

Cornell University Cooperative Extension St. Lawrence County



April 2015

Extension News

Serving Agriculture. Youth and Families since 1913



4-H Vet Science - Inspiring the Next Generation

Over 30 years ago SUNY Canton and Cornell Cooperative Extension of St. Lawrence County partnered to offer the first 4-H Vet Science Program for area students. The program continues to inspire local youth to explore animal science fields. SUNY Canton began offering a fully accredited Veterinary Science Technology as a field of study in 1978. This two-year associate's degree in Veterinary Science at SUNY Canton prepares students to work in clinics and at farms, zoos, research facilities, and elsewhere.

Not long after SUNY Canton created the Veterinary Science Technology course, Extension partnered with the University to develop a multi-session 4-H Vet Science program for teen's ages 13-18. The program is taught by SUNY Canton veterinary technology students and is overseen by Dr. Mary Loomis, the Veterinary Technology Department Director. The college students plan and teach each class with program oversight from Fiona Laramay, 4-H STEM Educator. Dr. Loomis points out that this class structure actually increases her students' knowledge of the material. The teens attending the 4-H Vet Science program explore a wide variety of topics including rabies and other public health concerns, radiology, surgery, pathology, and clinical care.

Mary Beth Green, retired Extension Educator, coordinated the program for many years. Green noted that students gained many positive attributes while participating in the 4-H Vet Science program, including the fact that nearly half of the youth went on to study vet science after high school graduation.

Extension News

Cornell Cooperative Extension of St. Lawrence County

Extension News is a monthly publication with

Information for Agriculture, Youth Development and Healthy Families.

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Cornell University Cooperative Extension St. Lawrence County

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Feature Article

4-H Vet Science	
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Farmer to Farmer

Field Crops and Dairy

Integrated Field Crop Management5
Alfalfa Snout Beetle Bio Control6
Colostrum Management8

Livestock

Sheep and Goat News	10
Why add Yeast	14

Horticulture and Natural Resources

Seeding	Experiences	12	2
---------	-------------	----	---

Youth and Family

Wonders of Washington	15
4-H Club News	17
Summer in a Package	18
4-H Calendar of Events	

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Cornell Cooperative Extension is an employer and educator recognized for valuing AA/EEO, Protected Veterans, and Individuals with Disabilities and provides equal program and employment opportunities

Calendar of Events

Cornell Cooperative Extension Pre-Season Direct Marketing Workshops in Keeseville, Canton and Watertown will help farmers who sell direct to consumers from their farms, at event or at farmers' markets learn how to brand themselves and better market and sell their fresh food and processed items. The \$15 workshop fee includes lunch. Cornell Cooperative Extension offers equal opportunity programming and employment opportunities. Learn more online at <u>www.ccenny.com</u>. April 4: Canton, St. Lawrence County Cornell Cooperative Extension Learning Farm, register with Brent Buchanan, 315-379-9192, bab22@cornell.edu

Sheep and Goat Week Meeting – April 8 at 7:00 pm, Extension Learning Farm. Mastitis and transition care for ewes and does at lambing and kidding. Carolyn Pierce, DVM and Betsy Hodge instructing. Please register at 315-379-9192 or bmf9@cornell.edu

Extension Workshops to Build Farmer Collaborations for Sales, Marketing and Delivery of Local Foods - Many farmers are teaming up to develop, market, and deliver multiple products to meet the needs of buyers interested in purchasing local foods. Cornell Cooperative Extension will hold workshops in Burrville, Canton and Plattsburgh to help farmers develop formal partnerships, cooperatives, and corporations. Thursday April 9, 7-9 pm, CCE St. Lawrence County Extension Learning Farm Classroom, 2043 State Highway 68, Canton, to register: CCE St. Lawrence County: 315-379-9192

DOT Regulations Review – Farm Bureau sponsored event - Wednesday, April 15 at 1pm at the Madrid Community Building unless it is raining, then it will be at Greenwood's Machine Shop [1087 State Highway 310 Canton, NY]. State trooper will be instructing and DOT regulation books will be available. RSVP to Felicia Dougherty: 866-995-7300 or eny@nyfb.org

Solar Hot Water Heating for Your Farm: How to Take Advantage of New NYSERDA Rebates Now Being Offered. Held at the Extension Learning Farm classroom in Canton; Thursday, April 23 from 1 pm to 2 pm. Call 315-379-9192 to register.





For Sale: 1 large square water tank with metal frame. \$75.00 Call 315-344-0443. (1/15)

- For Sale: Used Pioneer made fore cart, with tongue and fils \$375.00. Call 315-344-0443. (1/15)
- For Sale: 2 ewe lambs. \$100.00 each. Call 315-344-0443. (1/15)
- For Sale:1st and 2nd cut grass hay bales, 4x4 round bales, stored inside, DeKalb area \$30.00 each.Sunbeam 510 cow clippers, good shape. \$75.00. Call 315-347-1430. (2/15)
- For Sale: Badger Barn Cleaner, New Holland 269 baler parts, four pipe elevator, 196 ft. stainless steel pipeline with vacuum pump tank, surge milking control box, 2-5 horse electric motors, 1-3 horse electric motor. Call 315-276-6994. (3/15)
- For Sale: Dry firewood, mostly Ash \$55.00 a cord. Cedar fence posts. New Idea No. 8 manure spreader, needs work or for parts. 364 Fulton Road, Lisbon, NY 13658. (3/15)
- For Sale: Badger 570 gutter cleaner driver unit. Excellent condition. \$1,250.00 Call 315-769-5085. (3/15)
- For Sale: International 884 2WD tractor, new clutch, new rear tires. Asking \$6,000. Call 322-8960. (4/15)
- For Sale: 500 square bales, 1st cut hay. \$2.50 per bale. Call 386-3826. (4/15)
- For Sale:Howard Rotovator 6 ft \$3,500, Ag bag 8ft (like new) \$20,000, Badger unload \$4,500, Rex unload
\$3,500, Badger 12 ton tandem running gear with wooden round bale bed \$1,500, Horst 12 ton
tandem run gear \$3,500, Knight Reel Auggie mixwagon 2300 \$4,500, Meyers box manure spreader
M160 \$4,600, NH 511 square baler \$5,000. Call 244-6007. (4/15)

For Sale: Badger 570 Gutter Cleaner Drive Unit, excellent condition. Asking \$1,250. Call 769-5085. (4/15)

For Sale: Square hay bales \$3/bale Morley–Potsdam Rd Canton; Call 212-8537 or 322-3106 (4/15)

Contact your Cornell Cooperative Extension Office if you wish to have your advertisement listed above for 90 days at no cost.



Feature Continued

(Continued from page 1)

A majority of these youths tend to continue their education through the Vet Tech program at SUNY Canton. Both Green and Dr. Loomis agree that another important aspect that results from participating in the 4-H Vet Science program is the fact that some youth discover that the vet science field is not for them. The program is both informational and engaging, which in turn encourages many students to return for the following year.



Dr. Loomis highlighted many benefits the course offers for teens including the interactive structure of the course, as well as exposure to vet science as a degree and field. The classes are primarily hands-on and observation based; for example each year they are able to observe a surgery. The course introduces the teens to the college classroom and laboratory setting. For many students this is the first time they have been in either environment, and they have found it helpful when they move on to college. Similarly the veterinary science students are able to provide advice to the teens in choosing helpful high school classes, recommending colleges, and discussing the demands of the life of a veterinary technology student.



Cornell University Cooperative Extension

The Cornell Guide for Integrated Field Crop Management provides up-to-date and comprehensive field crop production and pest management information for New York State. The 2015 guide may be purchased online at the Cornell Store (http://store.cornell.edu/p-189428-2015cornell-guide-for-integrated-field-cropmanagement.aspx). The manual is now available in its normal print format and also as an electronic, online format. Cost of the printed or online manual is \$26.00 each. A print manual + online access bundle is discounted 30% and may be purchased for \$36.50.



For more information about field crop and soil management, contact your local Cornell Cooperative Extension office or contact Kitty O'Neil, CCE Northern New York directly at 315-379- 9192 x253, <u>kitty.oneil@cornell.edu</u> or follow on Twitter @CCENNYCropSoil. The Cornell Cooperative Extension of Northern New York website is www.ccenny.com.



Background and Bio-Control

Alfalfa Snout Beetle (ASB) is the major limiting factor in alfalfa production and stand longevity in all Northern New York counties. Uncontrolled, ASB can destroy a new alfalfa seeding in just a year or two. Field losses cost producers from \$250 to \$400 per acre from this insect. Over the past 25+ years, an ASB biological control program has been developed by the Shields' lab at Cornell University that uses native, insect-attacking nematodes (biocontrol nematodes). To date, approximately 8,000-10,000 acres of alfalfa have been treated with these ASB-biocontrol nematodes on about 65 farms.

Some farms have inoculated the majority of their alfalfa acres while a number of farms have only inoculated I-2 fields. Early adopting producers, who have treated multiple fields within an area have reported a significant decline of ASB on their farm and have returned to growing alfalfa successfully. The decline in ASB population in an area has taken 3-5 years after multiple fields were treated. In contrast, farmers who have treated only a couple of fields in an area are not seeing much impact on their ASB populations. For these reasons, this cost-sharing program was developed to encourage more growers to treat fields within problematic ASB areas.

On-farm research the past 7 years indicates that just a single application of biocontrol nematodes is required in a field because these biocontrol nematodes persist in the field for many years, including across multiple year rotations to row crops. Many farmers are hopeful that planting the new ASB-resistant alfalfa varieties will solve their ASB insect problems, but these varieties are currently only moderately resistant and can be overrun by high ASB populations. For example, heavy ASB pressure wiped out all of Cornell's resistant alfalfa lines planted in a Lewis County field comparison in 2014. To effectively control ASB, a dual management strategy must be used. ASB populations must be reduced using biocontrol nematodes before ASB resistant alfalfa can be used effectively.

Alfalfa Fields Targeted:

Applications of biocontrol nematodes should be focused on either fields in their seeding year or fields in their 1st production year. In this cost-sharing program, biocontrol nematodes will be applied to new seedings after 1st (July) and 2nd (August) harvest or to 1st production year alfalfa stands after 2nd or 3rd cutting. Applications need to be made before September 1st. Specific application protocols have been developed and will be provided to participating farms.

The cost sharing program, available during 2015 only, is outlined as follows:

- Producer must request participation via their local Cornell Cooperative Extension Specialist, expressing an interest in biocontrol of ASB by May 15.
- Producer enrolled fields must be seeded to alfalfa or an alfalfa-grass mix in spring 2015 or the spring of 2014.
- Producers in an area known to be infested will be given preference.
- Producers with no previously treated fields will be given preference.
- Participating farms are limited to 100 acres each.

Cost of the biocontrol nematodes will be discounted by 50%. The cost of the nematodes in this application method is \$20/acre when purchased from Cornell. Under this proposed program, the farmer will purchase the nematodes from Cornell for \$10/acre and the NNYADP program will cover the remaining rearing costs of \$10/acre.

If the farmer has the equipment to apply their own nematodes through a commercial sprayer, the reduced price of the nematodes will be the entire cost-sharing program. However, if the farmer requires a commercial applicator to apply the nematodes, the 50% cost sharing will extend to the cost of application (\$10/acre equals the maximum cost sharing reimbursement). The commercial applicator will bill the farmer 50% for the application and then send an invoice for the remaining 50% of the application cost (\$10 / acre max) to Cornell to be paid from NNYADP funds. Attempts will be made to distribute the opportunity for cost-sharing across all NNY counties proportionally depending on need and demand.

Nematodes will be applied using the "skip nozzle" method, leaving every third nozzle open and nematodes will be applied to 33% of the acreage driven over by the application equipment (based on nozzle separation of 22-24").

Sign up before May 15, 2015:

This program was funded for 2015 by the <u>NNY Agricultural Development Program Small Grants Program</u> is being implemented by Cornell University Cooperative Extension Field Crops and Soils Specialists in Jefferson, Lewis, St. Lawrence, Franklin, Clinton and Essex Counties and the Shields' lab at Cornell University. For more information or to enroll, contact your local CCE Specialist:

Mike Hunter	Kitty O'Neil
Jefferson and Lewis Counties	St. Lawrence, Franklin, Clinton and Essex Counties
Cornell University Cooperative Extension	Cornell University Cooperative Extension
(315) 788-8450, ext 266	Mobile (315) 854-1218
meh27@cornell.edu	kitty.oneil@cornell.edu



Colostrum Management

By Kimberley Morrill, Ph.D, CCE NNY Dairy Specialist

The cost to raise a heifer calf from birth to entry into the lactating herd is a large investment for dairy operations, averaging \$2,232/heifer and ranging from \$1,860 to \$2,263 per heifer. On average in the U.S. 7.8% of heifer calves born alive, die before weaning, and over 75% of calves will experience one bout of illness prior to weaning, thus increasing the cost of heifer rearing and decreasing productivity and profitability.

Colostrum management and subsequent IgG absorption in newborn calves is tied to mortality, morbidity, growth rates, future milk production and culling rates. During the first 12 - 24 hours after birth, the intestines of the newborn calf are replacing fetal type cells with adult-type enterocyte cells. These fetal type cells are able to transport macronutrients - specifically IgG across the intestine to the blood during the first hours of life - thus allowing the calf to achieve passive immune transfer from colostrum.

Quality colostrum fed within the first hours of life provides the calf with sufficient amounts of nutrients, antibodies and maternal cells to jump start the immune system and provide passive immunity for the first 30 - 90 days of life. Passive immunity can be both local (lg bathing the gut lumen) or humoral (lg absorbed from the gut into the blood). Feeding inadequate amounts of colostrum or delaying the feeding of colostrum not only puts the calf at a greater risk of failure of passive transfer (**FPT**), but also has negative metabolic implications.

Key management practices to maximize absorption of colostrum components & improve calf health and productivity.

Timing of colostrum collection:

• Colostrum should be harvested ASAP after calving; delaying colostrum collection after parturition (even 6 hours) has a negative impact on colostral IgG concentration and may increase bacterial content.

Evaluate colostrum quality?

- Test Colostrum to determine if it is high quality, Green level on a colostrometer (above 50 mg lgG/mL),
 21 %Brix on a refractometer.
- Visually Inspect colostrum, make sure the colostrum being fed is clean and not contaminated.

Discard poor quality or contaminated colostrum

Do not feed colostrum that is:

- Contaminated with manure or foreign particles.
- Bloody or watery.
- From a sick cow and cows that are Johne's, or Leukosis positive.
- Feeding colostrum that is contaminated or from a sick cow can lead to sick and dead calves.

Timing & quantity of first colostrum feeding

• Calves should receive their first feeding of high quality colostrum within 4 hours of birth. The longer you wait, the less IgG the calf is able to absorb. The less IgG the calf absorbs, the more susceptible the calf is to pathogens (scours, respiratory challenges...)

(Continued from page 8)

• Calves should receive a minimum of 10% of their bodyweight in colostrum within the first 4 hours of life. Limiting the volume of colostrum calves receive within the first hours of life not only puts the calf at a greater risk of FPT but also limits the amount of calories the calf receive and has available for metabolism and thermogenesis. If nutrient intake is below maintenance requirements it creates a situation that encourages failure of the immune system.

Colostrum storage

- Feed colostrum within I hour after collection.
- Freeze or refrigerate colostrum within I hour after collection to reduce the risk of bacterial contamination and growth.
- Freeze colostrum in I gallon Ziploc bags for quicker freezing and thawing.
- Feed refrigerated colostrum within 3 days.

Cleanliness of everything!

During the first hours of life, bacteria and pathogens can be passed directly to the bloodstream. To prevent the transport of pathogens to the bloodstream we need to take preventative measures, both in the calving pen and with colostrum handling.

- Make sure the calf is born in a clean pen.
- Move the calf into a clean pen or hutch immediately after birth.
- Properly clean the teats prior to milking the dam. This is the first time in 6 weeks the cow has been milked and a lot of bacteria could be on the teats.
- Make sure all milking equipment is sanitized prior to milking.
- Make sure all buckets & bottles are clean.

Evaluate your colostrum management program

- Passive transfer of IgG can be determined from blood collected from the calf after 24 h of age.
- Failure of passive transfer: serum total protein is < 5.0 (as measured on a refractometer can be done calf side) IgG concentration is < 10 mg/mL (lab test) after 24 h of age.

Simple changes in management practices can reduce the occurrences of FPT in calves. Reducing the rate of FPT will lead to increased productivity and profitability on dairy farms across the U.S.



Dr. Carolyn Pierce and Betsy Hodge will present a program on care of ewes and does pre and post partum and managing mastitis problems. Register at 315-379-9192 or by email at bmf9@cornell.edu.



Sheep and Goat News By Betsy Hodge, Livestock Educator

I really wanted to write about getting ready for pasture season but with the temps in the teens and the ground still frozen solid I think it is safe to wait until early May to write about grass. In the meantime, our ewes are getting wide and their udders are filling up in anticipation of lambing.

There have been lots of cute pictures of lambs and kids posted on social media lately. That got me thinking about the ewes and does and their treatment before and during lambing. There are tons of articles on lambing and how to care for the lambs but not much on the ewes and does that

are doing all the hard work gestating and bearing these cute little critters. Attend our sheep and goat week meeting April 8th to learn more about transition care and mastitis (7 pm, Extension Learning Farm, Canton).

Gestation is about 5 months long for goats and sheep with a little variation by breed. The first 90 days or so don't require much extra nutrition for the ewe or doe but it is important to have free-choice, species appropriate, loose minerals available. During the last 40 to 50 days, the nutritional requirements increase at the same time there is less space inside the ewe or doe to put food. Therefore, the feed needs to be good quality and easily available. There needs to be plenty of bunk space if you are supplementing grain to avoid jostling and bashing at the feeder. Many farmers vaccinate their ewes and does a month before lambing with a CD/T vaccine or even a 7-way clostridial (contains the CD/T and a few more). This practice allows the mothers to build up antibodies that will pass to the babies in the colostrums and give them some protection for a few weeks while they start to get their own immune system revved up.

Just before lambing and kidding is a good time to de-worm your sheep and goats. Parasites that over wintered inside the animals' digestive tracts will be coming to life now. At the Extension Farm we have not seen an increase in fecal egg counts at this time so we have not done this but we are going to do fecal samples as we approach lambing and decide whether to do it this year. Wool ewes may benefit from crutching or shearing the area around the back end and rear legs. Crutching makes it easier to observe whether the lamb is nursing and for the lamb to find the teats. Actual timing of the full shearing of the ewes will depend on whether you are lambing inside or out and what time of year. Goats don't have a problem with too much wool in the way but they sometimes have very low hanging udders at first which may mean the kids require some coaching for the first few days to get the hang of getting the teats into their mouths.

Some problems to watch for in the weeks before lambing and kidding are vaginal prolapse, pregnancy toxemia, and even respiratory problems since most of us lamb either inside or during the time when the weather is very up and down. Vaginal prolapses can be replaced manually and after the bladder drains can be strapped or held in place with a "spoon" that stays in place until the lambs or kids are born. Serious or repeat offender maybe require a stitch in the vulva to hold things together until lambing. There is a 40% chance the ewe will prolapse again next year so consider carefully whether you want to keep her for another lambing. Pregnancy toxemia can be very serious if not caught early. Any ewe or doe off feed or acting dopey should be considered suspect. The energy draw of twins or triplets at the end of pregnancy can cause the animals to become ketotic and eat even less. Toxemia can be treated with propylene glycol but it is recommended you talk to your vet if you suspect toxemia. If one animal is showing signs there may be more coming and a change in the ration may be needed. Ironically, over fat ewes and does are more likely to have toxemia so keeping your animals in good body condition but not fat is very important.

(Continued on page 11)



Cornell University Cooperative Extension St. Lawrence County

Farm Day Camp 2015



"Make Today Ridiculously Amazing!"



Farm Day Camp @ the Extension Learning Farm!

Get ready to embark on a summer of adventure and fun at the St. Lawrence County Extension Learning Farm, just outside Canton on State Route 68. Campers, ages 5-10 will participate in hands-on-activities in animal science, agriculture, gardening, environmental science and much more, led by experienced and trained educators.

Imagine a day filled with farm animals, nature, crafts, woodworking, astronomy, fresh garden vegetables, archeological digs, chemistry and fishing! Hours will be filled with new experiences that you cannot find anywhere else but at this century old working farm. Campers do not have to worry about doing the same thing twice as educators will be changing their activities and building upon their education throughout the summer.

Part of the daily activities will be built around the week's theme. Campers will encounter daily hands-on experience working with the Extension Learning Farm's animals or in the high tunnel. An Agricultural or Animal Science component will be part of the everyday schedule.

Theme week Fee: \$145 per week per camper

Theme weeks listed below are geared for youth ages 5-10



Week I:	July 6-10	Dino Park (T-Rex and Friends)
Week 2:	July 13-17	Enchanted Forest (come see where fairy tales are born)
Week 3:	July 20-24	Wild West (Horses, Mining, and Cow-folk.)
Week 4:	July 27– July 3 I	Extreme Explorers (Exploring Earth's most
		Extreme Places)
Week 5:	August 3-7	Minecraft (Surviving with Steve in the wilds)
Week 6:	August 10-14	Mad Scientist (Science with a twist)



Adirondack **Guide Series**

Programs for

Ages 10-13

Wilderness Adventures: July 13th- 17th

This week will include a fishing trip, an overnight at Tupper lake with a day at the Wild Center, a visit to John Brown's Farm, archery, and a night in a new tent site on the farm. \$275

Woodland Adventures: August 10th-14th

This week will include working on creating lean-tos in a new wilderness site, Archery, a night at the new site while exploring the night sky. \$165

Programs for

Ages 13-18

High Peaks Explorer Trip 1 (ages 13 & 14): July 6 -10

This is a great trip for the young backpacker in the family who interested in starting his or her adventure summiting all of the 46 High Peaks in the Adirondacks. On trail they will learn introductory backcountry skills from highly trained trip-leaders.

High Peaks Explorer Trip 2 (ages 15 & 16): July 20-24

Similar to Trip 1, this trip will summit a different, slightly more advanced, set of 46ers. On trail, explorers will work on their backcountry leadership skills

High Peaks Explorer Trip 3 (ages 16-18): August 3-7

The most physically demanding of the trips, this week

explorers will bag 4 (possibly 5 if they are up for it) of the High Peaks in one day. More advanced backcountry survival skills will be worked on throughout the week.

Each trip includes one overnight and a two-night/three-day backpacking excursion.

Adirondack Stewards Week (ages 13-18): July 27-31

This week is an advanced version of the Wilderness Adventures week. In addition to the overnight stay in Tupper Lake, trip to Wild Center and John Brown's, and fishing, teens will have the chance to shoot at a local gun-range and work on building backcountry tent sites and lean-tos on the Farm new wilderness area.

Each trip costs \$275/person and includes food/lodging/transportation on overnights

Registration Information

+All Camps run Monday-Friday, 8am to 4pm

•Register by mail. Payment for 1st week is due at registration, before a space will be held for your camper. If registering a child for more than I week, the payment balance is due no later than June 26, 2015. All weeks require registration at least one week in advance.

Refunds are not available for cancellations.

•Confirmation of your registration will be mailed to you along with all necessary paperwork. All paperwork is due back at the Office at least one week prior to attending.

•All campers are responsible to bring their own lunch and a nonsugared beverage. Two daily snacks will be provided. Refrigeration for lunches is available.

* For safety purposes, no open toed shoes are allowed.

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Farm Day camp is permitted and inspected by the

St. Lawrence County Department of Health



Registration Form:

Child's Name:

Phone:

Address:

City:

Zip:

Parent's Name:

Child's Age:

Week I:	July 6-10th	\$145	Age: 5-10
Week 2:	July 13-17th	\$145	Age: 5-10
Week 3:	July 20-24th	\$145	Age: 5-10
Week 4:	July 27– July 3 I st	\$145	Age: 5-10
Week 5:	August 3-7th	\$145	Age: 5-10
Week 6:	August 10-14	\$145	Age: 5-10
ADK Historical Adventures	July 13-17th	\$275	Age:10-14
Woodland Adventures	Aug 10-14	\$165	Age:10-14
High Peaks Explorer Trip I	July 6-10	\$275	Age: 13-14
High Peaks Explorer Trip 2	July 20-24th	\$275	Age: 15-16
High Peaks Explorer Trip 3	August 3-7th	\$275	Age:16-18
Adirondacks Stewards Week	July 27-31st	\$275	13-18

Mail form and payment to:

Cornell Cooperative Extension 2043B State Highway 68 Canton, NY 13617 For more information call:

315-379-9192 or visit us at www.cceslc.com

4-H provides youth with educational opportunities fostering their skills in:

Citizenship Healthy Lifestyles Science, Technology, Engineering and Math



CCE of SLC's Mission:

To provide an unbiased, educational outreach resource to the North Country through education, demonstration, and research in the areas of food and agriculture systems, life skills development, community enhancement and rural stewardship.

Cornell Cooperative Extension of St. Lawrence County provides equal program and employment opportunities.

Please contact the Cornell Cooperative Extension of St. Lawrence County Office if you have any special needs.

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(Continued from page 10)

Every once in awhile we find a ewe tipped over or "turtled". Her shoulder is next to a rock or she got tipped part way on her back in a little dip in the ground. I think this could happen to very pregnant goats as well but the thick wool on a ewe makes it even more challenging for her to get up. If you catch them in time, a little assist at getting right side up will be all they need although it might take a little while for them to un-bloat. If you are too late, they will bloat and not be able to breath.

At lambing and kidding time there are a couple things to watch for. Milk fever is unusual but possible in ewes and does. In ewes it usually hits right around lambing. Does often have trouble a little later – even a couple weeks after kidding. Ewes tend to be laying flat on their sternum with their head down on the ground and can be drooling. They respond very quickly to calcium. The fastest way is to inject calcium gluconate (available at most farm stores) under the skin. Refer to your vet for amounts and timing. Ewes and does should clean (pass the placenta) soon after the birth of their young. Retained placentas may be a sign that your mineral program is not quite right and again it would be wise to talk to your vet.

Your kidding and lambing area should be dry and clean or outside on grass. Does and ewes are less likely to pick up mastitis-causing organisms and lambs and kids are less likely to pick up navel infections. Last but not least, if you are using jugs or claiming pens for newborns and their mothers, make sure you get the right lambs with the right ewe or the right kids with the right does. Mix-ups cause much stress for the mothers and they may step on and hurt the babies while they are trying to let you know it is not right.

A little TLC goes a long way to getting your ewes and does off to a good start. Tempting good quality hay and a little grain will get a tired ewe or doe going. Fresh water is a must as well. Keep posting those pictures. Cute lambs and kids brighten everyone's days!



on for 12-16 hours a day. When the first set of true leaves develop, you can fertilize with a dilute solution (half-strength or weaker) of soluble fertilizer every 2-3 weeks. After the second set of true leaves appear, your starts are ready to transplant. About two weeks before you expect to set the plants out into the garden, begin hardening them off. Move them outside for a few hours each day to a partially shaded location sheltered from wind. Gradually increase the time they spend outdoors, and start exposing them to full sun a few hours at a time. When it's time to set plants into the garden make sure they're planted at the right depth in the soil, which is usually some shade of brown, just to jog your memory. It's been quite a while.

(315) 379-9924

During germination, temperature is critical. 70-75 degrees is an ideal range, so don't start them on your windowsill. Keep the containers moist but not too wet, and don't fertilize yet. After plants come up you can dial down the heat. Cool-season plants like broccoli, cabbage and lettuce will thrive at 45 or 50 degrees, but warmseason plants like tomatoes and peppers should be kept at 65-70 degrees in the day and 55-60 at night. Basically, plants are solar panels that make leaves and fruit instead of power, so they need good light. Full sun is best-even a big south-facing window often does not provide enough light. You can supplement lighting with fluorescent tubes. One "cool white" with a "warm white" 40W fluorescent tubes together in the same fixture are as good as a fancy grow-light, and much cheaper. Lights should be suspended just a few inches above the plants, and be kept

sow your peppers and eggplant about 7 weeks before last frost. Onions and leeks need 10 weeks. Any container that's at least three inches deep with large holes in the bottom for drainage will do. If they were used for plants before, immerse them in a 10% bleach solution and allow to drip dry. Make sure your potting soil contains no soil. To clarify, a good planting medium is a sterile mixture of peat moss and absorbent minerals like

perlite or vermiculite. It's disease-free and provides good soil aeration as well as water-holding ability. Premoisten the mix before filling your containers. Read each seed packet carefully-it will give tips on timing and care as well as planting depth. Most seeds are planted about 2-3 times as deep as they are wide. After covering up seeds, water the containers from the bottom-they'll have to be in trays of some sort. An aluminum baking sheet works great if you can spare one. From experience I can say that labeling your containers is time well spent.

Timing is important. If you sow too early, plants will become leggy and weak-stemmed before it's warm enough to plant them out. On the other hand, a crop like eggplant needs enough time to mature—if you're too late starting you might end up with few or no fruit. But if it's on your list to err in this process, better to do so on the side of late planting as opposed to early. Many vegetables such as tomatoes do best when started indoors about 6 weeks before the last frost, which in northern NY varies from the end of April to early lune depending on your elevation and latitude. You can find average last frost dates online, or call your Cooperative Extension office if you don't have Internet access. Squash, melons, pumpkins and cukes do well with only a 3-week head start, but

indoors. If you're new at this, the materials list can be perplexing. You'll need to scrounge up the right amounts of light, warmth, drainage, timing and sanitation. Seeds would be helpful, too.

Seeding Experiences By Paul Hetzler, Horticulture and Natural Resource Educator

impermanence resolved, gardeners can get ready to start seeds





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Why add yeast by Brent Buchanan,

Ag Issue Leader

Saccharides are carbohydrates (sugars) that are found in the cells of mammals and birds (among other things). Specifically, they tend to be found sticking out of the surface of the membrane (outside) of the cell as either oligo- (few) or poly- (many; chain-like) saccharide forms. Interestingly enough, many of the worst forms of bacteria for livestock and humans alike tend to be the gram negative bacteria, which also sport tough inner cell walls

and polysaccharides in their outer cell membranes. Now how does all this biochemistry relate to our animal industry?

Good question. Scientists have concluded that these oligosaccharides (within the cell membranes of mammals and birds) play a huge role in recognition. Specifically, the oligosaccharides help cells recognize other cells as well as specific proteins (both those that are good and those that are bad).

Now this is where the yeast come into play. A specific oligosaccharide, called mannan oligosaccharide is found within cell walls of certain yeast cells that can be cultured in large-scale commercial production facilities. This is good news because studies have shown that the yeast-built sugars are very handy when added to diets of livestock that typically struggle with bacterial issues which result in poor growth or death loss. For more than seven years now in university studies, performance was enhanced in nursery and weanling pigs as well as various types of poultry with the inclusion of mannan oligosaccharides in their diets. Young, bacteriasusceptible animals tend to be those receiving the most benefit from these yeast-derived compounds.



The current thinking is that the cell and protein recognition features of the oligosaccharides are the keys to the success of these products. Gram negative bacteria tend to mistakenly bind to the mannan oligosaccharides (made from the yeast cells), instead of attaching themselves to the inside of important parts on the inside of our livestock's gastro-intestinal tracts. When these opportunistic bacteria get a foothold in our livestock, they can wreak havoc in short order. So promoting the bacteria to latch onto something that provides a free (and harmless) trip to the outside of the animal can be a huge help. The commercial products containing mannan oligosaccharides are currently making their way into other livestock industries and appear to be worth taking a look at the research data currently being generated. Since this is a natural product, even USDA organic certifiers permit use of non-organic yeast products in livestock feed, as long they are non-synthetic.

Adding yeast to ruminant diets might be seen as a bit of an insurance policy against bad microorganisms. Just writing this makes me feel like eating bread and drinking grape juice!



Celebrate the 60th Anniversary of Soil and Water Stewardship Week, April 26 to May 3rd 2015. It is the longest running conservation event in the nation. Local Heroes – Your Hardworking Pollinators is this year's theme.





Our local conservation district can assist you in maintaining or developing habitat for pollinators. Contact the St. Lawrence County Soil and Water Conservation District at 1942 Old Dekalb Rd, Canton, NY 13617 or at 315-386-3582 or at conservation@slcswcd.org. Our web site is slcswcd.org.



4-H and Youth and Family

Wonders of Washington By Nicki Hamilton-Honey

Spring is in the air here in the North Country and, while we still have snow on the ground, it is sugaring season. Our nation's capital is heralding the beginning of spring with a unique festival that involves a very different tree. The National Cherry Blossom Festival has been held every year since 1927. This festival celebrates the gift of thousands of flowering cherry trees from the country of Japan. In a ceremony on March 27, 1912, the first two trees from Japan were planted on the north bank



of the Tidal Basin, directly opposite the Jefferson Memorial. In 1915, the United States reciprocated with a gift of flowering dogwood trees. Today, not only in the Tidal Basin but also up and down the National Mall, you will find the beautiful white and pink blossoms. Over the decades the festival has grown from a small one with school children and civic groups, to a four-week celebration attended by over a million people and including diverse programming marking this springtime celebration. This fall, youth ages 13 to 18 have the unique opportunity to visit our nation's capital. Please contact Andrew Carpino or Nicki Hamilton-Honey for more information about our 4-H Wonders of Washington trip. For more information about the National Cherry Blossom Festival go to http://www.nationalcherryblossomfestival.org/.



4-H Club Charter Archive Restoration

As farming became more of a business venture, and agricultural problems became more complex, a need for special trainings in the field was evident. An early attempt to educate rural youth was made by the New York State College of Agriculture at Cornell University. Around 1896, youth were encouraged to seek an interest in farming and rural life through the study of nature. Under the leadership of Dr. L. H. Bailey and J. Spencer, the first junior naturalist clubs were organized in rural school. These clubs received charters and members where given buttons.

In 1914, Extension gained Government recognition and support through the establishment of the Cooperative Demonstration Act (Smith-Lever Act) that was passed by Federal Congress. This made Federal funds possible for the purpose of providing educational services from the State Colleges of Agriculture to individuals who could not leave home to attend college. This congruently strengthened the work of Extension. It made the County Extension Agent System possible, and appointed state leaders to address the establishment of youth club work. O.H Benson was responsible for youth club work in the Northern and Eastern States in the country, and is recognized for the inspiration for the name of 4-H.

Historic information from Clara Stewart, The history of NYSACCE4-HE

WANTED- Old 4-H Club Pictures!

Upon arriving at Cornell Cooperative Extension, I was introduced to a thick pile of yellowish half sheets of paper that can only be described as the beauty of old aged paper. To my amazement, these stacks of paper were the applications from clubs that applied for 4-H Club Charters in St. Lawrence County over the years. The earliest charter applications were dated 1960 from Lawrenceville Busy Beavers, Woodbridge Corner Friends, and Cloverleaf 4-H Club of DePeyster. It is a beloved history of volunteers and clubs that have been established and fostered over the years, and it would be a wonderful project to put together an archive of the applications for 4-H Club Charters and 4-H Seals of Achievement. **Copy and Send in Old 4-H Club Photos!** Ask your family, friends, and neighbors who have a family history in 4-H that may have old photos from past 4-H years and would be willing to send in a copy of those photos to put into the club charters archive.



Club News

The **Jolly Rancher 4-H Club** would like to welcome the newest future 4-H member of their club. Joey Kring is holding his baby brother Henry. The club gifted Henry with a 4-H baby blanket.

Welcome Henry!

Information and photo provided by Meaghan Pierce, Jolly Rancher Club Secretary.

The **Raindrop Roundup 4-H Club** is proud to announce that all their members qualified to move onto the Regional Horse Communications Competition on April 11th, or District Public Presentations on May 2nd. Congratulations!! Information and photo provided by Judy Boyer, Raindrop Roundup Club Leader.

The **Shoots and Roots 4-H Club** will be starting seeds at their next 4-H meeting on April 6th. The seeds will include tomato, peppers, watermelons, petunias, marigolds, etc. Information provided by Rebecca Church, Shoots and Roots Club Secretary.

The **Pine Hill Pioneers 4-H Club** is hosting a can drive from now until September 1st, 2015.

4-H County Fair theme is "4-H: Right in Your Backyard!"

St. Lawrence County Places First

St. Lawrence County's 4-H Sr. Dairy Bowl team placed first in the District competition held on Saturday, March 21st, at the South Lewis Middle School. Mia Brown from St. Lawrence County took first in the individual placements with a score of 50. Mia will be participating in the 4-H State competition on Saturday, April 25th, at Cornell. Other members of the team were Sydney Brown, Rebecca Church and Xavier Tweedie. Colleen Tweedie leader of the Homeschool Hillybillies was the team's coach.

WUNDERS U WHOHINUIUN JOIN US IN EXPLORING THE NATION'S CAPITAL!

OCTOBER 21st - 24th, 2015

contact Andrew Carpino or Nicki Hamilton-Honey for more information @ 379 - 9192 or ac2464@cornell.edu / nh327@cornell.edu

Summer in a Package by Claudia Hitt

The seeds I ordered arrived today and I'm ready for them. I cleaned off some shelving and have placed it right in front of a 6 foot western window. Some of my newly transplanted houseplants are there



at the moment recuperating before being moved to their new spots in the house. After your seeds are in hand, the next thing needed is seed starting containers. There are containers made of plastic, or fiber, peat pots and pellets, growing cubes, and even complete starter kits. My Grandmother used to use egg cartons and milk boxes cut in half lengthwise. Drainage is important, so if using your own recyclable container, be sure to punch holes in the bottom.

Generally you will want to start the seeds six to eight weeks before the final frost date. For the central New York area that we are in, that means seeds should be started from the end of March to the middle of April. The best 'soil' for germinating seeds is a sterile, soilless media that you can buy in the store. I like the pre-moistened mix with fertilizer already in it. Your garden soil might be great, but it is not the best for indoor seed starting. I've tried it, and I know it's not! A good rule of thumb for planting seeds is to plant them at a depth I or 2 times the thickness of the seed. Tiny seeds, such as thyme or baby's breath should be scattered and pressed down, not covered. Be sure to place labels on your project or you'll forget what is where.

Water the trays from the bottom. This means that your starter trays need to be places in a water tight container. The trays will soak up water till the soil is moist. The 'soil' needs to be kept moist for germination to occur. Cover the container with plastic wrap or put it in a plastic bag and tie shut. Keep in a warm spot, around 70°. Be patient when waiting for germination. Some seeds take two weeks or more! Warm moist soil will produce the quickest germination. Remove the plastic as soon as you see sprouts. Put the container in the sunniest place you've got or under grow lights that are just inches above the sprouts. As the plants grow, keep the light just inches above them by raising when needed. The light should be on for 12 - 16 hours a day, everyday, and the temperature should be cooler, 55-60°

The seedlings can be moved outdoors as soon as possible. My seedlings will go to a cold frame on the porch where they will get 1/2 day of sun to start hardening them off. This may take a week or two, then they will go out on the lawn in full sun, still in a cold frame. The cold frame is a box covered with glass, a miniature greenhouse. It can be large or small. Care must be taken with a cold frame. It needs to be closed at night to protect the seedlings inside from freezing and frost. It may need to be covered at night in addition to being closed. On bright sunny days it needs to be opened, the warmer the day the wider the opening of the glass. I have had to water my seedlings every day when they were in a cold frame, especially if the sun is bright and warm.

This year watch the weather to help you decide when to start seedlings. Cold frames will not work well in a snowbank. And we have lots of them this year. For more information on seed starting call or stop by your local Cornell Cooperative Extension Office .

4-H Calendar of Events

Maple Community Program - April 4th 11:00am ; April 18th 10:00am Cornell Cooperative Extension Learning Farm.

STARR- April 10-12th at the NY State Fairgrounds, Syracuse. Contact Andrew Carpino at ac2464@cornell.edu or (315) 379 – 9192 ext. 234 for more information. Registration and \$75 per person is due to the Extension Office by March 13th.

Regional Horse Communications - April 11th, 10am at the Extension Learning Farm. Call Fiona Laramay to register and get an assigned time, 315-379-9192 ext. 252.

4-H Dairy Club - April 18th 12:00pm Brenda Smiths Farm Hermon, NY.

NYS 4-H Shooting Sports Annual Banquet - April 25th, Fort William Henry Resort, Lake George, NY. Visit http://www.nys4hshootingsports.org/ for additional information and registration form.

State Dairy Bowl Competition - April 25th Cornell University Ithaca, NY.

The St. Lawrence County Dairy Princess Pageant - Saturday, April 25th in the Madrid Community Building. Seeking young women(12-21) with a dairy connection to promote dairy products. Contact LouAnne at 322-4162 for participant questions. CowTail hour begins at 6:30PM, dinner and pageant at 7 PM. Please call Amy at 322- 5548 for reservations.

Animal Crackers registration is now open. Please remember to use the on-line registration link below and indicate which track participants will attend (livestock<u>or</u> horse). Do share registration procedures with county 4-H office staff who may be new. A printable brochure with workshop station descriptions and a schedule for **2015 Animal Crackers**, are posted http://4h.ansci.cornell.edu/events-2/animal-crackers/ This **25**th annual event for beginner 4-H'ers will be held on Sat. May 2, 2015, at Cornell. The deadline is April 22. Cost is \$15/youth and counties will be billed for each registered youth. Adult chaperones may attend for FREE. To keep cost low, attendees must BRING A LUNCH.

4-H District Public Presentations- May 2nd, 9am at the Hermon DeKalb School.

4-H Dairy Camp - May 16th 9-3pm Extension Learning Farm Canton, NY.

ATTENTION: Seeking volunteers to help perform a variety of task at the arena during St. Lawrence County Fair 4-H horse shows. For more information, or if interested in volunteering, please contact Fiona Laramay at (315) 379-9192 ext. 252, or fml43@cornell.edu.

WANTED: Presenters and volunteers to help out with a variety of tasks during Cornell Cooperative Extension's Farm Day Camp. Tasks may include presenting educational materials on various topics, chaperone youth, organize and lead games and activities, helping with morning and afternoon chores, etc. For more information, or if interested in volunteering, please contact Ryan Siver at (315) 379-9192 ext. 261, or rls359@cornell.edu.





Cornell University Cooperative Extension St. Lawrence County

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Shooting Sports 8 Week Program

The eight-week session alternates between the Norfolk Rod and Gun Club and the Extension Learning Farm in



Canton.

Youth must be12-19 years of age. Parents encouraged to get involved too! Participants use Extension owned archery equipment, .22 cal. rifles and 20 and 12 gauge shotguns.

Cost: \$50 per student. Fee includes necessary memberships (Sportsman Club and 4-H), insurance, supplies (ammo and targets), and facility use, etc.

Call to reserve space now, 379-9192. Welcome packet and registration forms will be mailed, which can be returned with fees prior to the first program event.

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