Appendix 7: Organic Dairy Scorecard Ratings – Assumptions

Ownership Structure

Cornucopia considered each dairy brand's ownership structure. We collected this information because ownership structure relates to the control and verification of marketing claims. In practical effect, a farmer who lives and works on their dairy is going to have more control over their supply than a corporate officer coordinating purchasing from dozens or hundreds of individual farms. This is also true of brands who blindly accept the claims their suppliers of raw milk, or finished products as with private label brands from another organization.

The majority of the dairy brands that voluntarily participated in our study are independent and family-owned and produce all of the dairy products they market under their brand. The next highest rated ownership category is family-owned businesses that produce some dairy products themselves and buy raw milk from other family farmers to supplement their own production.

1. Ownership structure	
100	Farmstead dairy (owned and operated by farm family)
90	Farmer-owned cooperative (or similar)
80	Family-owned business—close ties/partnership with farmers
70	Corporate/investor owned—deep roots/ties with farmers
60	Investor-owned corporations and LLCs
25-50	Investor-owned corporation with questionable track record
0-25	Any ownership structure with history as "bad actor."
0	No answer

Milk Supply

A brand's milk supply is a primary driver in how much control the brand has in conforming to the marketing claims they make in public, and standards they have articulated in their survey to Cornucopia. Cornucopia finds that brands with strong control over the quality of their raw milk are more likely to produce ethical products. In this respect, hands-on brands that either participate in milk production or have a strong review process and internal standards garner a higher rating.

2. Milk supply	
100	Farmstead dairy—100% of milk from farm.
95	Farmstead dairy—buys additional milk from neighbors
90	Cooperative /multiple farms—own patrons
80	50% own patrons plus a highly rated supplier
70	Purchases outside milk from highly rated suppliers

50	Purchases farm milk out without direct control
0-30	Purchases some percentage of milk from "open market"
0-30	Purchases some percentage of milk from confinement dairies
	(depending on percentage)
0	No answer

Organic Production

Brands that focus exclusively on organic production are generally more dedicated to organic integrity. They truly have "skin in the game." If the organic label is untrustworthy in the eyes of the consumer, they could lose big. Cornucopia asks for this information to determine a brand's "commitment to organics."

"Split" operations have to juggle keeping organic and conventional products separate. The practice of organic and conventional production taking place on the same farm is not forbidden under the organic standards. It's a weakness in the USDA standards.

3. Organic production	
100	100% organic farm(s), brand does not market conventional
70	Brand markets both organic & conventional dairy products
	that come from organic-only or conventional-only operations
60	Company markets only organic, even though the dairy farms
	may have both organic and non-organic
40	Split operations with organic and conventional dairy
	production on different properties
20	Split operations with organic and conventional dairy on same
	property
0	No answer

Farm Size

In this set of question, brands were asked to give information regarding their largest farm suppliers. This data was used to fact check other answers, including whether a farm's pasture would be adequate to support the number of cattle.

	4-5. Size of farms/large farms	This information was provided so that Cornucopia could fact- check the brand's other answers. This goes to the brand's transparency score.
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Organic Certifier

Cornucopia takes into account a brand's certifier because some have a better track record than others. Certifier scores reflect their treatment of operations who are skirting the law. Certifier policies are also taken into account. In general, Cornucopia gives certifiers the benefit of the doubt until caught in some wrongdoing (for example: certifying operations that have been found to be operating illegally).

6. Organic certification	
Certifier	
100	Baystate Organic Certifiers
100	Organic Alliance International
100	MOFGA
100	Maryland Dept. of Agriculture
100	Midwest Organic Services Association (MOSA)
100	Montana Dept. of Agriculture
100	Nature's International Certification Services (NICS)
100	New Jersey Department of Agriculture
100	Northeast Organic Farming Association (NOFA)
100	Ohio Ecological Food and Farming Association
100	Oklahoma Agriculture Department
100	Organic Crop Improvement Association
100	Stellar Certification Services
100	Utah Dept. of Agriculture
100	Vermont Organic Farmers (VOF)
100	Washington Dept. of Agriculture
100	Marin Organic Certified Agriculture (MOCA)
100	Organic Certifiers
100	International Certification Services (ICS)
100	EcoCert ICO
100	A Bee Organic Certified
100	Global Culture
100	Organic Certifiers
100	New Mexico Dept. of Agriculture
100	OneCert
85	Pennsylvania Certified Organic (PCO)
85	New Hampshire Dept. of Agriculture
85	Natural Food Certifiers
85	Quality Certification Services (QCS)
85	Iowa Department of Agriculture
75	Texas Department of Agriculture
75	California Certified Organic Farmers (CCOF)
75	Quality Assurance International (QAI)
75	Global Organic Alliance
75	Oregon Tilth Certified Organic (OTCO)
0	No Answer

Other Labels and Standards

The USDA organic label is the only federally backed label that verifies how a product was made. While the USDA organic label is important, some third party labels do provide reliable information about a product that the organic label may or may not cover. As

already discussed in this report, some of these third-party labels can be misleading. For example, a "Non-GMO" label is redundant if alongside the organic seal, because all organic products are required to be produced without using GMOs or ingredients that were produced with GMOs.

Our rating system is based on the third-party label standards and especially on their oversight. Consumers will find that those labels Cornucopia rates highly add something above and beyond organic certification.

7. Other labels and standards	
100	Animal Welfare Approved, Biodynamic Certified (Demeter
	Association)
90	Certified Naturally Grown
80	Salmon Safe, Wildlife Friendly, Predator Friendly, PCO 100%
	Grassfed Certification
60	Certified Humane (HFAC), Food Alliance Certified; American
	Grassfed Certified
40	American Humane Certified (AHA), Global Animal
	Partnership, Non-GMO Project verified
0	None, no answer
	Other:

Grass-Fed

As discussed in this report, the market for "grass-fed" dairy is blossoming. All organic dairy cows are required to spend some time on grass, so many organic dairy products advertise as "grass-fed" even if they are not 100% grass-fed. Top scores are given to those brands that have some outside verification that they are truly "100% grass-fed" (note that "100% grass-fed" may still mean these animals stored hay or other forage in the winter, along with non-grain supplements).

8. Grass fed	
100	100% grass-fed with independent verification of standards or independent requirements and practices that ensure compliance
90	100% grass-fed farmstead dairy with individual standards
50-80	Markets "Grass-fed" or "pasture-raised" and/or has over 50% DMI from pasture during the grazing season (feeds some grain)
40	Confirmed that the brand meets minimum organic standards for grazing
0	No answer

Soy Free

Because soy is a common allergen, many consumers are interested in products that are soy-free. Other consumers (as an example, those who follow a diet recommended by the Weston A Price foundation) also try to eliminate soy from their diets. This information is

provided for consumer benefit without any associated rating. Some dairies feed soy as a protein source. If a brand is 100% grass-fed, it is assumed that brand is also "soy free," even if they do not advertise as such.

9. Soy-free ration	Added for additional information to consumers.

Pasture Access

In general, the best animal welfare and pasture quality occurs when you see dairies that allot at least one acre per cow or more (that designation will vary for goat and sheep dairies, given the difference in animal size). In areas that grow exceptionally good grass, two or more cows can also possibly be accommodated with excellent management, so location is factored in as part of the scoring equation (as is irrigation for pasture, where necessary).

How a farm grazes their cattle also affects the quality of their milk. For example, many dairies use rotational grazing practices, where larger pastures are split into smaller subsections. These sections are then grazed until the grass is at a certain point, and then the cows are moved to a fresh strip or padlock and the old acreage is allowed to "rest" and regrow. This ecologically sound practice not only prevents environmental degradation but also produces milk with superior nutritional components.

Cornucopia stands by the principle that larger farms can graze their cows just as well as small farmstead dairies, given the desire to do so and the requisite management expertise. However, in practical terms it is difficult to graze large numbers of cows.

10. Pasture	Rating is based on the following criteria: (a) policies requiring pasture in addition to USDA regulations, (b) enforcement/oversight, (c) amount of acreage available per cow on the brand's largest farms, (d) average days cows are on pasture per year, (e) permissible exemptions

Number of Times Milked

It is standard practice for family-scale and organic dairies to milk their cows twice a day. Those dairies that milk three and four times a day are pushing their cows hard to maximize production. This production model requires feeding higher levels of grain and other feed concentrates and impacts how long cows can be outside, grazing on pasture. The welfare of a dairy animal is impacted when they pushed for high production often resulting in short, stressed, and unhealthy lives.

11. Times milked	The standard is 2x a day; denote for consumers if non-
	standard.

100	One time per day
90	Two times per day (standard practice)
25	Three times per day
0	Four times per day or no answer

Cull or Death Rate

Although not common, the average, healthy and productive cows can and do live beyond ten years of age. In intensive factory farm dairies a cow's life is truncated by the stress of a high-grain diet and intensive milk production. These industrial cows often only live to be 3 to 5 years old before they are culled (sent to slaughter).

One indication of an ethical and productive organic dairy is that they will have surplus young cattle to sell, rather than having to purchase replacements. When Cornucopia researchers see a high cull rate coupled with farms buying replacements from outside sources, it raises red flags. This combination could be an indication that the brand's farms are buying conventional heifers, taking advantage of the perceived "origin of livestock" problem. For this rating, Cornucopia took into account planned downsizing (which would make a brand's cull rate look higher than otherwise warranted) and other mitigating factors, including healthcare concerns.

12. Cull/death rate	Rating is based on the health and longevity of a farm's cattle, taking into account the farm's slaughter rate/cull rate.
100	Under 10% annually
75	Under 15% annually
15-60	Over 15%
0	Don't know or no answer

Replacement Cattle

A "closed herd" is one where the brand's farm(s) raise all their own replacement cattle. In short, the female calves born to the milking herd are used to replace lost or culled stock. This gives the farmer the most control over their stock and their dedication to organics. It also allows farmers to have close control over their herd genetics and assures a higher level of biosecurity.

Purchasing conventional animals and transitioning them to organic production is something Cornucopia downgrades.

13. Replacement Cattle	
100	Closed herd
90	All replacement animals managed organically from last third
	of gestation
0-50	Conventional animals purchased (depending on percentage

	of herd)
5	Calves sold at birth and conventional cattle purchased to replace via transitioning
0	No answer

Calves

Unique ways of managing calves or other young dairy animals include keeping them with their mothers for an extended period of time, using nurse cows, integrating calves in with the dairy herd, etc.

14. Calves	
80-100	Unique way of managing calves
70	Remove calf from mother shortly after birth (standard practice)
0	No answer

Antibiotic Use

In general, antibiotic use is prohibited in organic production. Any cows that need to receive antibiotics for their health must immediately be removed from the milking herd (and they are not allowed to return to the milking herd). However, some certifiers have permitted slight modifications to this prohibition (allowing young stock, prior to a year before being milked, to receive antibiotics). In our opinion this practice is not legal. Cornucopia is also interested in noting those brands that purchase conventional cattle as heifers and rotate them into organic production. These animals may have been lightly been administered antibiotics as calves.

15. Antibiotic use	
100	All antibiotic use prohibited
75	Not regulated by firm (default to some certifier standards where antibiotic use allowed during first year of life)
60	Milk withheld for one year before considering organic again
25	Commercial replacement cattle purchased—antibiotic use unknown
5	Calves are sold (to take advantage of loophole), and managed conventionally for first year of life
0	No answer

Hormone Usage

Growth hormones are not allowed for use in organic production. However, some reproductive hormones are allowed for therapeutic use. Oxytocin is currently allowed for "use in post-parturition therapeutic applications." In laymen terms, oxytocin is typically used to help cows recover from a difficult birth. Some dairies, however, do not ever use this hormone, even for therapeutic applications.

16. Hormone usage	It should be noted that hormones for increasing milk
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	production (genetically engineered bovine growth hormone—rBGH/rBST) are prohibited in organic dairy production. Some farms choose to use therapeutic hormones during reproduction (oxytocin).
100	No hormones used on farm
50	Hormones used therapeutically
0	No answer

Farm Support

The rating for "farm support" has everything to do with oversight. In the words of one farmstead producer, when asked for how often there farms are visited by company representatives: "We live here." Characteristically, farmstead dairy producers are with their cows every day and personally supervise the production of the dairy products. Some organizations have a dedicated field staff, or the owner visits with the organic farmers regularly. Others might visit annually or exclusively depend on certification and inspectors (which do not typically verify proprietary standards over and above what the USDA mandates).

17. Farm support	
100	Farmstead dairies (owner farms/lives on-site)
90	Cooperative/corporation that sets standards and has a staff that visits farms regularly (or similar situation)
80	Visits a minimum of once a year
60	Depends on trusted third-party for supervision
5	No direct supervision/no personal relationship with farm
0	No answer

Procurement of Dairy Ingredients/Components

Some products are produced using other dairy ingredients or components. For example, some yogurts might require milk powder in their formulation. Because other ingredients or components are part of the big picture in an organic dairy product, it is important to ensure they come from a high-quality organic source. After all, they represent, indirectly, milk production that may or may not be commensurate with the quality of the milk they produce themselves or purchases (to which the balance of these survey questions apply).

18. Procurement of	
Ingredients/Components	
100	Full control – 100% of dairy products come from within the
	organization
90	Outside purchases are confirmed from other highly rated
	dairy organizations
50	Dairy ingredients purchased from a number of different
	vendors, with less direct control
25	Purchases from anonymous suppliers—"open market";
	purchases internationally
0-24	Purchases ingredients from confinement factory farms

	(depending on percentage) or imports
0	No answer

Marketing Area

The marketing area is provided for consumers to assist in finding highly rated brands. This information is included so that consumers can search by their state and also get details about which retailers may carry specific products.

19. Marketing area	Information about where consumers can find this brand's
0	products available at retail.

Extra Credit

Extra credit opportunities emphasized brand transparency and willingness to open their inner-workings to investigators. Transparency is avoided by factory-organic brands and so can be one distinguishing factor between ethical and factory-organic brands. This included producers sharing their organic systems plan (OSP). The OSP is a detailed description of the practices and procedures used by an organic operation to produce whatever organic goods they have. Operations must update their OSP annually or as changes occur (this document is supplied to the inspectors on an annual basis)

Worry of widespread fraud with grain imports have been circulating for over a decade in the organic farming community. A number imports sold at low prices that domestic markets cannot compete with. In 2017, investigative reporters brought expanded exposure the fraudulent grain imports issue. In other words, grain is being imported under the organic label that is not actually organic. This has widespread effects on organic livestock operations, including dairy.

We asked dairy brands that had already completed the survey the following follow-up questions with respect to imported feed;

- 1. Do you produce 100% of the feed for your dairy animals?
- 2. If you purchase feed do you have any procedures in place to assure that it is from 100% US production? Please explain your process.

Note that the grain imports questions extra credit was given such that it would not otherwise impact the overall scoring category (number of cows), though it would affect the brand's placing within that category.

18. Extra credit	Several questions were asked in addition to the original survey questions that would ultimately give producers "extra credit' points.
75	Provide full organic systems plan (OSP).
75	Provide the contact information and details about <i>every farm</i> supplier instead of just the five largest (If a brand with more than five supplier farms).
100	With respect to the concern of fraudulent grain imports, this dairy produces 100% of their own feed (including 100% grass fed).

80	This dairy gets all of their feed from domestic sources.
50	This dairy gets all of their feed from "open source" certified organic feed but were transparent enough to share that detail
	with us.
25	This dairy responded and purchases some imported feed and some domestic feed.
0	This dairy purchases only imported feed.

ⁱ 7 CFR 205.603(a)(17)

ⁱⁱ <u>Peter Whoriskey</u>. 2017. "The labels said 'organic.' But these massive imports of corn and soybeans weren't." *The Washington Post,* May 17. https://www.washingtonpost.com/business/economy/the-labels-said-organic-but-these-massive-imports-of-corn-and-soybeans-werent/2017/05/12/6d165984-2b76-11e7-a616-d7c8a68c1a66_story.html?utm_term=.fd27d25aa53e