Planning for Pennsylvania’s Dairy Industry

John Frey Center for Dairy Excellence
Alan Novak- Professional Dairy Managers of PA
Alan Zepp- Center for Dairy Excellence

American Planning Association Pennsylvania Chapter
Making Great Communities Happen
John Frey
Executive Director
Center for Dairy Excellence
Session Objectives:

- Provide an overview of how Pennsylvania dairy farms and agriculture affect and are affected by local, regional, national and international circumstances.
- Initiate an honest discussion that increases the understanding of Pennsylvania’s agricultural and planning issues including ways that society and farmers can successfully coexist and thrive in the future.
Session Agenda notes:

- You are the planning experts
- We know the dairy industry and agriculture
- An overview of the Pennsylvania dairy industry
- An example of a dairy plant that considered PA but chose a site in another state
- Open discussion
A Growing, Dynamic Industry
Pennsylvania: a leader in dairy

- Top 5 states for Milk
  - California
  - Wisconsin
  - Idaho
  - New York
  - Pennsylvania

- Next 5 states for Milk
  - Texas
  - Minnesota
  - Michigan
  - New Mexico
  - Washington

- PA: Leader in Dairy Manufacturing
  - One of the top states for fluid milk processing
  - 75 Dairy Manufacturing plants (4th most in US)
  - Fluid drinking milk provider for Mid-Atlantic
Issue: demand outpaces supply = Opportunity

- US Dairy
  - 1930: 1st 100 billion lbs. annual production
  - 1992: 1st 150 billion lbs. annual production
  - 2012: 1st 200 billion lbs. annual production

- Variables:
  - Role of exports
  - Role of technology
  - Passion for industry, in Pennsylvania
  - Need production / Need manufacturing
Milk Production – million pounds
4th Quarter 2011 vs. 4th Quarter 2012*

*Adjusted for Leap Year
U.S. 4Q production was up 0.9%

Top Number: 4Q 2012 Production
Bottom Number: % Change from 2011
Source of Dairy Protein

- Milk Produced & Sold Locally
  - Milk sold in PA stores comes from less than 100 miles
  - Butter, cheese, yogurt & chocolate biggest users of PA Milk

- Milk & Products Exported Globally
  - Revenue from Exported Milk Returned to PA Communities
Exported Share of Production

U.S. DAIRY TRADE BALANCE, 1996-2013

- Exports
- Imports

Total Milk Solids, % of U.S. Production

- 1996: 2.7%
- 1997: 2.9%
- 1998: 3.6%
- 1999: 3.9%
- 2000: 4.0%
- 2001: 4.2%
- 2002: 4.2%
- 2003: 4.4%
- 2004: 4.5%
- 2005: 4.6%
- 2006: 4.4%
- 2007: 4.5%
- 2008: 4.0%
- 2009: 3.4%
- 2010: 2.9%
- 2011: 2.9%
- 2012: 3.2%
- 2013: 3.3%

- 1996: 3.7%
- 1997: 4.5%
- 1998: 4.4%
- 1999: 5.0%
- 2000: 5.2%
- 2001: 5.5%
- 2002: 5.1%
- 2003: 5.7%
- 2004: 7.6%
- 2005: 8.3%
- 2006: 9.3%
- 2007: 9.8%
- 2008: 11.0%
- 2009: 12.7%
- 2010: 13.3%
- 2011: 13.2%
- 2012: 13.1%
Dairy in Pennsylvania

- The Largest Segment of PA’s #1 Industry
  - 10.6 bill. lbs. (or 1.2 bill. gal.) of milk
  - 7,400 Dairy Farms
    - Ranked 2nd Nationally
    - 99 Percent Family Owned
  - $2.5 billion in Milk Sales

Fifth in Milk Production
Dairy Contributes $6 Billion in Economic Revenue to PA

- Average 70-cow dairy contributes nearly $1 million to local economy
- 500-cow dairy contributes $7 million for local economy
- 9 cows = 1 job
- 60,000 PA Dairy Jobs

* From Minnesota Study on Dairy’s Value.
Vital to the Economy

- 85 Percent of Milk Income Spent in Local Community
- Circulates through community 2.5 times to increase total economic revenue

* From Minnesota Study on Dairy’s Value.
Dairy is worth more to PA than Oranges are to Florida and Potatoes are to Idaho.
Concentration of Dairy Cows in PA

- Largest Concentrations
  - Lancaster
  - Franklin
  - Bradford
  - Lebanon
  - Berks
  - Blair
  - Chester
  - Somerset
  - Crawford
  - Mercer
2013 PA Dairy Analysis:

- Trends in Pennsylvania Dairy Industry
  - Production
  - Processing
  - Consumption

- Evaluate needs for growth & vitality for Pennsylvania’s Dairy Industry
  - 20 Prescriptions Offer Recommendations
  - 10 Webinars will review analysis results and offer insight into prescriptions
The following statement best describes my farm’s future:

- **Confident in ability to meet profitability goals.** 50%
- **Not confident in ability to meet profitability goals.** 14%
- **Will need to modernize to meet profitability goals.** 20%
- **Will need to grow herd size to meet profitability goals.** 12%
- **Will need to change style of dairying to meet profitability goals (i.e. Niche market).** 4%
Land Availability = Important

- Land availability- very important- 2008
- Land availability- very important- 2012

- Small Dairies (30 to 100 Cows)
- Mid-Size Dairies (101 to 250 Cows)
- Large Dairies (251+ Cows)
- Total (All Dairies)
US and PA Farmland Values

Figure 3.3: Comparison of Farm Real Estate Values in US & PA

Calculations based on USDA Data.
Farmland Rental Cost

Figure 3.4: Comparison of Average Farmland Rent in Pennsylvania Regions & Increase in Rate per Acre from 2008 - 2012

Calculations based on USDA Data.
Figure 7.3

Dairy Farmers: Government Regulations

- Environmental Regulations
- Agricultural Regulations
- Employment Regulations
- Zoning/Land use regulations
- Food safety regulations
- Health/Safety regulations
Threats for Production Dairy

- Regulatory/permitting
- Volatile margins
- Family Farm transitions
- Activists Agenda
- Land Availability
- Pace of modernization, reinvestment
Processing Plants

Figure 4: Dairy Processing Plant Locations in the Northeast
The Muller-Quaker Case:
Muller- Quaker: US Yogurt Plant

- Muller- founded in 1896 by a German dairy farmer
- Quaker Oates began in 1877 – currently owned by Pepsi-Cola
- Investigated the Reading Area
- Genesee County and New York State put and advisory group together to facilitate site selection and construction
Muller-Quaker Case: PA or NY?

- Preferred Pennsylvania “+”
  - Logistical advantages
  - PA offered direct routes to east seaboard retail
  - Cost savings in PA
  - Pull milk supply from PA and NY

- Pennsylvania “-” / New York “+”
  - Initial investment much higher
    - Price of land
  - Fewer state subsidies in PA
  - NY / team of 28 people ready to “coordinate”
    - Utilities, financial, reality, site, development, etc.
    - “New York very organized and professional”
Genesee Valley Agri-Business Park

- Genesee County Economic Development Center - Batavia, New York
- Shovel Ready Sites
- The two companies spent $206 million on the factory in Batavia.
Batavia, New York
Alan Zepp

Risk Management Program Manager
Center for Dairy Excellence
Sustainability = Profitability

- Smart Growth/Growth Management
- Urban growth boundaries
- Comprehensive planning and zoning
“Pennsylvania’s total developed land area increased from 4.1 percent of the state’s total land area in 1992 to 9.6 percent in 2005—with the most significant acreage increases occurring in the Southeast and South Central regions. A total of approximately 500,000 acres of agricultural land was lost to development within these two regions.”
"The Southeast region experienced the greatest percentage loss in acres of forest to developed land (20.4 percent), while three regions (Northern Tier, North Central, and Central) experienced less than a 2 percent loss. The Southeast Region also had the greatest percentage loss of acres of agricultural land to developed land (24.4 percent), while the Northern Tier had the lowest percentage loss with 4.9 percent."
Dairy Community Contributions

- Open Space
- Tax contributions exceed municipal needs
- Jobs
- Water Recharge
- Community Pride
Dairy Requirements

- Long Term Planning
- Realistic Regional Zoning
- A critical mass of quality land
- Support businesses
- Ability to grow and modernize
- Reasonable setbacks
- Uncongested roads
Acres to support 1 cow

Figure 3.7: Acres per Animal Unit on NE Dairy Farms
Figure 3.9: Change in Corn Acres Planted from 2002 to 2011 By County & State

Change in Acres of Corn Silage
## Regulatory Compliance Cost

### Annual Pre-tax Compliance Costs of the New Regulations
(Millions of 2001 dollars)

<table>
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<tr>
<th></th>
<th>&gt;1000 AU</th>
<th>300 - 1000 AU</th>
<th>&lt;300 AU (designated)</th>
<th>Total</th>
<th>Distribution</th>
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<td>Cattle</td>
<td>$85.8</td>
<td>$1.9</td>
<td>$0.5</td>
<td>$88.2</td>
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<td>Heifers</td>
<td>$0.1</td>
<td>$0.1</td>
<td>$0.0</td>
<td>$0.2</td>
<td>0.1%</td>
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<tr>
<td>Veal</td>
<td>$3.8</td>
<td>$2.4</td>
<td>$0.1</td>
<td>$6.3</td>
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<td>Dairy</td>
<td>$128.2</td>
<td>$22.0</td>
<td>$0.9</td>
<td>$151.1</td>
<td>46.3%</td>
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<tr>
<td>Hogs</td>
<td>$24.9</td>
<td>$9.5</td>
<td>$0.4</td>
<td>$34.8</td>
<td>10.7%</td>
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<tr>
<td>Broilers</td>
<td>$16.8</td>
<td>$2.4</td>
<td>$1.3</td>
<td>$20.5</td>
<td>6.3%</td>
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<td>Layers - Dry</td>
<td>$7.2</td>
<td>$0.1</td>
<td>$0.2</td>
<td>$7.5</td>
<td>2.3%</td>
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<td>Layers - Wet</td>
<td>$8.4</td>
<td>$0.5</td>
<td>$0.1</td>
<td>$9.0</td>
<td>2.8%</td>
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<td>Turkeys</td>
<td>$8.1</td>
<td>$0.3</td>
<td>$0.3</td>
<td>$8.7</td>
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<td><strong>Total</strong></td>
<td><strong>$283.2</strong></td>
<td><strong>$39.1</strong></td>
<td><strong>$3.8</strong></td>
<td><strong>$326.1</strong></td>
<td><strong>100.0%</strong></td>
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May not add due to rounding.

Source: Table 3-4, Option 2, USEPA EA Report (December 2002); Table 8-1 Federal Register, Vol. 68, No. 29 (February 12, 2003).
Number of CAFOS & Compliance Cost
Pennsylvania’s requirements comparable to other states

Figure 7.7: Comparison of State Regulatory Requirements to National CAFO Requirements

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<tr>
<th>Area</th>
<th>PA</th>
<th>NY</th>
<th>OH</th>
<th>MD</th>
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<tr>
<td>Permitting Types</td>
<td>General, Individual &amp; Other</td>
<td>General &amp; Individual</td>
<td>General, Individual and Other</td>
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<td>Water-quality Requirements</td>
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<td>Discharge Rule</td>
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<td>=</td>
<td>&gt;</td>
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<tr>
<td>Nutrient Management</td>
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<td>&gt;</td>
<td>&gt;</td>
<td>&gt;</td>
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<tr>
<td>Setback Requirements</td>
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<td>&gt;</td>
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<tr>
<td>Air Quality Requirements</td>
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<tr>
<td>Nuisance/Buffer Provisions</td>
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<td>&lt;</td>
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<tr>
<td>Property Odor Limits</td>
<td>=</td>
<td>=</td>
<td>=</td>
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<tr>
<td>Public Hearing Requirements</td>
<td>=</td>
<td>=</td>
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<td>=</td>
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<tr>
<td>Additional Requirements</td>
<td>Training, Record Keeping, Odor Control Plan, Local Control</td>
<td>Record Keeping</td>
<td>Training, NMP in Impaired Watersheds, Odor Control Plan</td>
<td>Training, Record Keeping, Local Control</td>
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<td>Assistance Programs?</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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Dairy Center Resources

- Dairy Profit Teams
- Dairy Transition Teams
- Dairy Decision Consultants
- Risk Management Resources

Upcoming events:
- December 11, 2013: Annual Meeting - Harrisburg
- February 12, 13 2013: PA Dairy Summit – State College
Center Foundation

- Dairy Leaders of Tomorrow
  - High School Business Management Curriculum
    - Prepares students to work in dairy production careers
  - Dairy Tours
    - Exposes students to well-managed dairy businesses
  - Scholarships
    - Awards outstanding students pursuing dairy careers
    - 24 Applicants
Discussion Questions:

- What do farmers need to know before they approach the planning process?
- What do you wish farmers would do more?
- ...less of?
- Legislative action?
Dairy farms contribute more than $6 billion to the Pennsylvania economy...
Learn More

Featured

Work with a Consultant
The Dairy Decisions Consultant Program can provide that outside perspective to fine-tune your dairy business. Learn more...

DairyLink
Are you a young dairy producer seeking facilities? A dairy landowner seeking a farmer? Dairy Link can connect you.

Become an Ally
Be a part of the momentum to grow a stronger, more profitable dairy industry in Pennsylvania. Learn more!

Attend the Dairy Summit
Considered the premier dairy event in Pennsylvania, the summit is held annually in February. Learn more

Dairy Margins

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<th>July '12 Estimate</th>
<th>2011-12 Actual</th>
<th>5-Year Average</th>
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<tr>
<td>Jan</td>
<td>$13.84</td>
<td>$13.84</td>
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<td>Nov</td>
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<td>Dec</td>
<td>$13.84</td>
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Follow us
Thank you to everyone who supported the fun and silent auction last week at the PA Dairy Summit, which brought in $4,460 for the Center...
(about 3 days ago)

Congratulations to Jeff Ainslie, Jeff Harding and Wai-Moore Farms, named the 2013 Pacesetters Award winners.
http://t.co/FnAlyYQA
(about 4 days ago)

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