

Confinement or Pasture? The USDA organic grazing war in 2008, before a final rule Bruce A. Scholten, Durham University Geography Department (UK) Keywords: animal welfare, biofuel, CAFOs, consumers, peak oil This article was written in late 2008. Another version is in Winchell *et al.* (2010)

Where have all the cowbells gone? In the last quarter century, about 80% of conventional US dairy cows and many in the UK, Canada and other countries have been consigned, with few if any breaks on pasture, to confined animal feeding operations (CAFOs). One study of 1000 households in California found that 'standards for the humane treatment of animals have the highest level of support' (Howard & Allen 2006: 439), and a goal of many consumers and small-scale family farmers in the organic movement is to keep animals grazing on grass. But critics say many cows producing milk certified organic by USDA live in factory-like organic-industrial confinement (Pollan 2001; Schlosser 2001; Fromartz 2006). The ensuing organic dairy pasture grazing debate affects how many animals are visible in the countryside - as on the US-Canadian border above. The outcome could shape farmscapes in other countries following the conflict.

Over 2005-6 the national organic standards board (NOSB) recommended rules to the USDA that cows graze at least 120 days yearly and eat over 30% of dry matter intake outside of barns or feedlots. Support for such rules is stronger among the green lobby and small farmers than investors in megadairies. In 2005 the Wisconsin-based Cornucopia Institute, an advocate for family-scale organic farmers, filed formal legal complaints with the USDA targeting Dean-Horizon, Aurora, and Vander Eyck organic dairies for non-compliance with pasture rules, among other alleged violations of the law, in the USDA national organic program (USDA-NOP 2002). Cornucopia's suit dovetailed with a boycott promoted by the Organic Consumers Association (OCA). Puget Consumer Coop joined scores of other groups in the boycott, banning Horizon milk from its eight Seattle natural food supermarkets after consumers complained that Horizon's practices belied its happy cow logo.

My studies in Washington State illustrate the debate linking regional conventional coops such as Darigold allowing confinement, incoming organic coops such as Organic Valley defending traditional grazing, and large-scale actors such as Aurora Organic Dairy (AOD) and Dean-Horizon that, say critics, increasingly rely on feedlots instead of family-scale farms (Scholten 2002; 2006a,b,c,d; 2007). Pastoralists on the US-Canadian border say a strong ruling on organic

grazing could improve the economic sustainability of farmland threatened by exurban sprawl from Seattle to the south and Vancouver to the north.

The outcome of the pasture war depends on USDA clarification of 'access to pasture', a vague phrase in the rules of the NOP (2002; USDA 2001a, b). Family-scale farmers say grazing is natural ruminant behavior. Large scale producers note that some pre-NOP certification programs did not mandate grazing - but they generally represent the post-1970s rise of dairies in arid California, Colorado and Idaho dependent on irrigation and inputs sourced nation-wide, which followed the petroleum-dependency of conventional dairying in a westward shift from rainier northern states to the burgeoning population centers in the southwest (Scholten 1997). Although definitions of organic are not the same worldwide, US standards do influence countries exporting to it. Since 'access to pasture' implies management of landscape it follows that a ruling will affect what geographers call the production of space (Lefebvre 1974; Elden 2004).

This chapter seeks to explain some confusing developments by key actors in the dispute, in the context of consumer efforts to participate in governance of the food chain. Information was gathered in interviews, email contacts and internet searches. It should be noted that USDA terms any dairy housing cows in barns for the winter a CAFO even if cows graze the other 8-10 months. However many actors in the pasture debate connote CAFOs with year-round confinement or zero-grazing, and that meaning is used here. CAFOs are less common in Europe where German consumers often refer pejoratively to such a farm as *eine Massentierhaltung*.

Background

When the abstract for this piece was penned in 2006, a USDA ruling was expected momentarily to clarify 'access to pasture'. At an NOSB meeting in March 2007, a USDA official said, 'We hope that the proposed pasture regulation is out before the end of the year.' But *Sustainable Earth News* (2007) reports it may be 2009 before one is enforced. Rules are supposed to be scale-neutral, but stocking rates are debated because large animal populations can harm the environment and themselves if they spend too much time on concrete-floored barns. High milk production itself does not bring lameness, but zero-grazed cows suffer more lameness, breeding problems inviting hormone injections to induce oestrus, and truncated longevity than pastured cows (Haskell *et al.* 2006, 2007). Regarding socio-economic effects among producers, Horizon claims 80% of its milk comes from 350 family partners. But Cornucopia activist Mark Kastel responds that consumers, 'should know that 20% is milk shipped from Horizon's two corporate-owned facilities.... they count CAFOs, milking thousands of cows, as "family farmers." Before they quit buying from the 10,000-cow Vander Eyk dairy, this setup was part of the 80% of family farmers! They are still purchasing milk from a growing number of megadairies.' Kastel says that heifers cannot be raised fast enough to replace stressed, burnt-out cows in such CAFOs.

Bridging these positions, a farmers' leader says:

The strict enforcement of pasture standards is where smaller farms (80-100 cows in the East, 100-300 in the Midwest and 500 cows in the West) see the ability to maintain the integrity of the organic standards. Unfortunately none of the processors do that right now, although they all pay varying amounts of lip service.... There are no good guys. All the processors have some farms that do not meet the pasture standards and have purchased milk from megadairies; there are no good guys, just a varying amount of grey. The varying levels of interpretation of organic standards need to stop being a marketing tactic and become the base standard that allows entry into the market.... Industrial agriculture will not disappear; we just have to fight realistically... to maintain a sustainable way of life for farmers.

Cornucopia Institute claims it is not anti-corporate and merely insists that enforcement of USDA organic rules be scale neutral across family to corporate farms. As a metric understandable by producers and consumers alike, Cornucopia devised its Dairy Scorecard from a 19-question survey (81% return rate) of 68 name-brand marketers on life-span, stocking density, milking frequency, etc. (www.cornucopia.org/dairysurvey/index.html). Kastel says 90% of organic name-brand dairy products meet the letter and spirit of the law but 'Large corporate farms are gaming the system at the expense of ethical family producers' (Cornucopia 2006).

Corporations considering investments in multi-thousand cow dairy feedlots complain that delay is costly. Organic pioneers reply that industrial free-riders are highjacking their market niche, one the public expects to include grazing (Fromartz 2006). Delay can be explained by government reluctance to regulate without industry consensus. Under the Federation of Organic Dairy (FOOD) Farmers umbrella, northeast, midwest and western organic dairy producers alliances (ODPAs), processors and others have been lobbying the USDA to accept the recommendation of the National Organic Standards Board's (NOSB) for these rules: (1) organic dairy livestock over 6 months of age must graze on pasture during the months of the year when pasture can provide edible forage; (2) the grazed feed must provide significant intake for all milking age organic dairy cows. At a minimum, an average of 30% of the dry matter intake (DMI) must come from grazed pasture during the region's growing season, which will be no less than 120 days per year (NODPA July 9, 2007 ANPR).

The threat of Peak Oil, US and Brazilian biofuel programs, and growing meat demand in China increase pressure on land. Recently prices of conventional maize and soybeans have doubled, and organic grain prices are decimating the net profits of organic dairy farmers (Kunstler 2007; *Hoard's Dairyman* Feb. 25, 2007; *Seattle P-I* 2007; *Guardian* 2007). When the USDA finally makes a decision, it will indirectly govern energy consumption and food miles in organic dairying.

A soft ruling could legitimize organic CAFOs, discourage campaigns on welfare of sentient animals (IFOAM 2006), disillusion consumers and ruin the lucrative USDA certified organic program. USDA projects total organic sales of about \$15 billion in 2007; although organic milk represents only about 2% of national milk volume, it is a leader in the livestock segment, with 25% annual growth. Margaret Wittenburg of Whole Foods claims organic milk is an 'entry point' for consumers who expect cows producing it to graze on pasture (NODPA Apr. 21, 2006; see also Hall et al. 2004). When processors' group NMI claimed that consumers prioritized the absence of GMOs or pesticides higher than pasture, Wittenburg pointedly asked why so many of them used pasture images on milk labels.

The significance of the pasture war is seen in the context of previous issues pitting greens against agribusiness. Fred Buttel (2000) described USDA approval of genetically-modified (GM) recombinant bovine growth hormone (rBGH, called rBST by Monsanto) in 1994 over green opposition. But David Goodman and Melanie DuPuis (2002) relate growing consumer 'not-in-my-body' resistance to the drug, and 275,000 protests when USDA mooted organic rules in 1997 allowing GMOs, sewage sludge and irradiation (see Table 1). Resistance to appropriation of organics rose. Since 2005, USDA has received about 80,000 comments in the pasture war.

Table 1. Organic Timeline	
1994	USDA certifies synthetic hormone rBGH/rBST.
1997	USDA moots organic rules; 275,000 protest Big 3 of GMOs, heavy metals, irradiation.
2002	USDA publishes National Organic Program (NOP) rules sans Big 3.
2003	USDA admits first mad cow near Seattle.
2005	USDA files Cornucopia legal complaints vs. Aurora & Horizon on pasture.
2005-7	USDA-NOP receives 80,000 protests on pasture in OCA milk boycott.
2007	USDA decertifies Vander Eyck Dairy, shortly before Horizon announces support of 120
	day/DMI rules. USDA finds Aurora dairy in 'willful' violations of 14 different provisions
	of the Organic Foods Production Act regulations.
Sources: Agriculture and Agri-Food Canada, Defra, OCA, PCC, USDA	

Milk boycott & USDA suit

Ironically, the organic boom boosts incentives to weaken organic process standards and replace them with quantifiable rules (Schlosser 2001; Pollan 2001; Guthman 2004; Morgan *et al.* 2006). Central to arguments between pastoralists and megadairy investors is the fact that rising demand for certified organic food encourages producers to increase output and seek economies of scale, and pioneers claim their rivals are stretching the meaning of organic. Fromartz (2006) suggests that Wal-Mart's plan to price organics within 10% of conventional fare pressured Horizon and Aurora to adopt 3-times daily milking typical of intensive dairying, and to reduce grazing on megadairies in Idaho, Colorado, Maryland and Texas. According to the Organic Consumers Association (OCA) and Cornucopia Institute, conditions on multi-thousand cow dairy farms deny cows' instinctive, natural behaviors on pasture leading to sore hooves, breeding problems, curtailed lives, and mastitis (Vaarst 2001). Veterinarian Robert Fry left Horizon's Maryland farm after eight years saying, 'They portray to their customers they've got this happy cow out on grass, this pastoral idyllic scene, but that's not the case' (*Hoard's Dairyman* 2006: 736). On my own visit to this farm in November 2007, conditions for calves, heifers and dry cows seemed good, but I did not see the milk herd which the manager said was inside for the winter.

With over 1200 farm families Organic Valley (OV) is the largest US farmer coop, and supplies Whole Foods supermarkets. In 2004 when Organic Valley was struggling to meet demand it relinquished a contract with Wal-Mart (*Economist* 2006; *Inc. Magazine* 2007). The contract fell to Dean-Horizon, but signs of struggle for market share soon appeared. *Inc. Magazine* (2007) reports that Horizon remains the leader in organic dairy, outselling Organic Valley by \$339 million to OV's \$232m. But OV leads in natural food stores with \$124m in sales and 28% growth per annum, compared with Horizon's \$91m in sales and 9.5% decline per annum. In 1999 Horizon bought Welsh family firm Rachel's Organic Yogurt and in 2003-4 Horizon-Rachel's was bought by multinational Dean Foods (2006 profits \$822m on \$10b sales). These Dean acquisitions troubled organicists who believed Dean switched to non-organic beans costing 'about two-thirds less than organic' after acquiring White Wave Silk soymilk, according to Fromartz (2006: 186). They were vexed again in 2007 when Dean Horizon launched Rachel's yogurt in America as a conventional, so-called 'natural' product - not organic as in Britain.

When the Cornucopia Institute, led by family farm advocates Mark Kastel and Will Fantle sued Horizon and Aurora for non-compliance with NOP pasture regulations in 2006, Kastel said, 'What we're trying to counter right now is a corporate hostile takeover of organics.' Cornucopia worked with OCA which soon enlisted support from consumer groups such as Puget Consumer Coop. With 43,000 coop members and annual sales of \$93 million, PCC claims to be even larger than New York City's respected Park Slope coop. In the Pacific Northwest region, the Horizon boycott allowed Wilcox Farms (which met consumer preference for rBGH/rBST hormone-free milk before rival Darigold) to replace Horizon in coop dairy cases. When asked if bunkers were more characteristic of Wilcox Farms than green pasture, PCC education and nutrition officer Goldie Caughlan replied that unlike Horizon, Wilcox was not accused of not doing what it said on the label (pers. com.).

Nationally, the suit lost Horizon sales in natural food stores and jeopardized its image, leading to advertisements in *Utne Reader* (2006) promising to buy 2500 more acres pasture, and reiterating its commitment to animal welfare. While Horizon seemed sensitive to public understandings that cows are healthier on pasture, Aurora took a more technical approach. Aurora's origins are mingled with Horizon's: president Mark Retzloff was a co-founder of Horizon in 1991, and left in 2001 to co-found Aurora with Marc Peperzak, former chair of the Horizon board. Peperzak raised \$18.5m in capital from Charlesbank Boston which invests for Harvard University, to convert a 5000-cow, 500 acre conventional dairy in Platteville, Colorado to organic, selling most of its milk to institutions, private labels and brands such as Wal-Mart. Aurora kept its cows off pasture during their 10-month lactations, while its veterinarian and vice president Juan Valez said 'Pasture can have a positive impact on animal welfare, if managed properly' and that USDA rules must accommodate 'variability between farms, climates, geographies, facilities, etc.' (Aurora 2006b: 11). Family-scale organic farmers interpreted Valez' comments as damning pasture with faint praise, a tactic to weaken their advantage in grazing.

Internationally, there were hints that actors in the Dean-Horizon-Rachel's network were wary of public relations fallout: About a year after Horizon bought Rachel's, the labels of its UK milk cartons switched from the cartoon cow to Rachel's black logo and images of real bovines touting donations of cattle to Africa. Another hint of Rachel's UK distancing itself from the USDA controversy is that its website features the video *Dancing Cows – Born to Graze* (2005).

Consumer wrath demanded a sacrifice. In spring 2007, the 10,000 cow Vander Eyck Dairy was decertified from organic production by USDA for lack of grazing. Cornucopia was praised by Ed Maltby of NODPA for its watchdog function, but some observers deemed it a token victory to placate shoppers, far from triumph in a war that could be won by agribusiness.

Counterintuitive moves were afoot. Most curious was Organic Valley (OV) leader George Siemon's cooperation with rival processors including Aurora and Horizon, signing a 'final alliance letter' to USDA Secretary Mike Johanns asking for a quick ruling on access to pasture. The letter was supplied anonymously to and released by Cornucopia (Oct. 26, 2006b). When the letter became public it spawned a flurry of emails, and a Whatcom County farmer in Washington State told me that in regional coop meetings members asked Siemon why, when he joined corporations in asking for an easily-met 120 day grazing rule, that he did not simultaneously demand strict dry matter intake (DMI) standards, a vagary allowing organic-industrial farms to fake sustainability as they built market share. Ronnie Cummins of Organic Consumers Association (OCA, March 19, 2007) warned:

...the USDA will soon propose new federal organic dairy standards that allow so-called organic factory farms to create the impression that their milk cows are being grazed on pasture, while in fact unscrupulous certifiers and bureaucrats in the USDA National Organic Program (NOP) will allow them to get away with 'symbolic access to

pasture' i.e. intensively confined, stressed-out dairy cows briefly chewing their cuds outside giant milking parlors in between their 3-x-a-day milkings.

What is surprising to learn is that three highly respected organic dairy brands have joined with Aurora & Horizon to lobby the USDA for this 'Big Fix'.... We have no evidence that Stonyfield Farm, Organic Valley, and Humboldt Creamery are deceiving the public - as Horizon and Aurora are - by not requiring their farmers to pasture their animals and provide them with at least 30% of their diet with pasture grass, but we certainly do have the evidence that they are jointly lobbying the USDA for the continuation of *vague and non-enforceable standards* [italics added; see Processors Final Letter to USDA].... Otherwise consumers will continue to lose faith in the already tarnished 'USDA Organic' label on dairy products.

Michael Funk, head of United Natural Foods, Inc. (UNFI), urged industry to pressure OCA to stop the boycott because it damaged the market (*Sustainable Food News* May 5, 2007). But Cornucopia countered that UNFI's private-label brand of milk, Woodstock Farms, is produced by Aurora and it is the largest distributor of Horizon products.

It seems logical that OCA and even OV farmers question OV actions. But it is useful to view actors through the lens of Thomas Rochon's (1998) social movement theory. Jeanne Merrill (2007) of Michael Fields Institute says that Rochon shows how actors, starting with similar ideologies, follow varying trajectories depending on resources and political prospects. Consider Horizon, a firm begun with concerns for its environmental and social stakeholders as well as stockholder profits (pers. com., Chuck Marcy, Horizon CEO, Sep. 10-11, 2001). Social movement theory would expect Aurora and Horizon to seek economies of scale on their farms, in order to reduce consumer prices and increase profitability – just as it expects NGOs Cornucopia and OCA to appeal to family farmers, greens and animal welfare advocates in their ethical consumer bases. Similarly, the pro-organic membership base of the UK Soil Association influenced its opposition to GM field trials which, as the public joined protests, helped the SA take a leadership role in environmental politics (Reed 2006).

On consideration, it is unsurprising when a coop leader such as Siemon quietly works with corporate rivals in asking USDA to pass a rule that reassures consumers of organic products. Once the 120 day grazing rule is won, cudgels can be taken up against free-riders on a legitimate mantle of sustainability, in the fight for a meaningful DMI rule.

Outlook on grazing and future welfare issues

From their nadir at USDA approval of rBGH in 1994, greens have rallied, and lately ride a public backlash against the drug. Even supermarket chain Safeway has asked processors to supply conventional milk without GMOs (March 10, 2007 *Hoard's Dairyman*).

But with great profits to be made in organics, battles on matters such as grazing are hard fought. The Cornucopia suit and milk boycott continued despite calls by UNFI head Michael Funk not to rock the boat. OCA claims success, in that many retailers and consumers dropped Horizon and Aurora, 'as well as the private label milk brands supplied by Aurora and sold by Wal-Mart, Costco, Wild Oats, Safeway, Giant, UNFI, and others' (March 19, 2007).

On the other hand, NODPA director Ed Maltby agreed with Funk in summer 2007 that milk boycotts had been less harmful to Horizon and Aurora than to consumer perception of organics. Perhaps that is true in the short-term, but it seems unlikely the USDA would invoke strong landanimal rules unless consumers hold errant processors accountable.

Grazing and CAFOs

Pro-grazing actors in the pasture war marked a major victory on May 25, 2007 when Kelly Shea, vice-president for organic stewardship at Dean-Horizon, the dominant actor in US organics, announced support for USDA rules of 120 days and 30% DMI, and urged the industry to exceed those standards. This made it clear that the 120 day rule was desired by all organic macroactors including Cornucopia, OCA, PCC coop, Aurora, Horizon, Horizon, Organic Valley coop, ODPAS, FOOD Farmers, Center for Food Safety and USDA itself.

Ed Maltby of NODPA says 120 days grazing is easily met, and already part of Aurora and Horizon farm plans - not to mention grassroots coops such as Organic Valley whose cows often graze 300 days a year. Such a ruling could encourage retention of pasture around rural towns such as Lynden (pop. 9000) in my study area of Whatcom County, where links to Dutch family dairying are part of local identity and an attraction to home-buyers from the US, Canada, and elsewhere. Activists fighting to retain agricultural zoning east of the Northwood Road say it is wiser to encourage more housing in the nearby university city of Bellingham (pop. 75,000) than to build homes on rich pasture land. Though most local herds now inhabit CAFOs year-round, rising energy costs could induce farmers to forsake trucked-in fodder and return to extensive pasturing. Whatcom County is a magnet for tourists seeking animals, barns and traditional landscapes recalling the previous generation – a pattern found in England's Lake District (Willis & Garrod 1992; Scholten 1997).

MIRG weakens need for CAFOs

Recent progress in managed intensive rotational grazing increases chances that USDA could also rule strongly on the deeper issue of dry matter intake (DMI; *Hoard's Dairyman* 2000; CIAS 2005). NODPA's Maltby (pers. com. 2007) says he once worked on a Massachusetts organic farm where 1000 cows grazed intensively 'so I know it can be done if you have a commitment to pasture-based systems'.

That sounds similar, albeit on smaller scale, to the 'green field' system of Aurora's new High Plains farm in Colorado with 3200 cows on 800 acres, and barns, milking parlors and pastures arranged so 'all animals have year-round, daily access to organic pasture and outdoor exercise' (Aurora 2005b, 2007). But Cornucopia called the animal/land ratio on the High Plains farm unsustainable because conditions are so arid. Further, Cornucopia (Aug. 16, 2007) claimed that Aurora's original Platteville, Colorado farm should be decertified because aerial pictures and farm visits showed only '1-2% of their cattle were actually grazing'.

The battle turns

Aurora seemed to be expanding inexorably when it opened another megadairy in Stratford, Texas on July 10, 2007. The firm claimed this was good news for low-income consumers, but small organic farmers complained that it threatened their price premiums and the integrity of the organic label. Less than two months later USDA agreed with Cornucopia and OCA's complaint that Aurora's Platteville farm was indeed in non-compliance. On August 30, 2007 *The New York Times* reported that Aurora 'agreed yesterday to stop applying the organic label to some of its milk and make major changes in its operation after the USDA threatened to revoke its organic certification for, among other problems, failing to provide enough pasture to its cows'.

Aurora tried to claim the suit was dismissed, but USDA (Aug. 29, 2007) made it clear the firm had a 'one-year probationary review period' to improve grazing and replacement of organic stock or USDA 'may withdraw from the agreement and reinstate the Notice of Proposed Revocation'. USDA forced Aurora's Platteville farm to cut the size of its herd to about 1,075 milkers, down from 2,100 in August and 4,200 a couple years before. Aurora also had to bulldoze most of the farm's feedlots to increase pasture to 400 acres. The firm was on the defensive when the Federation of Organic Farmers (FOOD Sept. 25, 2007) sent a letter to the USDA complaining that the consent decree was insufficient to bring closure to Aurora's 'willful violations' of organic rules.

Future welfare issues

Arguably, chronic animal welfare concerns such as veal transport (Scholten 1995) that were sidelined by the BSE crisis have returned to debate. Global demands that 'sentient... animals should be provided with the conditions and opportunities that accord with their physiology and natural behaviour' were renewed in the 2006 St. Paul Declaration at University of Minnesota, involving 24 country representatives in a special meeting of the International Federation of Organic Agricultural Movements (IFOAM 2006).

But welfare issues are complex. In organics as in other sectors today's hero can be tomorrow's zero, and vice-versa. Activists and traditionalists critical of its pasture policies might welcome Aurora's claim that it is 'among the only dairies in America, organic or conventional, which rely completely on natural breeding rather than artificial insemination (AI)'. Veterinarian Valez urges the entire organic industry to adopt natural breeding because 'It reduces animal stress and results in higher pregnancy rates at lower cost... natural breeding avoids the anti-biotics that are typically used in artificial insemination, even in organic systems' (Aurora 2005a).

Peter Singer, author of *Animal Liberation* (1975) notes many pending issues such as cow-calf separation, and cattle distress in journeys to abattoirs. Public debate on animal welfare could be just beginning.

Conclusions

The USDA organic pasture war is driven by competition for market share in the dairy case. What brought processors' focus back to sustainability was the boycott, i.e. consumers' refusal to buy milk which they learned had not come from cows pastured as they were in their grandparents' era. The penny dropped when USDA decertified Van der Eyck, and nearly decertified Aurora which was found violating 14 provisions of the Organic Food Act. Enforcement actions by the NOP targeting producers, processors and certifiers are likely to increase, since the 2008 Farm Bill doubles staff levels from only about a dozen.

Following up their boycott and litigation victories, on October 17, 2007 Ronnie Cummins of the Organic Consumers Association (2007b) and Mark Kastel of Cornucopia Institute (2007b) jointly announced lawsuits against Aurora and its distributors on behalf of consumers in 27 states, asking damages from Aurora for 'consumer fraud, negligence, and unjust enrichment concerning the sale of organic milk by the company'. The lawsuit was applauded by Joe Mendelson of the Center for Food Safety (2007), but ended without satisfaction for pastoralists.

Nor (at this writing; for the final rule see USDA 2010) has the USDA made a final ruling on access to pasture. On June 7, 2008, NODPA and the Coalition of Organic Groups including FOOD, White Wave Foods (Horizon Organic), Organic Valley coop, Stonyfield Farm, Humboldt Dairy, Organic Choice, Pastureland Cooperative and Organic Dairy Farmers Coop urged USDA to publish the access to pasture and origin of dairy livestock standards immediately (NODPA 2008). They noted that delay harms the organic market, and farms need a lengthy transition period to comply with any pasture rule with teeth.

In retrospect what has already occurred may prove to be as important as an eventual pasture rule: a key development, in May 2007, was the decision by industry leader Dean-Horizon to support proposed USDA-NOP rules of at least 120 days grazing and 30% DMI from pasture (Horizon May 25, 2007). The decision, which was probably prompted by litigation and the boycott by Cornucopia and the OCA, could help Horizon regain sales. More important to the overall sector is that Horizon's leadership could induce other firms to emphasize grazing. Admittedly, it is questionable whether these minimum rules represent true sustainable dairying, and it remains to be seen whether Horizon continues to lobby for less confinement and more grazing. In the long run macroeconomic forces could encourage grazing. At this writing in June 2008, record prices of \$138 per barrel oil, and US corn at \$7 a bushel in the biofuel boom, are forcing small and large actors to adjust business plans (see also *Hoard's Dairyman* 2007a: 129). Kate Halstead, a coordinator for Washington State University extension recalls (pers. com.), 'Dad thought it was crazy to take cows off pasture, bring fodder to the barn with a tractor, and haul waste back to pasture when cows do that better themselves.'

In 2007, when USDA decertified one megadairy and ordered Aurora to make major changes, pastoralists rejoiced that pressure from consumers and organic leaders was sending more cows from CAFOs to organic farmscapes. But pessimists fear that one reason the government is delaying a ruling on access to pasture may be that – in the light of food and oil inflation and competition for space from biofuel - it is analyzing the holistic cost of pasture-based dairying. If USDA concludes that grazing is no longer affordable, the National Organic Program may turn into an industrial husk of what pioneers dreamed.

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