is a freeze-dried preparation of modified live virus (MLV) strains of IBR, BVD (Types 1 and 2), PI3, and BRSV viruses, plus a liquid bacterin containing the 5 *Leptospira* serovars identified above. The liquid bacterin is used to rehydrate the freeze-dried vaccine.

**DIRECTIONS:**

**General Directions:** Vaccination of healthy cattle is recommended. Aseptically rehydrate the freeze-dried vaccine (Bovi-Shield GOLD FP 5) with the liquid bacterin provided (Leptoform-5®), shake well, and administer 2 mL intramuscularly. In accordance with Beef Quality Assurance guidelines, this product should be administered in the muscular region of the neck.

**Primary Vaccination:** Administer a single 2-mL dose to all breeding cows and heifers approximately 1 month prior to breeding or being added to the herd.

**Revaccination:** Annual revaccination with a single dose of Bovi-Shield GOLD FP 5 LS is recommended.

Good animal husbandry and herd health management practices should be employed.

**PRECAUTIONS:**

Do not use in pregnant cows (abortions can result) unless they were vaccinated, according to label directions, with any Bovi-Shield GOLD FP or PregGuard® GOLD FP vaccine within the past 12 months. Do not use in calves nursing pregnant cows unless their dams were vaccinated within the past 12 months as described above.

Consistent with good vaccination practices, it is recommended that heifers receive at least 2 doses with the second dose administered approximately 30 days prebreeding.

Store at 2°C–7°C. Prolonged exposure to higher temperatures and/or direct sunlight may adversely affect potency. Do not freeze.

Use entire contents when first opened.

Sterilized syringes and needles should be used to administer this vaccine.

Do not sterilize with chemicals because traces of disinfectant may inactivate the vaccine.

Burn containers and all unused contents.

Do not vaccinate within 21 days before slaughter.

Contains gentamicin as preservative.

As with many vaccines, anaphylaxis may occur after use.

Initial antitode of epinephrine is recommended and should be followed with appropriate supportive therapy.

This product has been shown to be efficacious in healthy animals. A protective immune response may not be elicited if animals are incubating an infectious disease, are malnourished or parasitized, are stressed due to shipment or environmental conditions, are otherwise immunocompromised, or the vaccine is not administered in accordance with label directions.

Technical inquiries should be directed to Pfizer Animal Health Veterinary Services, (800) 368-5280 (USA), (800) 461-0917 (Canada).

For veterinary use only.

U.S. Veterinary License No. 189
Contains pyrethrum - a botanical insecticide derived from chrysanthemums
Provides rapid knockdown and kill of pest pests
For use on growing crops and non-crops.
Can be used on day of harvest
Controls key livestock pests

ACTIVE INGREDIENT:
Pyrethrum ........................................... 5.00%
OTHER INGREDIENTS: .................................... 95.00%

KEEP OUT OF REACH OF CHILDREN
WARNING AVISO
Si usted no entiende lo que es, busque a alguien para que se lo explique a usted en detalle.
(If you do not understand the label, find someone to explain it to you in detail.)

See Inside Booklet for First Aid and Additional Precautionary Statements

EPA Reg. No. 1021-1772
Rev. 02/07-03/07
EPA Est. Nos. 1021-MN-2 and 1021-CA-012

Manufactured by:

MCK

Not for use on tree fruits.

USDA Fruit/Tree Nursery Health
Mississippi, MS 38674

NET CONTENTS 1 GALLON

FIRST AID

IF SWALLOWED:
Call poison control center or doctor immediately for treatment advice.
Have person sip a glass of water if able to swallow.
Do not induce vomiting unless told to do so by the poison control center or doctor.
Do not give anything by mouth to an unconscious person.

IF IN EYES:
Flush eyes open and rinse slowly and gently with water for 15-20 minutes.
Remove contact lenses, if present, after the last 5 minutes. Non-removable lenses.
Call a poison control center or doctor for treatment advice.

IF ON SKIN OR CLOTHING:
Take off contaminated clothing.
Wash skin immediately with plenty of water for 15-20 minutes.
Call a poison control center or doctor for treatment advice.

IF INHALED:
Move person to fresh air.
If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth. If possible.
Call a poison control center or doctor for further treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or go with treatment. For information regarding medical emergencies or poisons inflicted, call 1-800-742-2212.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

WARNING

Harmful if swallowed or inhaled. Avoid contact with skin, eyes or clothing. Avoid breathing droplets or spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, smoking, using bathroom, or as directed in all warnings. Do not use contaminated clothing before washing. Prolonged or repeated exposure may cause allergic reaction in some individuals.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are overcome resistant to this product are listed below. If you work with these products, follow the instructions for Category C on the EPA chemical-resistance category selection chart.

Applications and other handlers must wear: overalls, long-sleeved shirt and pants, chemical-resistant gloves, such as, but not limited to, nitrile, butadiene, neoprene, or Viton; chemical-resistant boots or shoes; chemical-resistant headgear; and chemical-resistant apron when handling equipment, mixing, or loading.

Disposal clothing and other contaminated materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse material. Follow manufacturer's instructions for cleaning/sterilizing PPE. If no such instructions for washing or decontamination, wash as follows: in warm water. Keep and wash PPE separately from other laundry.

When handlers use aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides at 40 CFR 170.240(d)(4)-(6), the following PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS:

Wear protective clothing: gloves, boots, apron, protective glasses, or goggles.

Wash hands before eating, drinking, smoking, or using the toilet.

Wear protective clothing. Change protective clothing immediately after contact is made. Do not return to the workplace until safe.

Remove PPE immediately after handling this product. Wash the outside of gloves before reusing. Do not pass PPE to others, wash thoroughly and change into clean clothing.
ENVIRONMENTAL HAZARDS

This pesticide is highly toxic to fish. Do not apply directly to water, or to areas from which surface water may be issued or to areas where surface water may be present or in immediate contact with surface or ground water bodies. Do not contaminate water when disposing of equipment or waste. Do not store equipment near water. When disposing of equipment or waste, wash pool or wash area, including any contaminated clothing, with detergent and hot water. Do not contaminate water when disposing of equipment or waste.
**FOR USE ON HARVESTED FRUITS AND VEGETABLES:**
including, but not limited to: Apples, blackberries, blueberries, boysenberries, cherries, cranberries, currants, strawberries, plums, apricots, grapes, guavas, loganberries, mangoes, muscadines, oranges, peaches, plums, pears, pineapples, plums, raspberries, tomatoes.

**DIRECT SPRAY TO FRUITS IN BASKETS, OR TRUCKS OR IN PROCESSING PLANTS:**
To control (non-resistant sp. 50,000 ppm for east Vines, Vineyard Mealybug, etc.) to the following plants, direct this concentrate at the rate of 1 part with 200 parts water (1 gallon with 200 gallons of water or 1 teaspoon with 40 parts of water). Thoroughly rinse the spray in the spray tank and treat as follows:
1) Apply plenty of water first and vegetables in baskets, on trucks and in plants. Use sprayers at a high pressure for applying the rate of five or six parts of diluted spray to a 5-ton load of product. Direct the spray for maximum coverage of the basket contents. It is important to spray between and underneath the containers.
2) Spray the raw stock stacked in the yard.
3) Dip baskets in the diluted spray, after dumping the produce to kill adhering larvae and harbor pests.

**FOR USE ON STORED PRODUCTS:**
This concentrate can be used at the rate of 1 part with 2 parts water or accessible carrier (1 part with 1 gallon of water or accessible carrier) can be used on (Almond Nutshell and Shells, Bailey, Bean, Blackened, Bean, Casses, Corn, Cellophane, Dried Apricots, Dried Fruits, Dried Peaches, Figs, Fruits, Grain Mills, Grapes, Peanuts, Pistachios, Pinions, Rice, Rye, Sorghum, Tobacco, Wheat, and Walnuts) and Shells held in storage for control of the accessible stages of Almond Moth, Acornworm Grain Moth, Carrot Beetles, Cigarette Beetles, Contradol Fungus Beetles, Flat Grain Beetles, Granary Weevils, Indian Meal Moth, Red Flour Beetles, Rice Weevils, Rusty Grain Beetles, Sawtooth and Ground Grain Beetles, Tobacco Moth. Monthly inspections should be made after the grain is placed in storage. If the top two or three inches are infested, dilute 1 part Pyranos® Crop Protection EC 500 with 1 part water and apply at the rate of 2 gallons per 1,000 square feet of grain. Make the mixture into the grain at the depth of 4 inches.

**FOR USE AS A GRAIN PROTECTANT:**
This concentrate when diluted with water and sprayed directly on grains will effectively protect the grain against grain storage insects for a full season or approximately 8 months. Dilute at the rate of 1 part with 20 parts water (1.6 fluid ounces with 1 gallon of water). Thoroughly mix the solution and apply at the rate of 1 gallon per 1,000 bushels of grain as it is being carried in or as it enters the elevator or elevator. This concentrate may be used in combination with a registered fumigant for use on heavily infested stored products.

Monthly inspections should be made. If the top 2 or 3 inches are infested, re-treat applying at the rate of 2 gallons of diluted material per 1,000 bushels of stored product.

**USE IN BUCKET SEEDS:**
This concentrate can be used to treat grain and seed in warehouses and trucks, cargo ships, bins, mill, bin, hopper, conveyors and conveying equipment at a clean up prior to using them for storage. In mills and silos, at grain-infested accommodations should be removed from the bin hopper. All storage bins and conveying equipment should be thoroughly cleaned by removing the waste grain, chaff, and debris from the walls and rafter as well as the floor and door frames with special attention to material lodged in the cracks and crevices.

All debris should be removed and turned to kill eggs and insects that might be present.

For farm storage, particular attention should be given to cleaning up around the used feed and grain bins, grain residues from wagons, harvesting equipment and feed troughs. Newly harvested grain should not be placed in the same bin with carry-over grain, and all carry-over grain stocks that are not treated with grain protectant should be fumigated. These cleaning operations should be done within two to three weeks before harvest.

After above sanitation measures have been employed, spray all areas prior to storage with 1 part to 2 parts water (1.6 fluid ounces with 1 gallon of water) up to 1 part to 6 parts (1 part with 1 gallon of water). Apply at the rate of 1 gallon per 750 square feet on walls, floors, ceilings and all interior surfaces of bins, paying particular attention to the area of cracks and crevices.

**NOT REGISTERED FOR USE IN THE STATE OF CALIFORNIA.**

---

**FOR USE AS A LIVESTOCK AND POULTRY SPRAY:**
1) To kill and repel Horn Flies, Horse Flies, Mosquitoes and Gnats, dilute at the rate of 1 to 3 fluid ounces per gallon of water and apply to wet hair thoroughly, paying particular attention to topknot, head, neck, rump and other areas. Repeat treatment at intervals of 5 to 7 days until infestation is under control or as needed when flies are swarming in large numbers.
2) To kill and repel Stable Flies, Horse Flies and Deer Flies, dilute at the rate of 2.5 to 4 fluid ounces per gallon of water and apply at a quart per small animal to wet hair thoroughly, paying particular attention to topknot, neck, rump and other areas. Repeat treatment every week as needed.

---

**STORAGE AND DISPOSAL:**
Do not contaminate water, food, or feed by storage or disposal.

**STORAGE:** Store in a cool, dry place. Keep container closed.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product should be disposed of on site or at an approved waste disposal facility.

**CONTAINER DISPOSAL:** Dispose of equipment (rakes, shovels, etc.) and packages following the instructions on the container or as required by State and Local authorities.
Leptoferm-5®
Leptospira Canicola-Grippotyphosa-Hardjo-Icterohaemorrhagiae-Pomona Bacterin

Description

- LEPTOFERM-5® contains chemically inactivated whole cultures of the 5 Leptospira serovars listed above.

Approved Uses

- For vaccination of healthy swine and cattle as an aid in preventing leptospirosis caused by L. canicola, L. grippotyphosa, L. hardjo, L. icterohaemorrhagiae, and L. pomona.

Key Features

- LEPTOFERM-5 provides protection against a highly contagious disease that can be transmitted from cattle to humans. Leptospira are quite hardy and can survive in standing water for up to 10 days. Infected cattle shed Leptospira in urine, sometimes for years, easily contaminating pastures, drinking water and feed. Infected cows may have late-term abortions and a marked decrease in milk production.
- All Leptospira serovars produce identical clinical signs, yet immunity to leptospirosis is serovar-specific. Vaccination with LEPTOFERM-5 provides protection against each serovar listed above.
- No significant postvaccination reactions were reported during developmental tests and in extensive field use.
- Recent studies have identified 2 distinct genotypes of L. hardjo in cattle. In challenge-of-immunity tests against both L. hardjo genotypes, leptospires were recovered from the urine of all controls, which continued shedding leptospires in the urine until necropsy at 31-49 days after challenge. Conversely, leptospires were not recovered from the urine or kidneys of any LEPTOFERM-5 vaccinates. Thus, efficacy of the L. hardjo fraction against both genotypes in cattle was confirmed. In challenge-of-immunity tests for the other 4 Leptospira serovars in LEPTOFERM-5, vaccinated animals remained healthy after challenge, while nonvaccinated animals developed clinical signs of leptospirosis.

Packaging

- 10 and 50 dose vials.

Dosage and Administration

- General Directions:
  Vaccination of healthy cattle is recommended. Shake well. Aseptically administer 2 mL intramuscularly. In accordance with Beef Quality Assurance guidelines, this product should be administered in the muscular region of the neck.

- Primary Vaccination:
  Administer a single 2 mL dose to healthy cattle.

- Revaccination:
Annual revaccination with a single dose is recommended.

Precautions

- Use entire contents when first opened.
- Sterilized syringes and needles should be used to administer this vaccine.
- Do not vaccinate within 21 days before slaughter.
- As with many vaccines, anaphylaxis may occur after use. Initial antidote of epinephrine is recommended and should be followed with appropriate supportive therapy.
- This product has been shown to be efficacious in healthy animals. A protective immune response may not be elicited if animals are incubating an infectious disease, are malnourished or parasitized, are stressed due to shipment or environmental conditions, are otherwise immunocompromised, or the vaccine is not administered in accordance with label directions.
- For veterinary use only.
- Store at 2°-7°C. Prolonged exposure to higher temperatures may adversely affect potency. Do not freeze.

Product Information
Material Safety Data Sheet

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entire article (printer friendly)

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The product information provided in this site is intended only for residents of the United States. The products discussed herein may have different product labeling in different countries.

The health information contained herein is provided for educational purposes only and is not intended to replace discussions with a healthcare provider. All decisions regarding patient care must be made with a healthcare provider, considering the unique characteristics of the patient.
Leptospira Canicola-Grippotyphosa-Hardjo-Icterohaemorrhagiae-Pomona Bacterin
Leptoferm-5®

**PRODUCT DESCRIPTION:** Leptoferm-5 is for vaccination of healthy swine and cattle as an aid in preventing leptospirosis caused by *Leptospira canicola, L. grippotyphosa, L. hardjo, L. icterohaemorrhagiae*, and *L. pomona*. Leptoferm-5 contains chemically inactivated whole cultures of those 5 *Leptospira* serovars.

**DISEASE DESCRIPTION:** Leptospirosis is a worldwide disease of animals and humans and causes serious economic loss to the livestock industry. The disease is usually transmitted by direct or indirect contact with leptospire-infected urine.

Leptospirosis in swine is characterized by poor productivity, fever, anemia, kidney inflammation, and abortions; late-term abortions are the most important effect. In calves, clinical signs of leptospirosis may include fever, prostration, loss of appetite, shortness of breath, anemia, and blood in the urine. In adult cattle, the most common clinical sign is reproductive loss, including abortion and premature or full-term birth of weak calves. Decreased milk production may also occur. *Leptospira* spp. are known zoonotic pathogens.

All the above *Leptospira* serovars produce identical clinical signs, yet immunity to leptospirosis is serovar-specific. Vaccination against each serovar, therefore, is indicated for protection.

**SAFETY AND EFFICACY:** During developmental tests and in extensive field use of Leptoferm-5, no significant postvaccination reactions were reported.

Although *L. hardjo* has been isolated from field cases of leptospirosis, attempts to experimentally induce clinical disease with that serovar had yielded unreliable results. Hence, no valid challenge-of-immunity tests on *L. hardjo* bacterin had been possible. Recent reports, however, have identified a method to induce clinical *L. hardjo* infection in cattle and have also identified 2 distinct genotypes of *L. hardjo* in cattle.

Accordingly, challenge-of-immunity tests were conducted to determine the efficacy of Leptoferm-5 against both *L. hardjo* genotypes. Seventeen healthy heifers were divided into 2 groups of 6 vaccinates each and a group of 5 nonvaccinated controls. Vaccinates were administered the *L. hardjo* fraction of Leptoferm-5 in 1- or 2-dose regimens. Subsequently all cattle were challenged with disease-causing strains of both *L. hardjo* genotypes. After challenge, leptospires were recovered from the urine of all controls, which continued shedding leptospires in the urine until necropsy at 31–49 days after challenge. Three controls (60%) also experienced fever and developed leptospires in the blood. Conversely, leptospires were not recovered from the urine or kidneys of any vaccinates, and leptospires were recovered from the blood of only 1 vaccinate (8%) for 1 day.

Thus, efficacy of the *L. hardjo* fraction against both genotypes in cattle was confirmed. These results are similar to results of previously conducted challenge-of-immunity tests on the other 4 fractions of Leptoferm-5 in both cattle and swine. In those studies also, vaccinated animals remained healthy after challenge, while nonvaccinated animals developed clinical signs of leptospirosis.

**DIRECTIONS:**
1. **General Directions:** Vaccination of healthy swine and cattle is recommended. Shake well. Aseptically administer 2 mL intramuscularly. In accordance with Beef Quality Assurance guidelines, this product should be administered in the muscular region of the neck.
2. **Primary Vaccination:** Administer a single 2-mL dose to healthy cattle. Healthy swine should receive 2 doses administered 3–6 weeks apart.

3. **Revaccination:** Annual revaccination with a single dose is recommended for both species.

4. Good animal husbandry and herd health management practices should be employed.

**PRECAUTIONS:**
1. Store at 2°–7°C. Prolonged exposure to higher temperatures may adversely affect potency. Do not freeze.

2. Use entire contents when first opened.

3. Sterilized syringes and needles should be used to administer this vaccine.

4. Do not vaccinate within 21 days before slaughter.

5. As with many vaccines, anaphylaxis may occur after use. Initial antidote of epinephrine is recommended and should be followed with appropriate supportive therapy.

6. This product has been shown to be efficacious in healthy animals. A protective immune response may not be elicited if animals are incubating an infectious disease, are malnourished or parasitized, are stressed due to shipment or environmental conditions, are otherwise immunocompromised, or the vaccine is not administered in accordance with label directions.

**REFERENCES:**


Technical inquiries should be directed to Pfizer Animal Health Technical Services, (800) 366-5288 (USA), (800) 461-0917 (Canada).

For veterinary use only

U.S. Veterinary License No. 189
Pfizer Animal Health
Exton, PA 19341, USA
Div. of Pfizer Inc
NY, NY10017
75-4475-03
MATERIAL SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION OF PRODUCT AND COMPANY

Pfizer Inc
Pfizer Animal Health
235 East 42nd Street
New York, NY 10017
Emergency telephone 1-866-531-8896
Hours of operation 24 Hours
Telephone 1-800-366-5288

Trade names Leptoferm-5
Product name Leptoferm-5
Synonyms Leptospira Canicola-Grippotyphosa-Hardjo-Icterohaemorrhagiae-Pomona Bacterin
Therapeutic use Veterinary Vaccine
Description Liquid solution

SECTION 2 - COMPOSITION

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS Number</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leptospira canicola</td>
<td>Not assigned</td>
<td>Proprietary</td>
</tr>
<tr>
<td>Leptospira grippotyphosa</td>
<td>Not assigned</td>
<td>Proprietary</td>
</tr>
<tr>
<td>Leptospira icterohaemorrhagiae</td>
<td>Not assigned</td>
<td>Proprietary</td>
</tr>
<tr>
<td>Leptospira hardjo</td>
<td>Not assigned</td>
<td>Proprietary</td>
</tr>
<tr>
<td>Leptospira pomona</td>
<td>Not assigned</td>
<td>Proprietary</td>
</tr>
<tr>
<td>Purified water</td>
<td>7732-18-5</td>
<td>&gt;90%</td>
</tr>
<tr>
<td>Non-hazardous ingredients</td>
<td>Not applicable</td>
<td>&lt;1.0%</td>
</tr>
</tbody>
</table>

Note: Ingredient(s) indicated as hazardous have been assessed under standards for workplace safety.

SECTION 3 - HAZARDS IDENTIFICATION

Signal word Not applicable
Statements of hazard Not applicable
Eye effects Not expected to cause eye irritation.
Skin effects Not expected to cause skin irritation.
Inhalation effects Repeated exposure to dust or mist may produce allergic reactions.
Ingestion effects Toxicity following ingestion is not expected. Ingestion should be avoided.
SECTION 3 - HAZARDS IDENTIFICATION ... continued

NOTE: This document has been prepared in accordance with standards for workplace safety, which require the inclusion of all known hazards of the product or its ingredients regardless of the potential risk. The precautionary statements and warnings included may not apply in all cases. Your needs may vary depending upon the potential for exposure in your workplace.

SECTION 4 - FIRST AID MEASURES

<table>
<thead>
<tr>
<th>Skin</th>
<th>Remove contaminated clothing and flush exposed area with large amounts of water. Obtain medical assistance if skin reaction occurs, which may be immediate or delayed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eyes</td>
<td>Immediately flush eyes with water for at least 15 minutes. If irritation occurs or persists, get medical attention.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>Remove to fresh air. If discomfort persists, get medical attention.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>In the event of swallowing this material, seek medical advice or consult the emergency contact listed in section 1.</td>
</tr>
</tbody>
</table>

SECTION 5 - FIRE FIGHTING MEASURES

<table>
<thead>
<tr>
<th>General hazard</th>
<th>This material is not expected to support combustion.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire fighting instructions</td>
<td>Wear approved positive pressure, self-contained breathing apparatus and full protective turn out gear. Move containers from fire area if possible without increased personal risk. Dike area if possible to contain water for later disposal.</td>
</tr>
<tr>
<td>Extinguishing media</td>
<td>Use carbon dioxide, dry chemical, or water spray.</td>
</tr>
<tr>
<td>Flash point</td>
<td>Non-flammable</td>
</tr>
<tr>
<td>Hazardous combustion products</td>
<td>Toxic or corrosive gases are expected in fires involving this mixture.</td>
</tr>
</tbody>
</table>

SECTION 6 - ACCIDENTAL RELEASE MEASURES

<table>
<thead>
<tr>
<th>General</th>
<th>Review Sections 3, 8 and 12 before proceeding with clean up.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small spill</td>
<td>Use non-combustible material to absorb spill; then place in a suitable, labeled recovery container. Clean spill area thoroughly. Prevent discharge to drains.</td>
</tr>
</tbody>
</table>
### SECTION 6 - ACCIDENTAL RELEASE MEASURES  ... continued

| Large spill                                      | Contain the source of the spill or leak if it is safe to do so. Collect spill with a non-combustible absorbent material and transfer to labeled container for disposal. Clean spill area thoroughly. Prevent discharge to drains. |

### SECTION 7 - HANDLING AND STORAGE

| General handling                                | Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. |
| Storage conditions                              | Follow product information storage instructions to maintain efficacy. Do not freeze. No other storage requirements are necessary concerning occupational hazards. |

### SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

| Ventilation                                     | Good general ventilation should be sufficient to control airborne levels. |
| Respiratory protection                          | Respirators are not required for normal use of this material. |
| Eye protection                                  | Wear safety glasses with sideshields if eye contact is possible. |
| Skin protection                                 | Wear protective clothing with long sleeves to avoid routine skin contact. Wash hands and arms thoroughly after handling this material. Clean up spills immediately. |
| Hand protection                                 | Wear latex or other impervious gloves if skin contact is possible. |

### SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

| Physical form                                   | Liquid Solution |
| Color                                          | No data available |
| Molecular weight                               | Mixture |
| Molecular formula                              | Mixture |
| pH                                             | Expected to be approx. neutral |
| Boiling point                                  | No data available |
| Melting point                                  | No data available |
| Density                                        | No data available |
| Vapor pressure                                 | No data available |
| Water solubility                               | Components are soluble in water |
| Solvent solubility                             | No data available |
SECTION 10 - STABILITY AND REACTIVITY

Reactivity
This mixture is stable

Conditions to avoid
Avoid freezing and storage at temperatures greater than 7° C.

Incompatibilities
This material can be denatured or inactivated by a variety of organic solvents, salts or heavy metals.

Hazardous decomposition products
None expected under normal conditions.

Hazardous polymerization
Not expected to occur

SECTION 11 - TOXICOLOGY INFORMATION

Acute toxicity

Eye
Not determined for this mixture. Not expected to cause eye irritation

Skin
Not determined for this mixture. Not expected to cause skin irritation.

Inhalation
Not determined for this mixture.

Ingestion
Not determined for this mixture. Toxicity is not expected following ingestion.

Mutagenicity
Not determined for this mixture.

Sensitization
Sensitization (allergic skin reaction) may occur, based on effects of individual components.

Subchronic effects
Not determined for this mixture.

Chronic effects/ carcinogenicity
Not determined for this mixture.

Carcinogen status
None of the components of this formulation is listed as a carcinogen by IARC, NTP or OSHA.

Reproductive effects
Not determined for this mixture.

Teratogenicity
Not determined for this mixture.

Additional information
This mixture contains a bacterin vaccine for use in cattle and calves and swine.

SECTION 12 - ECOLOGICAL INFORMATION

Environmental overview
The environmental characteristics of this mixture have not been fully evaluated. Releases to the environment should be avoided.
### SECTION 13 - DISPOSAL INFORMATION

| Disposal procedure | Observe all local and national regulations when disposing of this mixture. For large quantities, dispose of waste on site in a biomedical incinerator if allowed by the incinerator permit. If no on-site incinerator is available, dispose of waste in a licensed biomedical incinerator. |

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### SECTION 14 - TRANSPORTATION INFORMATION

| General shipping instructions | Not regulated for transport under USDOT, EUADR, IATA, or IMDG regulations. |

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### SECTION 15 - REGULATORY INFORMATION

<table>
<thead>
<tr>
<th>EU Classification</th>
<th>Not classified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canadian WHMIS</td>
<td>This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.</td>
</tr>
</tbody>
</table>

---

### SECTION 16 - OTHER

| Disclaimer | Pfizer Inc believes that the information contained in this Material Safety Data Sheet is accurate, and while it is provided in good faith, it is without a warranty of any kind, expressed or implied. |
Material Safety Data Sheet
ECO-PLUS CONCENTRATE

Section 1. Chemical product and company identification

<table>
<thead>
<tr>
<th>Trade name</th>
<th>ECO-PLUS CONCENTRATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product use</td>
<td>Teat dip</td>
</tr>
<tr>
<td>Supplier</td>
<td>Ecolab Inc, Food &amp; Beverage Division</td>
</tr>
<tr>
<td></td>
<td>370 N. Wabasha Street</td>
</tr>
<tr>
<td></td>
<td>St. Paul, MN 55102</td>
</tr>
<tr>
<td></td>
<td>1-800-392-3392</td>
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<tr>
<td>Code</td>
<td>911598-01</td>
</tr>
<tr>
<td>Date of issue</td>
<td>12-May-2005</td>
</tr>
</tbody>
</table>

EMERGENCY HEALTH INFORMATION: 1-800-328-0026
Outside United States and Canada CALL 1-651-222-5352 (In USA)

Section 2. Composition, information on ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS number</th>
<th>% by weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>glycerin</td>
<td>56-81-5</td>
<td>5 - 20</td>
</tr>
<tr>
<td>poly(1,2-ethanediyl).alpha-(nonylphenyl).omega-hydroxy, compd. with iodine</td>
<td>11096-42-7</td>
<td>20 - 50</td>
</tr>
</tbody>
</table>

Section 3. Hazards identification

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Liquid, (Liquid.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency overview</td>
<td>CAUTION!</td>
</tr>
</tbody>
</table>

MAY CAUSE EYE IRRITATION.
Repeated or prolonged contact with irritants may cause dermatitis.
Do not get in eyes or on skin or clothing. Avoid breathing vapor or mist. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.

Potential acute health effects

Eyes: Moderately irritating to eyes.
Skin: Slightly irritating to the skin.
Inhalation: No known significant effects or critical hazards.
Ingestion: No known significant effects or critical hazards.
See toxicological information (section 11)

Section 4. First aid measures

Eye contact: In case of contact, immediately flush eyes with cool running water. Remove contact lenses and continue flushing with plenty of water for at least 15 minutes. Get medical attention if irritation persists.
Skin contact: Wash with soap and water. Get medical attention if irritation develops. Wash clothing before reuse.
Inhalation: If inhaled, remove to fresh air.
Ingestion: Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If potentially dangerous quantities of this material have been swallowed, call a physician immediately.

Section 5. Fire fighting measures

Flash point: > 100°C
Product does not support combustion.
Products of combustion: These products are halogenated compounds.
Fire-fighting media and instructions: Use an extinguishing agent suitable for the surrounding fire.
Dike area of fire to prevent runoff.
No specific hazard.
Section 6. Accidental release measures

**Personal precautions**: Ventilate area of leak or spill. Do not touch damaged containers or spilled material unless wearing appropriate protective equipment (Section 8). Stop leak if without risk. Prevent entry into sewers, water courses, basements or confined areas.

**Environmental precautions**: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

**Methods for cleaning up**: If emergency personnel are unavailable, contain spilled material. For small spills, add absorbent (soil may be used in the absence of other suitable materials), scoop up material and place in a sealable, liquid-proof container for disposal. For large spills, dike spilled material or otherwise contain it to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal.

Section 7. Handling and storage

**Handling**: Avoid contact with eyes. Wash thoroughly after handling.

**Storage**: Keep out of the reach of children. Keep container tightly closed. Keep container in a cool, well-ventilated area.

Store between -30 and 50°C

Section 8. Exposure controls, personal protection

**Engineering controls**: Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits.

**Personal protection**: Eye protection recommended.

**Eyes**: No protective equipment is needed under normal use conditions.

**Hands**: No protective equipment is needed under normal use conditions.

**Skin**: No protective equipment is needed under normal use conditions.

**Respiratory**: No protective equipment is needed under normal use conditions.

**Name**: glycerin

**Exposure limits**: ACGIH TLV (United States, 9/2004). Notes: Inhalable fraction. See Appendix C, paragraph A. Inhalable Particulate Mass TLVs (IPM-TLVs) for those materials that are hazardous when deposited anywhere in the respiratory tract.

- **TWA**: 10 mg/m³ 8 hour/hours. Form: Mist
- **OSHA PEL**: (United States, 6/1993).
  - **TWA**: 5 mg/m³ 8 hour/hours. Form: Respirable fraction
  - **TWA**: 15 mg/m³ 8 hour/hours. Form: Total dust

Section 9. Physical and chemical properties

**Physical state**: Liquid. (Liquid.)

**Color**: Brown. (Dark.)

**Odor**: Iodine

**pH**: 4.2 (100%)

**Boiling/condensation point**: >100 °C

**Specific gravity**: 1.145 (Water = 1)

**Viscosity**: Dynamic: 350 cP

**Dispersibility properties**: Easily dispersed in cold water, hot water.

**Solubility**: Easily soluble in cold water, hot water.
Section 10. Stability and reactivity

Stability : The product is stable.
Reactivity : Slightly reactive to reactive with acids, alkalis.
Hazardous decomposition : These products are halogenated compounds.

Section 11. Toxicological information

Potential acute health effects
Eyes : Moderately irritating to eyes.
Skin : Slightly irritating to the skin.
Inhalation : No known significant effects or critical hazards.
Ingestion : No known significant effects or critical hazards.

Potential chronic health effects
Chronic effects on humans : Contains material which causes damage to the following organs: kidneys, upper respiratory tract, skin, eye, lens or cornea.

Section 12. Ecological information

Products of degradation : These products are carbon oxides (CO, CO₂) and water, halogenated compounds.

Section 13. Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Consult your local or regional authorities.

Section 14. Transport information

<table>
<thead>
<tr>
<th>Regulatory Information</th>
<th>UN number</th>
<th>Proper shipping name</th>
<th>Class</th>
<th>Packing group</th>
<th>Additional information</th>
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</thead>
<tbody>
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<td>Not regulated.</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

APPLIES ONLY DURING ROAD TRANSPORT
Any variation of the shipping description based on the packaging is not addressed.

Section 15. Regulatory information

HCS Classification : Imitating material
Target organ effects
U.S. Federal regulations : SARA 302/304/311/312 extremely hazardous substances: None.
SARA 302/304 emergency planning and notification: None.
TSCA 8(b) Inventory : All materials are listed or exempt.
California Prop. 65 : No products were found.

Section 16. Other information

Hazardous Material Information System (U.S.A.)
Health
Fire hazard
Reactivity
Personal protection

Date of issue : 12-May-2005.
Responsible name : Regulatory Affairs
ECO-PLUS CONCENTRATE

Date of previous issue: No previous validation.

Notice to reader

The above information is believed to be correct with respect to the formula used to manufacture the product in the country of origin. As data, standards, and regulations change, and conditions of use and handling are beyond our control, NO WARRANTY, EXPRESS OR IMPLIED, IS MADE AS TO THE COMPLETENESS OR CONTINUING ACCURACY OF THIS INFORMATION.
Bovine Rhinotracheitis-Parainfluenza-3 Vaccine
Modified Live Virus
For intranasal use

PRODUCT DESCRIPTION: TSV-2® is for vaccination of healthy cattle, including pregnant cows, as an aid in preventing infectious bovine rhinotracheitis caused by infectious bovine rhinotracheitis (IBR) virus and disease caused by parainfluenza-3 (PI-3) virus. The vaccine is prepared by growing attenuated virus strains on a bovine cell line. The vaccine fractions are combined and stabilized by freeze-drying. A sterile diluent is supplied for hydration.

TSV-2® is unique in that the virus strains it contains are temperature-specific. Tests have shown that they will not grow in vivo at or above 38°C, the normal bovine body temperature. This restricts viral replication to the nasal mucosa, which is constantly ventilated and maintained at temperatures less than 38°C, even in the febrile animal. At this localized site, the temperature-specific viruses replicate and stimulate local and systemic immunity. Because the temperature-specific strains cannot grow in the internal body organs or developing fetus, pregnant cows may be safely vaccinated. Stimulation of a localized immune response also results in a rapid onset of protection.

DISEASE DESCRIPTION: IBR is a prevalent viral respiratory disease characterized by fever, nasal discharge, conjunctivitis, a hyperemic nose, coughing, and increased respiration. In pregnant cows, IBR virus can also cause abortions.

PI-3 is a common viral respiratory infection, sometimes mild or inapparent, but often associated with bovine respiratory disease complex.

SAFETY AND Efficacy: Safety of the temperature-specific IBR strain was demonstrated in a test where it was administered to 1,019 pregnant cows in 12 herds. No abortions attributed to IBR were observed. In a controlled challenge- of-immunity test, 5 of 5 susceptible vaccinated cows were protected from a virulent IBR challenge that clinically affected all 5 nonvaccinated control calves. In a second challenge-of-immunity test, all 25 vaccinated calves were protected from a virulent PI-3 challenge that produced clinical signs or temperature increase in 8 of 17 nonvaccinated control calves. In an alloimmunization study, 2 pairs of susceptible calves remained clinically normal when subjected to contact challenge 172 and 48 hours after vaccination with virulent IBR virus. One calf challenged 24 hours post-vaccination remained normal, another exhibited mild clinical signs. All control calves and calves used for contact challenge were clinically affected.

DIRECTIONS:
1. General Directions: Vaccination of healthy cattle, including pregnant cows, is recommended. Aseptically rehydrate the freeze-dried vaccine with the sterile diluent provided, shake well, and administer 2 ml intranasally.

Leptospora Canicola-Grippophyosoma
Hardjo-Icterohaemorrhagiae-
Pomona Bacterin

Leptoform-S®

PRODUCT DESCRIPTION: Leptoform-S® is for vaccination of healthy swine and cattle as an aid in preventing leptospirosis caused by Leptospira canicola, L. grippophyosoma, L. hardjo, L. icterohaemorrhagiae, and L. pomona. Leptoform-S® contains chemically inactivated whole cultures of these 5 Leptospira serovars.

DISEASE DESCRIPTION: Leptospirosis is a worldwide disease of animals and humans and causes serious economic loss to the livestock industry. The disease is caused by Leptospira. Leptospirosis in swine is characterized by poor productivity, fever, anemia, kidney inflammation, and abortion; late-term abortions are the most important effect. In calves, clinical signs of leptospirosis may include fever, prostration, loss of appetite, lethargy, dyspnea, and blindness in the urol. In adult cattle, the most common clinical sign is reproductive loss, including abortion and premature or term birth of weak calves. Decreased milk production may also occur. Leptospirosis is a known zoonotic pathogen. At the above Leptospira serovars produce identical clinical signs, yet immunity to leptospirosis is serovar-specific. For protection, vaccination against each serovar, therefore, is indicated for protection.

Leptoform-S®

Patent by USA

0012
75-4475-12
Pfizer by USA
SAFETY AND EFFICACY: During developmental tests and in extensive field use of Leptoterm-5, no significant post-vaccination reactions were reported.

Although L. hardii has been isolated from field cases of leptospirosis, attempts to experimentally induce clinical disease with this serovar had yielded unsatisfactory results. Hence, no valid challenge-of-immunity tests on L. hardii bacteremia had been possible. Recent reports, however, have identified a method to induce clinical L. hardii infection in cattle and have also identified 2 distinct genotypes of L. hardii in cattle.

Accordingly, challenge-of-immunity tests were conducted to determine the efficacy of Leptoterm-5 applied both L. hardii genotypes. Seventeen healthy steers were divided into 3 groups of 6 steers each and a group of 5 nonvaccinated controls. Vaccinates were administered the L. hardii fraction of Leptoterm-5 in 1- or 2-dose regimens. Subsequently all cattle were challenged with disease-causing strains of both L. hardii genotypes. After challenge, leptospiruria were recovered from the urea of all controls, which continued shedding leptospirosis in the urine until recovery at 21–49 days after challenge. Three controls (50%) also excreted fever and developed leptospirosis in the blood. Conversely, leptospiruria were not recovered from the urine or kidneys of any vaccinated, and leptospirosis were recovered from the blood of only 1 vaccinated (16%) for 1 day.

Thus, efficacy of the L. hardii fraction against both genotypes in cattle was confirmed. These results are similar to results of previously conducted challenge-of-immunity tests on the other 4 fractions of Lepto-

DIRECTIONS:
1. General Directions: Vaccination of healthy swine and cattle is recommended. Shake well. Aspirate administer 2 ml intra-naturally. In accordance with Food Quality Assurance guidelines, this product should be administered in the muscular region of the neck.
2. Primary Vaccination: Administer a single 2-ml dose to healthy cattle. Healthy swine should receive 2 doses administered 3-6 weeks apart.
3. Revaccination: Annual revaccination with a single dose is recommended for both species.
4. Good animal husbandry and herd health management practices should be employed.

PRECAUTIONS:
1. Store at 2°-8°C. Prolonged exposure to higher temperatures may adversely affect potency. Do not freeze.
2. Use entire contents when first opened.
3. Standardized syringes and needles should be used to administer this vaccine. Do not use with other medications.
4. Do not vaccinate within 21 days before slaughter.
5. As with any vaccines, anaphylaxis may occur after use. Initial anasto-

REFERENCES:
1. Ray WR, Johnson RC: Current status of leptospirosis vaccines. Progress
Bovine Rhinotracheitis-Virus Diarrhea-Parainfluenza 3-Respiratory Syncytial Virus Vaccine

Modifed Live Virus

Bovi-Shield® GOLD 5

**PRODUCT DESCRIPTION:** Bovi-Shield GOLD 5 is for vaccination of healthy cattle as an aid in preventing infectious bovine rhinotracheitis caused by infectious bovine rhinotracheitis (IBR) virus, bovine viral diarrhea caused by bovine virus diarrhea (BVD) virus Types 1 and 2, and disease caused by parainfluenza 3 (PI3) virus and bovine respiratory syncytial virus (BRSV). Bovi-Shield GOLD 5 may be administered to pregnant cattle provided they were vaccinated, according to label directions, with Bovi-Shield FP® 4+LS, Bovi-Shield FP 4+VL5, Bovi-Shield GOLD FP 5 LS, Bovi-Shield GOLD FP 5 VL5, PregGuard® FP 9 or PregGuard GOLD FP 10 within the past 12 months. Bovi-Shield GOLD 5 may also be administered to calves nursing pregnant cows provided their dams were vaccinated within the past 12 months as described above. Bovi-Shield GOLD 5 is a freeze-dried preparation of modified live virus (MLV) strains of IBR, BVD Types 1 and 2, PI3, and BRSV viruses, plus a sterile diluent used to rehydrate the freeze-dried vaccine. Viral antigens are propagated on established cell lines.

**DISEASE DESCRIPTION:** IBR, BVD, PI3, and BRSV viruses are commonly associated with respiratory disease and/or reproductive failure in cattle. IBR virus infection is characterized by high temperature, excessive nasal discharge, conjunctivitis, and ocular discharge, inflamed nose ('red nose'), increased rate of respiration, coughing, loss of appetite, and depression. Cattle infected during pregnancy may abort.

BVD virus may be transmitted in nasal secretions, saliva, blood, feces, and/or urine, and by direct contact with contaminated objects; it invades through the nose and mouth and replicates systemically. Infection during pregnancy may result in abortion, fetal resorption, or congenital malformation of the fetus. Moreover, if susceptible cows are infected with noncytopathic BVD virus during the first trimester of pregnancy, their calves may be born persistently infected with the virus. Exposure of those calves to certain virulent cytopathic BVD virus strains may precipitate BVD mucosal disease. Both BVD Types 1 and 2 can show a variety of clinical signs. The signs may be mild and not readily apparent. Clinical signs may include severe immune suppression, diarrhea, anorexia, depression, fever, and respiratory disease. If infected with some Type 2 strains of BVD, severe thrombocytopenia may occur and hemorrhaging may be seen.

PI3 virus usually localizes in the upper respiratory tract, causing elevated temperature and moderate nasal and ocular discharge. Although clinical signs typically are mild, PI3 infection weakens respiratory tissues. Invasion and replication of other
A back page is visible through the image, but the text is not visible or legible. The image does not contain any readable text.
**Iovi-Shield GOLD®**

**PRODUCT DESCRIPTION:** Iovi-Shield GOLD® FP 5 L5 is for vaccination of healthy heifers and bulls prior to breeding. It is an inactivated, avirulent strain of bovine rhinotracheitis virus (BRV) and bovine respiratory syncytial virus (BRSV). It is used to protect calves against BRV and BRSV infections. It is administered intranasally or by intramuscular injection, depending on the age and size of the animal.

**FUNCTIONALITY:**
- **BRV:** Protects against BRV respiratory disease, which can lead to pneumonia and bronchitis.
- **BRSV:** Protects against bronchopneumonia, a common respiratory disease in calves.

**ADMINISTRATION:**
- Intranasal: 1 to 2 ml per nostril
- Intramuscular: 1 ml per dose

**SAFETY AND EFFICACY:** The vaccine is safe and effective when administered according to the recommended dose and schedule. It provides long-term immunity against BRV and BRSV infections.

**CONTRAINDICATIONS:**
- Hypersensitivity to any component of the vaccine
- Animals with respiratory distress or other signs of clinical illness

**SIDE EFFECTS:** Rare cases of local reactions at the injection site have been reported.

**DOSAGE AND ROUTINE:**
- For heifers and bulls: 1 dose 1 to 3 weeks before breeding
- For newborn calves: 1 dose at 2 to 3 weeks of age

**STORAGE:** Store at 2°C to 8°C. Prolonged exposure to higher temperatures may adversely affect potency. Do not freeze.

---

**Piizer Animal Health**

**For Veterinary Use Only**

**Veterinary License No. 180**

---

**PIEZAR VIRUS**

**DESCRIPTION:**
- **Rhinotracheitis Virus**
- **Bovine Parainfluenza-3 Respiratory Syncytial Virus**

**INDICATIONS:**
- Protection against respiratory diseases in calves and cattle

**ADMINISTRATION:** Intranasal: 1 to 2 ml per nostril

**SAFETY:**
- Safe for use in calves and cattle
- Hypoallergenic

**STORAGE:** Store at 2°C to 8°C.
ELECTROID® 7 VACCINE

Schering-Plough

Clostridium Chauvoei-Septicum-Novyi-Sordellii-Perfringens Types C & D Bacterin-Toxoid

INDICATIONS

For the vaccination of healthy cattle against diseases caused by Clostridium chauvoei, Cl. septicum, Cl. sordellii, Cl. novyi Type B and Cl. perfringens Types C and D.

Although Clostridium perfringens Type B is not a significant problem in the USA, immunity may be provided against the beta and epsilon toxins elaborated by Cl. perfringens Type B. This immunity is derived from the combination of Type C (beta) and Type D (epsilon) fractions.

CAUTION

Store at 35°-45°F (2°-7°C), Protect from freezing. Use entire contents when first opened. Do not vaccinate within 21 days before slaughter. Anaphylactoid reactions may occur following use.

Antidote: Epinephrine.

ADMINISTRATION AND DOSAGE

Shake well. Using aseptic technique, inject subcutaneously or intramuscularly. Dosage: 5 mL, repeated in 3 to 4 weeks. Revaccinate annually with 5 mL prior to periods of extreme risk, or parturition. For Cl. novyi, revaccinate every 5 to 6 months. Animals vaccinated under 3 months of age should be revaccinated at weaning or 4 to 6 months of age.

PRECAUTIONS

This product has been tested under laboratory conditions and has met all Federal standards for safety and efficacy. This level of performance may be affected by conditions of use such as stress, weather, nutrition, disease, parasitism, other treatments, individual idiosyncrasies or impaired immunological competency. These factors should be considered by the user when evaluating product performance or freedom from reactions. Local reactions may be observed following subcutaneous administration to cattle.

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Schering-Plough Animal Health Corp., Omaha, NE 68103 U.S.A.
Manufactured by SCHERING-PLOUGH ANIMAL HEALTH LIMITED, UPPER HUTT, NEW ZEALAND
Distributed by SCHERING-PLUGH ANIMAL HEALTH CORP., OMAHA, NE 68103 U.S.A.
U.S. Veterinary Permit No. 311

For veterinary use only

<table>
<thead>
<tr>
<th></th>
<th>NDC-</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 mL</td>
<td>10 doses</td>
</tr>
<tr>
<td>250 mL</td>
<td>50 doses</td>
</tr>
<tr>
<td>1,000 mL</td>
<td>200 doses</td>
</tr>
</tbody>
</table>

NAC No.: 10470561

An Aid in Reducing the Spread of Organisms Which May Cause Mastitis

ACTIVE INGREDIENT: Iodine.................................................................................................1.0% INACTIVE INGREDIENTS: .............................................................................................................99.0% (Contains an emollient system.)

FOR COMMERCIAL USE ONLY
KEEP OUT OF REACH OF CHILDREN
NOT FOR HUMAN USE

CAUTION
Not for internal use. May cause eye irritation. No protective equipment is necessary under normal use conditions. If splashing may occur, eye protection is recommended.

FIRST AID
If In Eyes: Immediately flush eyes with plenty of cool, running water. Remove contact lenses; then continue flushing for at least 15 minutes, holding eyelids apart.
If Swallowed: Rinse mouth; then immediately drink 1 or 2 large glasses of water. DO NOT induce vomiting. Never give anything by mouth to an unconscious person.

IF IRRITATION OR DISCOMFORT PERSISTS, CALL A PHYSICIAN.

FOR EMERGENCY MEDICAL INFORMATION IN USA OR CANADA, CALL: 1-800-328-0036.
FOR EMERGENCY MEDICAL INFORMATION WORLDWIDE, CALL: 1-651-222-5352 (IN THE USA).

Formula ingredients contain no Phosphorus.

Preparation Date: __________________________
Lot Code: __________________________

DIRECTIONS FOR USE

IMPORTANT: Do not mix Eco-Plus 100 with water, any other teat dips, or other products unless specified in product use instructions. If transferred from this container to any other, make sure that the other container is thoroughly pre-cleaned and bears the proper container labeling for Eco-Plus 100.

If product in dip cup becomes visibly dirty, discard contents and replenish with undiluted product. Do not reuse or return any unused product to the original container.

Before Milking: Wash teats thoroughly just prior to next milking with appropriate udder wash solution or pre-milking teat dip to avoid contamination of milk. Teats should then be dried with single-service towels. Use proper procedures for udder washing or pre-dipping.

Directions for Teat Dipping
Pre-Milk Dipping: Fill teat dip cup with Eco-Plus 100. Do not dilute. Before each cow is milked, dip each teat full-length into the teat dip cup containing Eco-Plus 100. Wipe teats dry after dipping, using single-service towels to avoid contamination of milk.
Post-Milk Dipping: Immediately after each milking, use Eco-Plus 100 at full-strength. Dip each teat full-length into the teat dip cup containing Eco-Plus 100. Allow to air dry. Do not wipe. Always use fresh, full-strength Eco-Plus 100. Do not turn cows out in freezing weather until Eco-Plus 100 is completely dry.

Directions for Teat Spraying
Pre-Milk Spraying: Before each cow is milked, spray entire teat with Eco-Plus 100. Wipe teats after spraying using single-service towels to avoid contamination of milk.
Post-Milk Spraying: Immediately after each milking, use Eco-Plus 100 at full-strength. Spray entire teat with Eco-Plus 100. Allow to air dry. Do not wipe. Always use fresh, full-strength Eco-Plus 100. Do not turn cows out in freezing weather until Eco-Plus 100 is completely dry.

Expanded Usage: When freshening cows, begin dipping teats twice daily for about 10 days before calving.

PRECAUTION: Eco-Plus 100 is not intended to cure or help the healing of chapped or irritated teats. As with any germicide, irritation or sensitization may occur in sensitive animals. In case of teat irritation or chapping, have the condition examined and, if necessary, treated by a veterinarian.
DIRECTIONS FOR USE

IMPORTANT: Do not mix Eco-Plus 50 with water, any other teat dips, or other products unless specified in product use instructions. If transferred from this container to any other, make sure that the other container is thoroughly pre-cleaned and bears the proper container labeling for Eco-Plus 50.

If product in dip cup becomes visibly dirty, discard contents and replenish with undiluted product. Do not reuse or return any unused product to the original container.

Before Milking: Wash teats thoroughly just prior to next milking with appropriate udder wash solution or pre-milking teat dip to avoid contamination of milk. Teats should then be dried with single-service towels. Use proper procedures for udder washing or pre-dipping.

Directions for Teat Dipping

Pre-Milk Dipping: Fill teat dip cup with Eco-Plus 50. Do not dilute. Before each cow is milked, dip each teat full-length into the teat dip cup containing Eco-Plus 50. Wipe teats dry after dipping, using single-service towels to avoid contamination of milk.

Post-Milk Dipping: Immediately after each milking, use Eco-Plus 50 at full-strength. Dip each teat full-length into the teat dip cup containing Eco-Plus 50. Allow to air dry. Do not wipe. Always use fresh, full-strength Eco-Plus 50. Do not turn cows out in freezing weather until Eco-Plus 50 is completely dry.

Directions for Teat Spraying

Pre-Milk Spraying: Before each cow is milked, spray entire teat with Eco-Plus 50. Wipe teats after spraying using single-service towels to avoid contamination of milk.

Post-Milk Spraying: Immediately after each milking, use Eco-Plus 50 at full-strength. Spray entire teat with Eco-Plus 50. Allow to air dry. Do not wipe. Always use fresh, full-strength Eco-Plus 50. Do not turn cows out in freezing weather until Eco-Plus 50 is completely dry.

Expanded Usage: When freshening cows, begin dipping teats twice daily for about 10 days before calving.

PRECAUTION: Eco-Plus 50 is not intended to cure or help the healing of chapped or irritated teats. As with any germicide, irritation or sensitization may occur in sensitive animals. In case of teat irritation or chapping, have the condition examined and, if necessary, treated by a veterinarian.

FIRST AID

If in Eyes: Immediately flush eyes with plenty of cool, running water. Remove contact lenses; then continue flushing for at least 15 minutes, holding eyelids apart.

If Swallowed: Rinse mouth; then immediately drink 1 or 2 large glasses of water. DO NOT induce vomiting. Never give anything by mouth to an unconscious person.

IF IRRITATION OR DISCOMFORT PERSISTS, CALL A PHYSICIAN.

FOR EMERGENCY MEDICAL INFORMATION IN USA OR CANADA, CALL: 1-800-328-4026.

FOR EMERGENCY MEDICAL INFORMATION WORLDWIDE, CALL: 1-651-222-5322 (IN THE USA).

Formula ingredients contain no Phosphorus.

Preparation Date: __________________________

Lot Code: __________________________
948869-14
Product: 0.5% IODINE TEAT DIP
ECOLAB FOOD & BEVERAGE DIVN.
MEDICAL EMERGENCY ONLY, 24 HOUR SERVICE: 1-800-328-0026

7.0 HEALTH HAZARD DATA /
CAUTION

7.1 Effects of Overexposure to Concentrate:
Eyes: May cause irritation.
If Swallowed: May cause stomach distress, nausea or vomiting.

8.0 FIRST AID /

8.1 Eyes: Flush immediately with plenty of cool running water. Remove contact lenses, if used, and flush again.
8.2 If Swallowed: Rinse mouth; then drink 1 or 2 large glasses of water. DO NOT induce vomiting. Never give anything by mouth to an unconscious person.

IF IRRITATION OR DISCOMFORT PERSISTS, CALL A PHYSICIAN.

9.0 PROTECTIVE MEASURES /

9.1 CONCENTRATE:
Eyes: Eye protection is recommended.

10.0 ADDITIONAL INFORMATION/PRECAUTIONS /


KEEP OUT OF REACH OF CHILDREN

The above information is believed to be correct with respect to the formula used to manufacture the product. As data, standards and regulations change, and conditions of use and handling are beyond our control, NO WARRANTY, EXPRESS OR IMPLIED, IS MADE AS TO THE COMPLETENESS OR CONTINUING ACCURACY OF THIS INFORMATION.
51431006 MATERIAL SAFETY DATA SHEET  Page 1 of 2
MEDICAL EMERGENCIES ONLY (24 Hour Service): 1-800-328-0026
Medical Calls from Outside of the USA: 1-612-851-8162

ECOLAB FOOD & BEVERAGE DIVN.
Ecolab Center St. Paul MN 55102
Product Information: 1-800-392-3392  Issue Date: May 6, 1999

1.0 IDENTIFICATION

1.1 Product Name: 0.5% IODINE TEAT DIP
1.2 Product Type: Iodine Teat Dip
1.3 Hazard Rating: Health: 0  Fire: 0  Reactivity: 0

2.0 HAZARDOUS COMPONENTS

2.1 This product is not considered hazardous according to the criteria of 29 CFR 1910.1200. It does not contain any substance listed in SARA 313. It is not a DOT hazardous material.
2.2 It does contain complexed iodine at less than 1%.

3.0 PHYSICAL DATA

3.1 Appearance: Dark brown liquid
3.2 Solubility in Water: Mixes with water in all proportions
3.3 pH: 3.6 - 4.2 (100%)
3.4 Initial Boiling Point: >212 deg F
3.5 Specific Gravity: 1.020 @ 68 deg F

4.0 FIRE AND EXPLOSION DATA

4.1 Special Fire Hazards: None
4.2 Fire Fighting Methods: Does not support combustion.

5.0 REACTIVITY DATA

5.1 Stability: Stable under normal conditions of handling.
5.2 Conditions to Avoid: Do not mix with any other product. Do not store or use at temperatures above 115 deg F.

6.0 SPILL OR LEAK PROCEDURES

6.1 Cleanup: Dike or dam large spills, soak up on inert absorbent or pump to suitable containers. Neutralize residual iodine with sodium thiosulfate or sodium sulfite. Flush residue to sewer with plenty of water.
6.2 Waste Disposal: Rinse empty container thoroughly with water before discarding. Do not reuse container.
All Other Products

Hydron S/R Dispenser 6.0-8.0

Catalog 345  F01-SHTRG-060080-12RD

Price
$49.95 Flach
544.66 Centr10

Unit Of Measure: Each

VIEW LARGER IMAGE

This short range Hydron pH Paper is excellent for measuring pH solutions around neutral pH 7.00 and others clear bright single color matching at every 0.2 to 0.3 interval from pH 6.0 to 8.0.

This color chart has pH matches at 6.0, 6.5, 7.0, 7.5, 8.0.

Hydron pH Paper is a general use pH paper. A sample of its diverse pH applications includes:

Classroom Demonstrations
Hospital Laboratories
General Laboratories
Industrial Testing
Food Service
Safety Testing
Emergency Testing
Agricultural Testing

Each 100-sheet roll contains 10 kits, each consisting of a 15-foot roll of test paper and matching color chart. Provides for approximately 1000 tests.

Simply tear off a small strip of pH paper, dip into the test solution, then instantly compare the resulting color with the matching pH color chart.

Disclaimer: All information on this web site is for informational purposes only. Under no circumstances is any product on this site intended to diagnose, treat, cure or prevent any disease or condition. Please contact a medical doctor to diagnose and treat any medical condition.

https://www.microessentiallab.com/ProductInfo/F01-SHTRG-060080-SRD.aspx  07/13/2010