Spring is finally here according to both the calendar, longer days and warm sunshine. As you receive this I am sure many are preparing to head to the fields for a welcome opportunity to plant crops in anticipation of a bountiful harvest. Please keep safety in mind as you finish maintaining equipment and travel on roads from field to field as well as working on the farm.

- While none of us want to revisit the winter we had, if you experienced any loss of livestock that exceeded normal mortality due to the adverse weather conditions you may be eligible to participate in Farm Services Agency’s Livestock Indemnity Program (LIP). More information can be found on Page 2 and always your best source of information can be found at your local FSA Office.

- We have been alerted that there have been reports of Equine Botulism which is very devastating. More information can be found on Page 3. Please feel free to share this information with your neighbors if they have horses.

- With the change of season our livestock will need to make adjustments as well. We can help our calves housed in hutches make this transition successfully if we carefully monitor the ventilation. Page 4 discusses how to do this and some tips for keeping our young stock healthy as well as a good reminder to refresh those caring for them the farm protocols established for ventilation of hutches.

- If you have a bi-lingual labor force there is an electronic newsletter available from the Northwest Dairy and Field Crop Team, be sure to find the web link for it on Page 4.

- Alfalfa growers will want to be aware of new alfalfa varieties produced in New York to thrive under pressure from NY pests and soils. To learn more about these varieties turn to Page 5.

- Dairy farms that are considering transitioning to organic may benefit from the NY Organic Dairy Initiative more information can be found on Page 5 along with a website for more information.

- There are several different business models that are being used by established producers who market locally and those who are considering entering this type of market place may benefit from the Smart Marketing article on Page 6 titled “An Overview of Emerging Business Models in the Local Foods Landscape”.

- As we approach the busy field season we will be switching from this newsletter format to post card alerts. Ag Alert! will again resume late summer - early fall. While we may not be in your mailbox monthly, please know that Keith (ext. 225) kvs5@cornell.edu and Judy (ext. 234) jlw24@cornell.edu are available year round to answer your questions!

Sincerely,

Keith Severson  
Agriculture Resource Educator

Judy Wright  
Agriculture Resource Educator

Plan for the future of your dairy

<table>
<thead>
<tr>
<th>Service</th>
<th>Amount Available</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business &amp; Facility Planning</td>
<td>up to $5,000</td>
<td>-</td>
</tr>
<tr>
<td>Environmental Planning</td>
<td>up to $10,000</td>
<td>-</td>
</tr>
<tr>
<td>Comprehensive Nutrient Management</td>
<td>(update or new)</td>
<td>Preference for farms under 300 cows</td>
</tr>
<tr>
<td>Design of Best Management Practices</td>
<td>(BMPs)</td>
<td>Available to farms with fewer than 700 cows</td>
</tr>
</tbody>
</table>

Program covers 80%, farm pays 20% plus any amount exceeding value of award

Dairy Acceleration Program

For more information, please visit: prodairy.cals.cornell.edu/dairy-acceleration/ or call CCE-Cayuga at 315-255-1183 ext. 234.
Calendar of Events

Below is a list of upcoming events that we thought might be important to you! If you ever have further questions or need to clarify any information, you can always check out our website http://blogs.cornell.edu/cccecayuga, go to the Ag Calendar under the Agriculture tab on top. We try our best to keep information as up-to-date as possible so that you have a quick, easy reference available 24/7. Of course, you can always call our office with any questions or concerns you might have at 315-255-1183.

APRIL

April 21—Internet Marketing 101 & 102. Held from 10 a.m. until 12 p.m. (101—How to Build & Launch a Farm Website) and 1 p.m. until 3 p.m. (102—How to Use Social Media for Your Farm) Two workshops, one day. You’ll learn how to connect with customers and potential customers online by improving your farms web presence. Cost is $15 for one or $25 for both. Pre-registration is required by April 20th call 315-963-7286. For questions or special assistance please contact Lynnette Wright at 315-963-7286 ext. 203 or email at lkw39@cornell.edu.

MAY

May 19—WIC Nutrition Program Farmer Training Webinar. A viewing of this webinar is being held at the CCE Cayuga Education Center, 248 Grant Avenue, Auburn, NY at 7 p.m. To register or for more information contact Becky Crawford at 315-255-1183 ext. 246 or email at rsc34@cornell.edu.

JUNE

June 6—Old Ways and Dairy Days. Held at the Ward O’Hara Agricultural & Country Living Museum & Dr. Joseph F. Karpinski Sr. Educational Center. 6880 East Lake Rd. Auburn. From 10 a.m.—4 p.m. Cayuga County’s Dairy Princess Pageant will also be taking place at 2:30 p.m. during this event.

JULY


AUGUST

August 22—CNY New York Forest Owners Association Summer Picnic, Woods Walk & Sawmill Tour—in Moravia. As more information becomes available, we will be sure and update on our website:
http://blogs.cornell.edu/cccecayuga

The Recommendation Report of the Advisory Committee to the Cayuga County Manure Management Working Group should be available by June 1st. To view go to: http://www.cayugacounty.us/Portals/0/planning/WQMA/Documents/RecommendationReport.pdf

Have You Suffered Livestock Losses As a Result of Adverse Weather?

The Farm Service Agency administers the Livestock Indemnity Program (LIP) which provides assistance to eligible producers for livestock death losses in excess of normal mortality due to adverse weather. LIP compensates livestock owners and contract growers for excess mortality of livestock due to adverse weather conditions which include losses due to floods, blizzards, extreme heat or extreme cold.

For 2015, eligible losses must occur on or after Jan. 1, 2015, and before December 31, 2015. A notice of loss must be filed with FSA within 30 days of when the loss of livestock is apparent. Participants must provide the following supporting documentation to their local FSA office no later than 30 calendar days after the end of the calendar year for which benefits are requested:

- Proof of death documentation
- Copy of growers’ contracts
- Proof of normal mortality documentation

USDA has established normal mortality rates for each type and weight range of eligible livestock. These established percentages reflect losses that are considered expected or typical under “normal” conditions. Producers who suffer livestock losses in 2015 must file both of the following:

A notice of loss the earlier of 30 calendar days of when the loss was apparent or by January 30, 2016.

An application for payment by January 30, 2016.

For additional Information about LIP contact the Cayuga County FSA Office at (315) 253-8471 extension 2 or email krista.tyrrell@ny.usda.gov.
Equine Botulism

Written by: Dr. Jerry Bertoldo, Dairy Management Specialist, Cornell

Botulism is sometimes referred to as “forage poisoning” in adult horses or “shaker foal syndrome” in foals 1 to 2 month old. It is a progressive, paralyzing disease that is 80-100 percent fatal in affected horses. Horses are extremely sensitive to botulism compared to all other domestic animals. This explains why it is common to find no other livestock on the farm affected even when multiple cases are diagnosed in horses.

Clinical signs of the disease include the loss of facial expression, a sleep appearance, saliva drooling from the corner of the mouth, loss of tongue control and loss of tail tone. Early in the disease a horse’s appetite remains good, but there is a great deal of difficulty in chewing food and “playing” in feed and water buckets is noted. Nerve impulses to the horse’s muscles are blocked by the botulinum toxin binding to the nerve endings. This results in a progressive paralysis of all the major muscle groups. As weakness becomes more profound, the horse will experience muscle trembling, generalized sweating and labored breathing. A weakened, shuffling gait may develop. Eventually, the horse goes down and death results due to paralysis of the respiratory muscles.

Botulism is caused by a potent toxin (poison) produced by the bacterium Clostridium botulinum that can produce several different toxins - Type A, B, C and D. Type B is responsible for 85 percent of horse cases in the United States.

The botulism bacteria live in the soil as well as the intestinal tract of many birds and mammals, including the horse. It produces dormant spores (long lived and extremely tough forms) found in 18.5 percent of soil samples tested in the United States.

Treatment is difficult and expensive even with early detection when the horse is only showing mild signs. Antibiotics are usually not very useful. Expensive botulinum anti-serum, intravenous fluids and tube feeding are necessary if there is any chance of survival. Down horses have grave prognoses. Euthanasia should be considered.

Botulism can be initiated in one of three ways:

- In the case of “forage poisoning,” the horse ingests pre-formed toxins that have contaminated grain or hay, most often due to putrefied carcasses of birds or rodents. Ensiled hay crop silage and baleage with a pH of 5.5 or higher as well as round bales left on dirt or pasture can be common sources of the toxins. Moldy conditions are often associated with the presence of the botulinum toxin.

- The bacteria itself can enter a horse’s body via contamination of a wound, especially a deep puncture wound. A good example is “shaker foal syndrome,” which is most frequently caused by the bacteria entering the newborn foal’s body through its moist navel.

- The third method by which the disease can be initiated is by ingestion of the spores in the soil. Hay should not be fed on wet and muddy ground especially where it can be trampled. The ingested spores activate in the horse’s intestinal tract where they produce potent toxins that are then absorbed.

Continued on Page 4...
When is a Vent Not a Vent?

Two days ago I walked all the calves on a dairy in central New York State. They are housed in hutches with collars and tethered at the front of the hutch.

At this time of the year, the rear vents are opened. A auto-size tire is slid under the rear of the hutch. The combination of these two adjustments should be to increase air movement through the hutch.

It was a warm day at noon. My recording thermometer read 87 F sitting on a bale of straw sitting in an unused hutch. Thus, some air movement inside hutches would be helpful.

However, when is a vent not a vent? When the person(s) bedding hutches places too much bedding too far back in the hutch. Many of the hutches were bedded well—the combination of long wheat straw and sawdust was placed far enough forward in the hutch to leave the base at the rear open for air entry.

However, more than a few hutches had the bottom rear vent space fully blocked with bedding. So, like any other protocol, folks need to be re-trained in the spring to adopt “summer-time” bedding practices.

Perhaps you have other seasonally specific protocols on your dairy—remember that nearly every year workers need to be refreshed on correct techniques.

Equine Botulism Continued . . .

Botulism is not contagious from horse to horse. Humans are not in danger from contact with affected animals.

The disease is difficult to diagnose because it resembles several other medical conditions and diseases. Blood samples rarely contain toxin. Because the bacteria often occur naturally in the horse’s intestinal tract, isolation of the organism from the sick horse’s intestine is not diagnostic. A PCR test is available through the University of Pennsylvania which can be used on feed, manure and large intestine content to identify the toxin.

Prevention through vaccination is critical. A Type-B toxoid vaccine available through Neogen, BotVaxB®, is 85% effective in preventing the disease. In areas where the disease is prevalent, pregnant mares should be initially vaccinated at the eighth, ninth and 10th month of gestation and thereafter at the 10th month of each pregnancy. This provides excellent protection against shaker foal syndrome. After an initial series of three shots, yearly vaccination of adults in areas where the disease frequently occurs is also recommended.

Consult your veterinarian for help in disease control and assessing the risk of botulism on your farm.

Bi-Lingual e-newsletter Available

Many dairy farms across the state rely on their Hispanic employees to carry out some of the most important day-to-day duties on the farm: milking cows, caring for calves and assisting with calvings to name a few. El Sostento is a bi-lingual e-newsletter from the Northwest New York Dairy, Livestock and Field Crops Team that is published 4 times per year. It provides relevant content to dairy farmers who have Hispanic employees. The March 2015 issue is now available and the topics include:

- Avoid Housing Issues
- What's in a Ration? (Span/Eng vocabulary)
- Worth a Listen
- Calving Assistance (Spanish/English)
- La Virgen de Guadalupe- Who is She?
- Pest Management DVD
- Bed Bug Fact Sheet

To view a copy of El Sostento go to: http://nwnyteam.cce.cornell.edu and click on the “BILINGUAL” tab in the upper right hand corner.
Dairy and other livestock farmers in the northern U.S. have three new alfalfa options this growing season – all pioneered by Cornell University researchers as a way to combat devastating pests, increase yields and improve forage quality.

Developed by Donald Viands, a professor of plant breeding and genetics in the School of Integrative Plant Science at Cornell University, along with senior research associate Julie Hansen, and research support specialist Jamie Crawford, these new varieties were grown in Cornell greenhouses and tested for resistance in farm fields across the state.

“The broader implications on agriculture revolve mostly around livestock producers, especially in the dairy industry, being able to economically produce forage for feed,” Viands said. “Higher forage yield and quality, combined with multiple disease and insect resistances, enable forage to be produced more economically, thus enhancing economic vitality of livestock operations.”

The first variety, SW 9558SBR, provides resistance to the alfalfa snout beetle, which can cripple root systems. Viands said this project was a collaborative effort among plant scientists Elson Shields and Tony Testa in the Department of Entomology at Cornell, extension educators and farmers. In trials, researchers have found this variety provides a half-ton increase in yield per acre.

The developers said seed companies are interested in selling SW 9558SBR to combat the snout beetle following a dramatic increase in the insect’s population over the past decade. The alfalfa snout beetle, currently confined to northern New York state, has the ability to spread to surrounding states and Canada.

“It’s easy to overlook this problem,” said Hansen. “Beetles burrow in hay bales and if only one insect gets transported, populations can grow rapidly.”

A second new alfalfa variety, SW 315LH, combats the potato leafhopper – an insect Hansen called “the most furious pest on alfalfa in all of North America.” The pest does not overwinter but arrives each year from the south carried by early spring thunderstorms. While the insect is found throughout the central and northern United States, Hansen said SW 315LH is the first potato leafhopper-resistant variety of alfalfa that is well-adapted for New York.

The third variety, SW 215CR, is geared to bolstering New York’s alfalfa cultivation and is the culmination of a project spearheaded by the late Royse Murphy, professor emeritus of plant breeding. This “creeping rooted” variety helps alfalfa grow in adverse conditions because its root system swells and grows laterally.

“Creeping rooted is not really a new trait, but Murphy successfully bred it into Northeast conditions,” said Viands. “This variety will be effective in New York state and surrounding states, building pasture longevity.”

All varieties are available to farmers through the New York-based seed company Seedway, with limited availability of SW 315LH and SW 215CR this spring. Seeds are available to farmers throughout the northern United States and may be made available to Canadian farmers in the future. Hansen said the team has had early feedback indicating both higher yields and healthier plants.

“The College of Agriculture and Life Sciences is unique for doing this type of work,” said Viands. “Through collaboration with researchers, extension educators and farmers, we can help advance the land-grant mission throughout the state.”

These varieties have been ongoing, collaborative projects for years and are funded primarily by Federal Hatch Funds through the Cornell University Agriculture Experiment Station as well as the Northern New York Agriculture Development Program and New York Farm Viability Institute.

**Considering Transitioning to Organic?**

Dairies interested in transitioning to organic certified production should take a look at the NY Organic Dairy Initiative website [http://blogs.cornell.edu/organicdairyinitiative](http://blogs.cornell.edu/organicdairyinitiative). The Initiative, through its connection with Cornell’s School of Agriculture and Life Science and Cornell Cooperative Extension, provides information to all parts of the organic dairy industry, including: the consumer, dairy retailer, dairy processor, organic certifier, and farmers. It enables New York State to grow this industry into a viable farming style that responds to the needs of its consumers, its environment, and its farmers.
In response to growing public interest in regionally-focused food systems, a proliferation of business models for expanding sales into these markets is occurring. In a recent U.S. Department of Agriculture (USDA), Economic Research Service (ERS) report, the most recent data and findings on several aspects of local and regional models were shared, but even that report noted that the concept of localness may vary by the audience, purpose and data of the food system dimension where local is applied (Low, et al., 2015). Given that some of the growth in regional food systems is anchored in the idea of increasing the share of food dollars retained by farmers, if not their allied business associates and communities, it seems important to better understand how different models address those goals. We propose a typology of local/regional food system business models, employing representative categories to help small and medium sized farmers learn how their operations best fit the changing food marketing landscape.

A Classification Scheme of Local Food Business Models (Figure 1)

Figure 1 represents a variety of the most common food system enterprises, both local and non-local. The typology can be divided into four quadrants using the sales volume as the horizontal dimension and the value-added (operating profit margin) per unit of sales as the vertical dimension. The types of models are ordered, and connected by arrows, to represent common evolutionary steps that operations may take if their current marketing choice or portfolio evolves with plans to expand or decrease in scale, as new marketing opportunities appear or financial challenges arise. The top two quadrants (and their subcategories) will be the focus of this article, as they correspond most directly to the business ventures found in local and regional food systems, and as Low, et al. (2015) reported, these intermediated sales may also be the future for growth in these markets.

Direct Marketing

As a broad category, direct marketing encompasses several marketing models that have emerged as a growing segment, but with slowing growth in most recent years (Low, et al., 2015). This category represents high-margin outlets with low sales volumes, high input costs (including labor) and limited ability to scale up due to seasonality and low share of consumer dollars spent in these markets. Online sales and roadside stands allow for the higher margins desired in direct markets but do not allow producers to “leverage” the power of more collaborative markets, thus they are relatively low on the vertical axis of Figure 1.

Farmers’ markets, a fast growing sector of local/regional food systems whose growth has plateaued in the past few years in terms of total numbers across the U.S., have been one of the central business models for direct marketing enterprises. Although commonly cited as a great start-up marketing choice and one that improves farm gross sales (e.g., Hunt, 2007), there is some agreement that potential sales volume may be limiting to vendors, and in some cases may not cover the additional inputs required by farmers’ market sales (i.e., packaging and labor requirements) (Hardsety and Leff, 2010; LeRoux, et al., 2010). An increasing number of farms provide their products directly to their consumers through...
An Overview of Emerging Business Models Continued. . .

community supported agriculture agreements: a model that provides more stable profit margins with an ability to scale up in areas near urban consumer centers. For this reason, it is placed higher on the vertical axis of Figure 1.

Value-Based Food Supply Chains

As illustrated in Figure 1, value-based food supply chains serve as one potential mechanism to scale food enterprises up while retaining some market-control. Within this larger category, several models have emerged with varying organizational and marketing strategies which may influence whether producers and their communities will benefit from their existence.

Farm direct to wholesale, where farms sell products directly to specialty retailers, restaurants, and institutions, may allow for long term relationships and informal contractual supply chains. Although long-term, cooperative supply chains may allow the prices paid to the farmer to be sustainably higher than commodity counterparts, some tension does arise in finding a price that works for both the buying and selling businesses (King, et al., 2010). Similarly, multi-farm CSAs allow the farmer to retain control over their products (in terms of setting production levels and/or prices), but farmers use a collectively-owned centralized system to market, sell and distribute their products. The model can provide favorable returns to producers, but one of the main challenges faced is maintaining equity among producers given the wide variety of volume and product type (Schmidt, et al., 2011).

Finally, food hubs are where the producer leaves all elements of the supply chain to a central organization, similar to a mainline distributor, but with governance aligned with collaborating producers’ missions. Fair pricing is a key distinguishing characteristic of this value chain model, but also a challenge as the organization and the producer both aim to maximize profits while working in an environment of small margins. Table 1 summarizes the advantages and disadvantages of each category of the typology.

Conclusion

A generalized typology of marketing choices and the associated advantages and disadvantages will assist small and medium-sized farmers respond to their own desire to grow or respond to future innovations in their local economy and/or market linkages in the future. The categories outlined in Figure 1 are necessarily broad, but may help enterprises identify their current position(s). And, as they move forward with future planning, this summary may direct them to the most relevant case studies, literature and market players so effectively compiled in a number of directories and bibliographies developed by key food system organizations.

For a more detailed discussion please see our full article on the eXtension website titled An Evolving Classification Scheme of Local Food Business Models:


Table 1. Market Typology Advantages and Disadvantages

<table>
<thead>
<tr>
<th>Market Orientation</th>
<th>Customers</th>
<th>Managerial Control</th>
<th>Pricing Power</th>
<th>Market Volume Potential</th>
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<tbody>
<tr>
<td>Roadside Stand and Online Sales</td>
<td>Local, traveling and national households</td>
<td>Full control</td>
<td>High</td>
<td>Low to high</td>
</tr>
<tr>
<td>Farmers Markets</td>
<td>Local households, travelers</td>
<td>Full control</td>
<td>High</td>
<td>Low to medium</td>
</tr>
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<td>CSA</td>
<td>Local households</td>
<td>Full control</td>
<td>Medium</td>
<td>Low</td>
</tr>
<tr>
<td>Farm Direct to Wholesale</td>
<td>Local, independent businesses, institutions</td>
<td>Full control</td>
<td>Medium</td>
<td>Medium</td>
</tr>
<tr>
<td>Multi-Farm CSA</td>
<td>Local households and businesses</td>
<td>Shared control</td>
<td>Medium</td>
<td>Medium to High</td>
</tr>
<tr>
<td>Food Hubs</td>
<td>Local businesses and institutions</td>
<td>Shared to limited control</td>
<td>Medium</td>
<td>Medium to High</td>
</tr>
<tr>
<td>Traditional Distributor</td>
<td>All buyers</td>
<td>Limited control and pricing power</td>
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</table>
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Dairy Production Margin
As you can see in the graph below, the milk feed ratio is predicted to be diminishing over the next few months. This graph projects dairy farm profitability has the potential to be reduced because of lowering milk prices this spring.

![Dairy Production Margin Graph]

Introducing Meatsuite.com
Meatsuite.com is a free online tool designed to help consumers easily find locally produced high quality meats in bulk. Meatsuite.com is available to farmers in Broome, Cayuga, Chemung, Cortland, Tioga, Tompkins, Seneca, Schuyler and Steuben Counties.

Cayuga County livestock farmers who sell in bulk are welcome to add their farm to meatsuite.com by going to meatsuite.com and adding your farm to Meat Suite! Currently this service is being offered at no charge. To learn more go to meatsuite.com

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