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University of California
Agriculture and Natural Resources
Making a Difference for California

Grazer's Gazette

Volume 5: Number 6 October, 2010

A Newsletter about Livestock, Pastures and Rangeland
Edited by John M. Harper, Livestock & Natural Resources Advisor, Mendocino & Lake Counties

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John Harper's Livestock & Natural Resources Blog Updates August 5, 2010— October 11, 2010

From time to time ***The Grazer's Gazette*** *will reprint articles from John Harper's on-line blogs and postings to Facebook and Twitter. If you are not already on John's email distribution list and would like to get this information when it is posted, please contact the UC Cooperative Extension at 707-463-4495 or email* ***cemendocino@ucdavis.edu*** *with your current email address. Also, be sure to notify us of email or address changes so that you continue to receive timely information.*

New Cattle Ear Tag Available for Horn Fly Control

August 5, 2010

Dr. Alec Gerry from the Department of Entomology at University of California Riverside provided the following information:

New Cattle Ear Tag for Horn Fly Management

Y-Tex Corporation has recently registered (in 2010) a new ear tag called "XP 820" for beef and non-lactating dairy cattle in California. The XP 820 ear tag is registered for control of horn flies and several tick species with control lasting up to several months. The label also indicates that the tags will reduce face flies when two treated tags are used per animal.

This new cattle ear tag is the first to contain abamectin (a macrocyclic lactone) which provides these tags with a different chemistry than other tags available with organophosphate (OP) and synthetic pyrethroid chemicals. Abamectin has not previously been used for control of cattle pests in the United States. This new chemistry will make these tags effective against flies which are already resistant to insecticides in other chemical

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classes currently available with ear tags. Rotate the use of the XP 820 ear tags with other ear tags containing different insecticide chemistries to reduce the development of insecticide resistance within targeted fly populations.

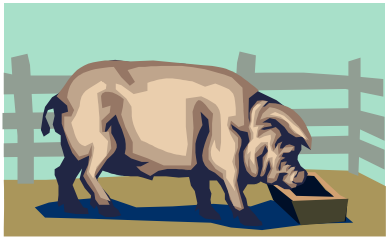
For more information on the XP 820 cattle ear tag, visit the Y-Tex Corporation web site at: www.ytex.com . *The University of California does not recommend any specific company or product and has not evaluated the efficacy of the XP 820 ear tags.*

Pen Ultimate Niche Meat Marketing

August 5, 2010

Building your own USDA Inspected Harvest and Processing Facility? On your ranch?! How could this be possible?

I'm always intrigued with the entrepreneurial spirit of the American rancher. Especially those who are willing to be early adopters and those that work towards solving what most of us call impossible problems.



Learn about what one Vermont rancher, Sugar Mountain Farms, is doing through community sponsored agriculture (CSA). Yes, Virginia, they are building their own Butcher Shop with the goal of USDA inspection for interstate trade by 2011. (Vermont unlike California can get state inspection, but for interstate trade they must be federally inspected)

Read more about their efforts at: http://flashweb.com/blog/2009/11/butcher-shop-at-sugar-mountain-farm.html. Do remember there are differences between Vermont and California. An example is that in Vermont you can compost the offal. In California you cannot.

I hope this inspires our California niche meat marketers. Checking out Sugar Mountain Farms web pages and in particular their pre-buy CSA should give you all a bunch of ideas.

Beef Checkoff—Study: Americans' Perception of Factory Farming

August 25, 2010

The Beef Checkoff program has released in August the results of a study on Americans' knowledge of the term "factory farming." The study's goal was to determine if knowledge of the term adversely affected consumers' preferences for beef.

The findings of the study showed that *"the number of Americans who are familiar with the term factory farming has increased since 2008, rising by 15 percentage points." In addition, it found that "the percentage of consumers who associate factory farming with chickens has risen significantly since 2008, but those who associate it with cattle has remained stable. Beef cattle are much more associated with factory farming than are dairy cattle."*

"Consumers overwhelmingly associate factory farming with big agriculture and large scale farming. They describe factory farming as being industrialized, using machinery and technology, owned by big corporations and producing large numbers of animals. A small percentage seem to have bought into the activist argument that factory farms are driving small family farms out of business."

Beef producers need to be especially proactive about responding to the following from the survey results. *"Of some concern is the finding that well over half (58%) of consumers who are familiar with factory farming believe the beef they buy at the supermarket comes from cattle raised in a factory farm setting. This percentage has not changed since 2008. In addition, of those who*

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think their beef is from factory farms, more than half (56%) are concerned (with 41% saying they have a great deal of concern) about the safety of the beef they buy. This percentage, as well, has not changed significantly since 2008."

Education of consumers is extremely important no matter how you market your cattle. Take the time to share what you know about your industry with your non-producing friends, family and neighbors.

You may read the entire article on-line at: http://www.beefresearch.org/CMDocs/BeefResearch/Market%20Research/Project%20Snapshot%20Factory%20Farming%20081810.pdf.

New Organic Handbook from USDA

September 7, 2010

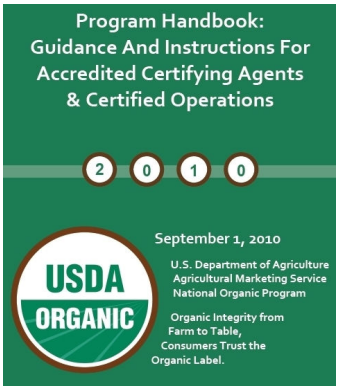
The following is a press release from USDA announcing the publication of the new National Organic Program Handbook.

WASHINGTON, Sept. 2, 2010—The U.S. Department of Agriculture today published the first edition of a program handbook designed for those who own, manage, or certify organic operations. Prepared by the National Organic Program (NOP), the handbook provides guidance about the national organic standards and instructions that outline best program practices. It is intended to serve as a resource for the organic industry that will help participants comply with federal regulations.

"The handbook will provide guidance to the organic agricultural community to enable them to carry out production and handling processes in a consistent manner," said Miles McEvoy, NOP deputy administrator. "It will also reduce the burden on industry participants as they work to comply or verify compliance with the NOP regulations."

First proposed as a "program manual" a decade ago and more recently addressed in the March 2010 USDA Office of Inspector General audit report of the NOP, the publication of the program handbook marks an important step in NOP's efforts to ensure consistency in the application of NOP regulations. The inaugural edition of the handbook provides guidance on the allowance of green waste in organic production systems, approval of liquid fertilizers in organic production, certification of organic yeast, processed animal manures in organic crop production, reassessed inert ingredients, and the calculation of dry matter intake for NOP's access to pasture requirements.

It also includes instructions concerning organic certification, such as recordkeeping, steps to certification, and organic certificates; accreditation procedures, such as how to apply to become an accredited certifying agent; international procedures, such as how USDA determines equivalence of foreign organic standards to those of the NOP; compliance and enforcement measures, such as how to handle complaints; and appeals procedures for certified operations or accredited agents.



Additionally, the handbook explains the difference between NOP guidance and instruction documents and outlines their purpose, legal effect, and the process by which the NOP authorizes, reviews, revises and disseminates them to the public. Future guidance documents will be issued through the notice and comment process outlined in the handbook.

The handbook is accessible at http://www.ams.usda.gov/NOPProgramHandbook.

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Printed copies can be made available upon request to Standards Division, National Organic Program, 1400 Independence Ave., SW., Room 2646-S, Ag Stop 0268, Washington, D.C. 20250-0268; telephone: (202) 720-3252; fax: (202) 205-7808.

For more information, contact Melissa Bailey, Director, Standards Division of NOP, at (202) 720-3252.

Agriculture's Role in Greenhouse Gas Emissions and Capture

September 8, 2010

The American Society of Agronomy, the Crop Science Society of America, and the Soil Science Society of America recently released a joint document entitled *Agriculture's Role in Greenhouse Gas Emissions and Capture*. The full document can be downloaded at: https://www.agronomy.org/files/science-policy/ghg-report-august-2010.pdf.

The effort summarizes current knowledge of Greenhouse Gas (GHG) emissions and capture as influenced by cropping system, tillage management, and nutrient source (including manure) in six US agricultural regions. The six regions are the Northeast, Southeast, Corn Belt, Northern Great Plains, Southern Great Plains and the Pacific. The Pacific region includes California, Nevada, Oregon, Washington and Idaho. Additionally, topics requiring further research have been identified.

The report's interpretive summary states that: *"Approximately 6% of all greenhouse gas (GHG) emissions originating in the United States (U.S.) come from agricultural activities. These gases are in the form of carbon dioxide (CO2), nitrous oxide (N2O), and methane (CH4). However, by employing proper management techniques, agricultural lands can both sequester carbon and reduce CO2, CH4, and N2O emissions, thereby reducing their GHG footprint.*

Cap-and-trade climate change legislation, currently under discussion in the legislative and executive branches, may have broad and long-term implications for the agricultural sector. In order to determine the role of agriculture in GHG emissions and capture, a full life cycle accounting of GHG sources and sinks is needed."

The report does a great job in explaining the effects of GHG on climate change and documents the rise in each of the three GHG's. It further offers methods of reducing agriculture's production of GHG or sequestering carbon including:

- Reducing fuel consumption;
- Enhancing soil carbon sequestration;
- Improving nitrogen-use efficiency (NUE);
- Increasing ruminant digestion efficiency; and
- Capturing gaseous emissions from manure and other wastes.

Livestock producers, rangeland managers and hay producers will value many of the specific suggestions for them in both reducing GHG's and sequestering carbon. A few of these include:

- Harvesting forage by livestock grazing rather than mechanically - reducing fuel consumption;

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- Using legume-based rotations or organic agricultural systems to reduce N fertilizer applications - reducing fuel consumption;
- Conservation tillage, winter cover crops and perennial pastures - enhancing soil carbon sequestration;
- Leguminous green manures (like clovers) can convert nitrogen gas from the atmosphere to plant available N for crop use (like hay and pasture or between vineyards) - improving nitrogen-use efficiency (NUE);
- Adjusting the portions of animal feed to decrease digestion time - increasing ruminant digestion efficiency;
- Using edible oils or other feed additives to reduce metabolic activity of rumen bacteria that produce CH4 - increasing ruminant digestion efficiency;
- Capturing CH4 emissions from livestock waste using covered lagoons and converting to electricity – capturing gaseous emissions from manure; and
- Applying manure to the soil as a nutrient source rather than storing it as waste – capturing gaseous emissions from manure.

It's encouraging to know that grazing livestock and some of the typical practices we presently employ can have a positive impact on our environment. I hope all of you will download and read the entire report.

Fall is Often Bluetongue Season on the North Coast

October 5, 2010

Fall is often bluetongue season on the North Coast. Recently a colleague of mine forwarded me an excellent summary article by Robert B. Moeller Jr. DVM of the California Animal Health and Food Safety Laboratory in Tulare, California. I've included it below for your reading.

Bluetongue is an endemic disease in California and is a common problem of unvaccinated sheep living in the San Joaquin Valley of California. The disease is seasonal and is usually seen in the late summer and early fall months. Most clinical cases are usually seen during the months of August through the end of October. Bluetongue disease occurs worldwide and has recently caused serious economic problems in livestock in northern Europe.

Bluetongue is caused by a virus that is a member of the Orbivirus genus. This disease is not contagious from animal to animal and must be spread to susceptible animals by the bite from an infected insect vector. The insect vectors are biting midges (*Culicoides* species), which are common throughout California. There are 26 serotypes of Bluetongue virus present in the world, but only 5 serotypes are currently established in the United States. However, this could change fairly rapidly if virus containing midges or virally infected animals are introduced into the United States. Bluetongue strains 10, 11, 13, and 17 have been identified in California.

Although Bluetongue virus infects many different domestic (cattle, sheep and goats) and wild ruminant (deer) species, sheep tend to be the species most seriously affected. One particularly serious bluetongue strain of virus (Bluetongue virus strain 8) that was recently introduced into Northern Europe from Africa is currently causing significant disease in sheep, cattle and goats. The strains of bluetongue virus in California tend to

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produce no disease symptoms in cattle and goats while causing apparent and severe disease in sheep.

Symptoms in infected sheep include elevated body temperatures (105°F to 107°F), excessive salivation, swelling of the face, lips, and nose, ulcers and erosions of the dental pad, tongue and lips, swelling and discoloration of the tongue (blue tongue), difficulty in standing and/or lameness with swelling and/or ulceration of the coronary bands and hemorrhaging of the mucus membranes of the mouth and tongue. Some sheep may have respiratory difficulty due to pulmonary edema in the lungs. Other sheep with significant lesions in the mouth, tongue and esophagus may occasionally vomit with aspiration to the lungs which can lead to severe pneumonia. Mortality can be variable with death rates approaching 30% to 80% of the infected animals. Infected pregnant animals that survive clinical disease can have abortions or deliver young that are deformed, blind, weak, or have serious neurological defects.

Yearly vaccination of animals in the spring protects most sheep from becoming seriously affected by this viral agent. Since the Bluetongue vaccine is a modified live vaccination it is not recommended to vaccinate pregnant sheep because the virus in the vaccine may cause abortions or deformities in the fetus.

If you suspect bluetongue in your sheep you should contact your veterinarian immediately and discuss further testing of your flock. Testing of sick or dead animals for this disease can be accomplished through your regional veterinary diagnostic laboratory.

New Eco-Uses for Wool

October 11, 2010

The following two stories demonstrate how sheep producers can become part of the green revolution and take advantage of opportunities for wool sales or a local cottage industry. With regards to the first article on wool insulation the following properties make it a great product:

Material Advantages

- Wool is natural, renewable and sustainable
- Sheep Wool Insulation is perfectly safe to touch and requires no specialized safety clothing or equipment, making it easy to install
- It causes no irritation to the eyes, skin or lungs and wool fibers present no hazard to your health
- Wool fibers are breathable, meaning they can absorb and release moisture without reducing thermal performance unlike fiber glass based products
- Wool does not support combustion and will extinguish itself in the event of fire
- Sheep Wool Insulation does not settle due to the high elasticity of the wool fibers ensuring no loss of performance over time

Saving Energy

- Wool is designed by nature to save energy
- Sheep Wool Insulation also requires only a fraction of the energy to produce compared to that of manmade counterparts
- This means that Sheep Wool Insulation will pay back its energy costs more than 5 times sooner (only 15 kW of energy are used to produce 1 m^3)

Performance Benefits

- Wool has a higher fire resistance than cellulose and cellular plastic insulation
- It does not burn, but instead singes away from fire and extinguishes itself (Wool has a very high inflammation point of 560°C due to its high Nitrogen content of ~16%) Wool is self-extinguishing because of its high Limiting Oxygen Index (LOI=25.2), which means to

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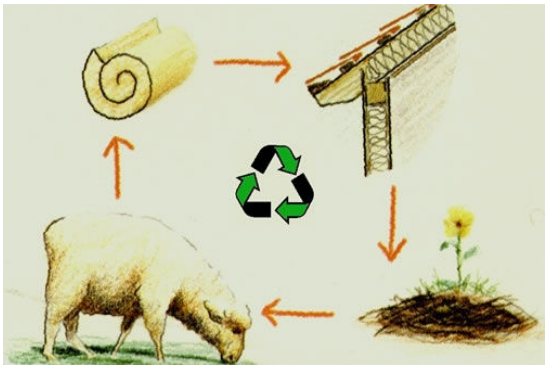
completely burn wool an oxygen content of 25.2% is necessary whereas air only has 21%

- Wool fibers are hygroscopic by nature, meaning the can absorb up to 35% of their own weight from the surrounding atmosphere depending on the humidity, helping to preserve the surrounding timbers.
- While absorbing this moisture, wool releases energy in the form of heat, thus raising the temperature of its surrounding areas. Naturally releasing this moisture in the warmer seasons, wool creates a cooling effect on the same surroundings.
- Sheep Wool Insulation rolls are produced to standard width requirements – saving time when fitting
- Multiple layered wool fibers effectively reduce airborne sound transfer



Now that you know about the great qualities of wool for insulation on to the first of the two articles.

Turning Sheep's Wool into High-Quality Insulation

There is a portion of the U.S. wool clip that is too coarse for the textile industry. Bellwether Materials, a San Francisco-based startup company, has figured out that this coarser wool makes for high-quality home insulation.

Priscilla Burgess, Bellwether Materials founder, was at the West Coast Green conference where she encouraged folks to touch the new insulation. "It's just as effective as fiberglass, but you don't need a respirator and it's cheaper to install," she says.

There are other advantages, too. Wool is allergen-free and naturally pest, fire and mold resistant. Bellwether isn't the first company to use sheep's wool for insulation, but competitors all use plastic additives.

Bellwether's product is ready to go, and customers have been lined up. Now the company just has to start its manufacturing process, which should be ready for commercial production by January. Instead of outsourcing the supply chain to China, Bellwether is hiring professional millers from the milling-reliant town of Adamstown, Pa.

"We're hoping to support one whole town that was going to turn into a ghost town," Burgess explains.

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Bricks Made with Wool are Stronger

Spanish and Scottish researchers have added wool fiber to the clay material used to make bricks and combined these with an alginate, a natural polymer extracted from seaweed. The result is a stronger more environmentally friendly brick, according to the study published recently in the journal Construction and Building Materials.

"The objective was to produce bricks reinforced with wool and to obtain a composite that was more sustainable and non-toxic using abundant local materials and that would mechanically improve the bricks' strength," said Carmen Galán and Carlos Rivera, authors of the study.

The mechanical tests carried out showed the compound to be 37-percent stronger than other bricks made using unfired stabilized earth.

This piece of research is one of the initiatives involved in efforts to promote the development of increasingly sustainable construction materials. These kinds of bricks can be manufactured without firing, which contributes to energy savings.

According to the authors, "This is a more sustainable and healthy alternative to conventional building materials such as baked earth bricks and concrete blocks."

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Cooperative Extension—Mendocino County
890 N. Bush Street
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Published by
University of California
Cooperative Extension
Mendocino County

890 N. Bush Street, Ukiah, CA 95482
Phone (707) 453-4495
FAX (707) 463-4477
http://cemendocino.ucdavis.edu

John M. Harper
County Director,
Livestock & Natural Resources Advisor
jmharper@ucdavis.edu

The University of California working in cooperation with Mendocino and Lake Counties and the USDA