

the Integrity

Magazine of the Western Organic Dairy Producers Alliance (WODPA)

WODPA Announces 9th Annual Fall Conference and Organic Trade Show Tuesday and Wednesday, October 14-15, 2014

WODPA's Annual Fall Conference and Trade Show will take place October 14 and 15, 2014, at DoubleTree by Hilton, Rohnert Park, California. Please see our website, www.wodpa.com, and the back page of this issue of the Integrity for registration information.

The two day event will feature Board elections, educational sessions, farm tours, a trade show, time to network, an organic dinner, and a post tour barbeque hosted by Petaluma area organic dairymen. We will also have an open forum to discuss WODPA's *Economic Survey*, *what are the next steps?* The forum will be moderated by **Dr. Cynthia Daley, Organic Dairy Program, California State University, Chico**, 11:30 a.m. Wednesday.

Elections

Elections will be held for President, Vice-President, and Second Vice-President. We will also be electing Directors as State Representatives and At-Large Members. Producers interested in running for any of the positions should notify Mario Avelar, Nominations Committee Chair, at 707-496-2955 or Ward Burroughs, Committee Member, at 209-678-5967. Job Descriptions for President, Vice-President, Second Vice-President, and Board of Director can be found on our website at www.wodpa.com. You can also obtain them via email by contacting Richard H. Mathews at rhmathews51@comcast.net or 717-457-0100.

In This Issue:

WODPA Fall Conference	1
President's Message	5
Executive Director's Message	6
Secretary's Message	9
Thank You!	9
Meal Feeding	10
Can organic farmers co-exist with GMO's?	12
The Story of CowVac	15
HOPE Scholarships	18
Tony Azevedo	19
Preventing and Treating Lameness in Cows	20
Organic Certification Cost Share Programs	22
WODPA Confernece Fall Conference	24
Thankyou WODPA Conference Sponsors	24
Associate Membership	24



Educational Sessions (Speaker profiles occur later in this article.)

History of organic dairy in Sonoma County, issues unique to wine country, and a vision for the future: **Mr. Marcus Benedetti, President and CEO, Clover Stornetta**, 9:00 a.m. Tuesday.

Current Perspectives and Big Picture Issues that face the Organic Dairy Industry: **Dr. Tim LaSalle, International Consultant for the Howard G. Buffet Foundation and previous CEO of Rodale Institute**, 10:15 a.m. Tuesday.

Hard Work & Harmony: Effective Relationships in Family Businesses: **Mr. Dave Pratt, Ranch Management Consultants**, 11:15 a.m. Tuesday.

Cow-Signals: what your cows are telling you: **Dr. Hubert Karreman, VMD, Rodale Institute and Certified CowSignals Trainer**, 1:15 p.m. Tuesday.

How to implement a GMO process verification program for your farm: the why, the how, and the cost: **Mr. Albert Straus, Founder and CEO, Straus Family Creamery**, 2:15 p.m. Tuesday.

How to read your soil analysis; what products to use to balance your soils based on your soil analysis and application processes: **Mr. Mark Kopecky, Agronomist, Organic Valley**, 3:45 p.m. Tuesday.

Editor: Richard Mathews Graphic Designer: Sherelle Sinko

Establishing your farm's financial benchmarks to assess your economic well-being; compare your numbers to industry standards; how to identify your problem areas: Panel discussion with: Mr. John Kennedy, Bluehill Ag Consulting; Mr. Robert Burroughs, CPA for Genske, Mulder & Co. LLP; & Mrs. Ruth McClure, Vice President – Lending, American AgCredit, Petaluma, CA., 4:30 p.m. Tuesday.

Organic approaches to managing mastitis and lameness: Dr. Hubert Karreman, VMD, Rodale Institute and Certified CowSignals Trainer, 9:00 a.m. Wednesday.

Someday this will all be yours....or not: Mr. Dave Pratt, Ranch Management Consultants, 10:30 a.m. Wednesday.

Farmers Advisory Committee: Mr. Nathaniel Lewis, Senior Crops and Livestock Specialist, Organic Trade Association, 1:00 p.m. Wednesday.

Utilization of fodder as an alternative source of energy in the organic dairy ration; impact of fodder-based diets on rumen function: Dr. Cynthia Daley, Organic Dairy Program, California State University, Chico, 1:30 p.m. Wednesday.

Farm Tours and Dinner

We will tour two organic dairies in the Petaluma area beginning at 2:30 p.m. Wednesday. Petaluma area organic dairymen will then host a barbeque featuring local oysters. Everyone attending the conference is invited to participate in the tour and barbeque. To help with planning we ask that you notify Darby Heffner if you will be participating in the tour and barbeque. Darby can be reached at wodpa@outlook.com.

Trade Show

Last year's trade show featured 30 companies that provide products and services to organic dairymen. This year's facility provides for a larger and more centrally located trade show. Our goal is 40 participating companies. All participating companies will be given an opportunity to briefly introduce themselves during the conference. See our website (wodpa.com) for a listing of the companies that have registered to date.

Speaker Profiles

Mr. Marcus Benedetti, President and CEO, Clover Stornetta Farms. Mr. Benedetti was born and raised in Petaluma, CA. He studied Business Administration at the University of Alaska, Fairbanks. Completing his studies in 2000, he joined Clover full time. His rise in the company included stints in the chilled warehouse, milk delivery to schools, product delivery to restaurants, sales representative, and

market development. Finally, in January 2006 he became President and CEO. Marcus is past President of the Dairy Institute of California. He also serves on the board of the Association of Independent Dairies of America, California Independent Grocers Association, and Agricultural Sustainability Institute at UC Davis. Markus is an honorary board member of the Wells Fargo Center for the Arts and Social Advocates for Youth. He is also involved



in Petaluma Rotary, and was the past Chairman of the American Heart Association's Heart Walk. Marcus is married to Mary Beth Nowak of Chicago. They love spending time with their three children: sons Jack and Henry, and daughter Maeve. In their free time, the Benedetti's love the outdoors and spending time with family and friends.

Dr. Tim LaSalle, International Consultant for the Howard G. Buffet Foundation and previous C.E.O. of Rodale Institute. Dr. LaSalle is one of the most sought-after speakers on organics and sustainable farming today. As founder/director of New Era Agriculture, Tim championed his science-based hope for a regenerative food system that will mitigate climate change and prevent famine. While serving as a professor at California Polytechnic State University, he started and operated his own dairy farm and became involved with the California Agricultural Leadership Program. Tim soon became its CEO, where he arranged educational leadership programs in more than 80 countries with heads of state, ministers, and community leaders. As CEO he became exposed to and a student of many of humanity's global challenges. LaSalle previously served as the first CEO of Rodale Institute, Executive Director of the Northwest Earth Institute and Executive Director of the Allan Savory Center for Holistic Management.



Mr. Dave Pratt, Ranch Management Consultants. Mr. Pratt is one of the most sought after speakers and respected authorities on sustainable ranching in North America. His programs, which include the Ranching for Profit School and Executive Link, have benefited thousands of families and millions of acres. He served 14 years as a Range and Livestock Advisor with the University of California Cooperative Extension where he researched management intensive grazing and strategic issues impacting



ranch profitability. He earned a reputation for innovative teaching with a practical edge and helped hundreds of farmers and ranchers develop and implement strategies to increase profit. Dave co-founded the Sustainable Ranching Research & Education Project, a large-scale, long-term effort to develop, research, and demonstrate economic, environmental and socially sustainable ranching practices. He also co-founded the California Grazing Academy, which provided ranchers with hands-on experience applying management intensive grazing. Dave and his wife Kathy bought Ranch Management Consultants in 2001. As President and CEO of RMC, Dave carries on the RMC mission by helping people transform their farms and ranches into sustainable businesses.

Dr. Hubert Karreman, VMD, Rodale Institute and Certified CowSignals Trainer. Dr. Karreman has been involved with organic agriculture since 1988 when he was a herdsman at an organic/Biodynamic farm in Pennsylvania. He saw homeopathic remedies, botanicals and biologics work so well that he decided to go to veterinary school to learn "the real thing" in order to mix and match modes of treatment as each patient would need. He was a full-time dairy veterinarian from 1995-2010 working primarily with organic cows in Lancaster, PA. He served 5 years on the National Organic Standards Board.



He has been an invited speaker for farmer and veterinary groups across the US, Canada, the EU and Asia. At the Rodale Institute he leads educational classes and conducts applied research with various farm animal species. He also owns and operates Bovinity Health, LLC a company providing science-based and holistic solutions for commonly encountered dairy cow problems.

Mr. Albert Straus, Founder and CEO, Straus Family Creamery. Mr. Straus is CEO of Straus Family Creamery (Straus) which he founded in 1994. He is an outspoken advocate for organic, non-GMO dairy production, environmental stewardship, and small family farms. The Straus family farm became the first certified organic dairy west of the Mississippi River. This led the way for other small California dairies to convert to organic. Straus is a leading producer of highest-quality organic milk, yogurt, butter, sour cream and ice cream. Straus was the first certified organic creamery in the United States. On the farm, Albert began testing certified organic feeds for GMO contamination in 2005. He effec-



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tively implemented an in-house testing system to preserve the integrity of the organic milk supply. When the Non-GMO Project emerged in 2010, Straus became the first and only creamery in the country to carry the Non-GMO Project Verification seal. This verification extends to the family farm and Straus' eight other organic milk suppliers. Additional sustainability programs implemented by Albert at the dairy and creamery include methane-digester technology to convert dairy waste into energy, an extensive water-reuse system, and production of milk in reusable glass bottles.

Mr. Mark Kopecky, Agronomist, Organic Valley. Mr. Kopecky is the Soils Agronomist for Organic Valley and CROPP Cooperative. He has spent most of his life working in agriculture. After serving in the Marine Corps, Mark attended the University of Wisconsin-River Falls where he earned a Bachelor of Science in soil science and a minor in agronomy. He worked two years as a soil scientist with the Soil Conservation Service and then attended graduate school at UW-Madison where he completed a master's degree in soil science.



Mark worked for over 24 years as an agriculture agent for UW-Extension providing education to farmers throughout Wisconsin, focusing on crop and soil management. In 2012, he accepted his current position, where he helps co-operative members and others to improve their crop and soil management skills. He and his family have operated a small grass based dairy farm in northern Wisconsin for over 20 years and have been members of Organic Valley since 2007.

Mr. Robert Burroughs, CPA, Genske, Mulder & Co. LLP. After graduating from Cal Poly State University, San Luis Obispo in 1982, Mr. Burroughs worked for seven years with two large national accounting firms in the San Francisco Bay Area in their audit and tax departments, spending the last two years as a tax manager for KPMG Peat Marwick. Robert moved to Modesto in 1989 to be more involved with agricultural clients and joined Genske, Mulder & Co. in 1992. Genske, Mulder & Co. LLP specializes in serving the accounting, tax and estate planning needs of a large number of dairy farmers across the United States as well as other agricultural producers. The



firm's clients produce more than 10% of the entire nation's milk supply. Having been born on a dairy that was started by his grandfather in the early 1900s, Robert very much enjoys working with conventional and organic dairies, providing financial statements accompanied by industry standards to assist dairy owners in evaluating and improving their operations.

Mrs. Ruth McClure, Vice President – Lending, American AgCredit, Petaluma, CA. Upon graduation from Cal Poly San Luis Obispo, Ruth began her career with the Farm Credit system. She is a Vice President with American AgCredit in the Petaluma office and has been lending money to dairies for 30 years in the North Bay area. She started her career lending to conventional dairy operations but has seen and financed the transition to organic production by many local dairies. The majority of her dairy customers now have organic dairy operations. Ruth grew up in agriculture and has a strong background in the agriculture industry. She serves on several local agriculture related boards and committees. She resides on the family's organic dairy farm in the Point Reyes National Seashore.



Dr. Cynthia Daley, Organic Dairy Program, California State University, Chico. Dr. Daley is program director for the Organic Dairy Teaching and Research Facility at California State University Chico. The program is focused on building knowledge and skills in organic dairy production through hands-on learning and applied research. The College supports the program with the first Organic Dairy Production & Management course offered on a University campus. Dr. Daley provides technical and research support to a variety of sustainable livestock practices through her work to establish the nutritional benefits of pasture-based systems on lipid and antioxidant profiles in grass-fed



meats and milk products. Her research, supported by the Western Sustainable Agriculture Research & Education fund, was recently published in the Nutrition Journal. This research continues to provide justification for "value added" nutritional labeling for farmer direct marketing of grass-fed products. In addition to lipid research, Cindy is working to develop sustainable feeding strategies by enhancing forage quality through soil amendments. She recently completed research on the effects of fodder feeding on rumen function. When she's not teaching class, managing the dairy, or doing research related activities, she's writing, or providing support to the on-line educational database (www.eorganic.info). eOrganic is where much of the most relevant work in organic dairy production is supported.

Mr. Nathaniel Lewis, Senior Crops and Livestock Specialist, Organic Trade Association. Mr. Lewis provides staff support to OTA's Farmer Advisory Council. He also provides on-the-ground outreach to OTA's organic farmer membership community, and analysis of policy issues that affect organic crop and livestock producers. Prior to his current position, Nathaniel served as Certification Coordinator for Washington State Department of Agriculture's organic certification program. He managed WSDA's material review program and gained certification experience in all scopes of organic production. Nathaniel's responsibilities at WSDA also included coordination of their periodic residue sampling program. Nathaniel holds a Bachelor's of Science from The Evergreen State College with a focus in agricultural science and organic chemistry.



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President's Message

Greetings,

Summer is gone; some of us had excellent weather, some of us had extreme drought. Not much we can do about it.

In my last address I wrote about the face of organics changing. Milk supply is becoming shorter; some of us are no longer with us. I think we'll see more of the specialty organic milk drinks, cheeses and other ingredient products. It makes me cringe when I hear people talk about organic milk as a special commodity. Any commodity will always be cheap on the farm end.



Financials haven't changed much. I have said for many years; organic milk base price for dairymen needs to be 1.5 times conventional price for it to be sustainable all around. I will stick with my formula for the long term but catching up will be the trick.

There are many things happening, many of which are presented in this Integrity so I will not repeat everything. We have made many changes during the last two years; including Richard coming on as Executive Director and new board members. There are two people that make a lot happen that do not get a lot of recognition. I'd like to thank; Darby Heffner who does a superb job as secretary and Sherelle Sinko who lays out the Integrity you are currently reading. Many thanks!

My last point is; it's been two years since you've voted me in as your WODPA President! I'm up for reelection. I'll gladly serve again if you all vote me in. If not, I will not be offended if someone else is voted in. October 14 and 15 you get your chance to vote at our WODPA conference in Sonoma Wine Country Ca.

Thanks,

Andrew Dykstra, President



Email: organic@agr.wa.gov
Website: agr.wa.gov/FoodAnimal/Organic

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Certifying organic farmers, processors and handlers in Washington State and beyond for over 25 years, the WSDA Organic Program is dedicated to upholding the integrity of the organic label through certification and outreach. Join the organic community and discover the benefits of certification!

The WSDA Organic Food Program protects organic integrity through inspections, audits, sampling and enforcement.



Executive Director's Message

By Richard H. Mathews

As Darby said, regarding this year's conference, in her message "We have a fantastic line up of speakers and we are going to have an impressive trade show with numerous companies represented." This year's conference will feature outstanding educational sessions presented by knowledgeable experts in their field. See the conference article beginning on page one of this issue. We are also on track to break last year's record of 30 trade show



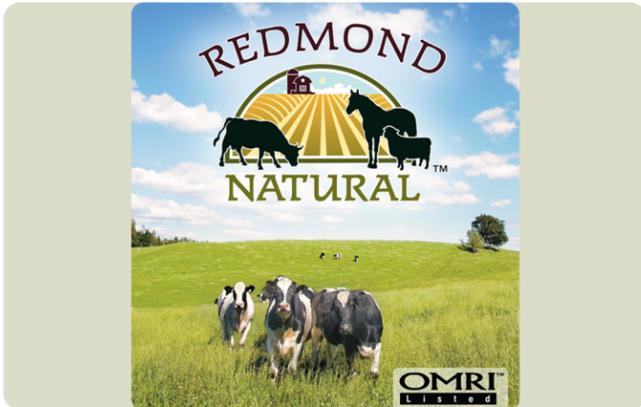
participants. I encourage everyone to visit with our trade show participants. The conference would not be possible without the support of the trade show participants and our sponsors.

In June I traveled to the Petaluma and Humboldt regions of California where I had the pleasure of meeting with several processors and dairy producers. In the Petaluma region I traveled in the company of Dr. Cindy Daley, Darby Heffner, and Breanna Rogue. We met with Nicole Smith of Wallaby Organic Yogurt; Albert Straus and Robert McGee (President) of Straus Family Creamery and their Nutrition Consultant, Dan Giacomini; Dayna Ghiradelli of Clover Stornetta; and Mike Griffin, Organic Valley's California Pool Manager. All of them enthusiastically supported the idea of holding this year's conference in the Petaluma region. Wallaby Organic Yogurt, Straus Family Creamery, and Clover Stornetta are conference sponsors and are sponsoring their producers' attendance. You will have the pleasure of sampling some of their products during conference breaks and meals.

The Petaluma area organic dairymen are hosting the farm tour (two farms) and a post tour barbeque featuring local oysters. WODPA thanks them for their support and generosity. Everyone attending the conference is invited to participate in the tour and barbeque. To help us plan transportation and food needs, please indicate, when you register, whether you will be participating in the tour and barbeque.

The fee for conference registration is \$100 if payment is received before October 1, 2014. The fee increases to \$125 on October 1, 2014. Please note that the conference registration fee will only cover about two-thirds of the cost of the three meals provided to each conference attendee.

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To minimize the chances of over ordering meal servings, we ask that attendees register early. By registering early, you will help us control the total food cost and prevent food waste.

Origin of Livestock

In the spring issue of the Integrity, I mentioned that we had informed Melissa Bailey, Director, NOP Standards Division that we would like to host a listening session on the proposed rule in conjunction with our conference. Regrettably that will not happen. The proposed rule is still under legal review in the USDA's Office of General Counsel (OGC). The proposal went to OGC about seven months ago. NOP responded to issues raised by OGC about two months ago. OGC is only the first step in a multi-step clearance process. Accordingly, it is unlikely that the proposal will be published before sometime next spring. I will provide an update on this issue during the conference business session.

Organic Research and Promotion Program

The Organic Trade Association continues its outreach to

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producers and handlers regarding development of a national Organic Research and Promotion Program. They are at the tail end of their second outreach to about 18,000 certified operations. Per OTA, the first outreach round revealed that a majority of respondents had no opinion due to a need for more information. Of the remaining respondents, supporters outnumbered opponents. No specific numbers were provided. I will provide an update on this issue during the conference business session.

Exemption from Federal Research and Promotion Programs

The farm bill expands the current exemption from Research and Promotion Programs to all producers and handlers of products qualifying for the organic and 100% organic labels. USDA is still working on regulations to implement this change. I will provide an update on this issue during the conference business session.

Attention Organic Dairymen

The National Organic Standards Board (NOSB) will meet October 28-30, 2014. Some thought the NOSB would vote on allowance of Acidified Sodium Chlorite (ASC) for

Use in Organic Livestock Production as a teat dip. ASC is not on the agenda for this meeting. However, comments can be submitted

Opponents (non-farmers) to this substance claim that farmers already have many choices and that another substance is not needed. However, the National List of Approved substances limits the options to a few iodine and hydrogen peroxide products: except, that, chlorhexidine can be used when iodine and hydrogen peroxide products lose their effectiveness. The fact that chlorhexidine was added to the National List as a failsafe, seems to argue for a third, less toxic, product for Mastitis control. Further, I have heard that the main surfactant (Nonylphenol Ethoxylates) in iodine and chlorhexidine teat dips and washes is being phased off the market for safety concerns. This could put iodine products in short supply.

If you would like to be able to use ASC, you need to make your voice heard. You can submit a written comment to nosb@ams.usda.gov. You can also contact Dan Giacomini at pnc@cloverjack.com or Alesia Bock at alesia@agrisys-intl.com to sign a petition. I have support documents and a petition which I can forward upon request. I can be reached at rhmthaws51@comcast.net.

WODPA Needs You!

While WODPA has a wonderfully dedicated pool of volunteers and donors, that pool is too small. WODPA needs you to volunteer your time and/or contribute financially.

To volunteer your time, you can:

1. Become a Board Member.
2. Serve on the Board Member Nominations Committee.
3. Assist with fundraising.
4. Serve on the Conference Committee.
5. Serve as a conference volunteer (information, registration, voting, vendor assistance, etc.).
6. Serve on the ORPP Committee.
7. Write an article for our magazine the Integrity. For example, tell us about you and your farm. Write about a farming practice that has helped you improve your milk quality, forage production, animal health, or other issue important to the success of your dairy operation.

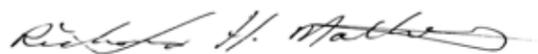
You can help financially by:

1. becoming a Producer Milk Assignment Member (\$0.01 per hundredweight shipped),
2. becoming a Per Head Member (\$1.50 per milking cow per year), or
3. making a donation in any amount you are comfortable with.

Contact me at rhmathews51@comcast.net to volunteer your time and/or contribute financially. Additionally, please contact me should you have questions about WODPA or need assistance with issues involving the National Organic Program.

I'm looking forward to hearing from you and seeing you at the conference.

Sincerely,



Richard H. Mathews, Executive Director

Secretary's Message

By Darby Heffner

Hi Everyone,

I hope summer has treated you well, I can't believe how fast it has gone!

The conference committee and I have been working hard and are getting very excited about this year's conference! We have a fantastic line up of speakers and we are going to have an impressive trade show with numerous companies represented.



I wanted to highlight a couple of things about the Sonoma County area, where the conference is going to be held, so you get a feel for what it has to offer, just in case you would like to make a vacation out of your trip (the hotel agreed to continue the discounted rate from 10/11 - 10/17).

Sonoma County has numerous activities that you can choose from including: hundreds of different wineries where you can indulge in wine tasting; breath taking beaches with historic lighthouses; trails through the giant redwoods; and most importantly, numerous organic dairies and farmstead creameries scattered across the rolling hills.

We would recommend flying into San Francisco International Airport or Oakland International Airport. Both airports are within the same amount of driving time to the hotel, roughly 1 1/2 hours depending on traffic. The hotel is called the DoubleTree by Hilton, Sonoma Wine Country. They offer a shuttle service to both the San Francisco and Oakland Airport for \$34.00 one way. Please call Sonoma Airport Express at 707-837-8700 for full details or visit their website at www.airportexpressinc.com. Also, to get the discounted price of \$119.00/night, you will need to book the room before September 22nd. Please go to www.wodpa.com for the link to the hotel.

Local organic dairymen have generously offered to host dairy tours and a BBQ on the second day of the conference. The BBQ could last into the evening, so you may want to book your room for Wednesday night as well.

Please log on to www.wodpa.com for all conference information, Please let me know if you have any questions,

Thank you,

Darby Heffner, WODPA Secretary

THANK YOU! WODPA thanks its dairy producer sponsors for their much valued financial contributions to the execution of WODPA's mission. It is through their generous financial support that WODPA is able to pursue its mission to preserve, protect, and ensure the sustainability and integrity of organic dairy farming across the west.

Our dairy producer sponsors for the first eight months of 2014 are:

\$1.50 per Milking Cow

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- Moretti Dairy
- Postmus Organic Farms
- Nature's Harmony Organic Dairy
- R and J McClelland Dairy
- Robert McClelland Dairy
- River Bend Jerseys
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Meal feeding: it's different between cows and people

By Daniel Giacomini, MS, PAS

There are basic principles of nutrition between people and ruminant livestock that differ substantially. Understanding those differences can have a huge impact on how we feed dairy cows, especially on certified organic farms.

People are single compartment stomached animals. We have one stomach compartment where gastric juices breakdown the food we eat into smaller pieces for absorption in the lower intestines. Dairy cows are ruminant animals having a four compartment stomach, the largest being the rumen.

When people eat a meal or various meals during the day, the food is broken down, absorbed and processed in the liver. The body takes various nutrients absorbed at different times during the day and converts them into the chemicals needed for the various bodily functions.

As that goes, the cow is similar. Once absorbed, the liver processes nutrients into various chemicals needed by the cow's body. However, the cow has one significant

difference; the rumen.

The rumen is a large anaerobic fermentation vat populated by a huge number of various microbes from bacteria and protozoa to fungi. In the rumen, the microbes breakdown and consume much of the food ingested before it gets to the gastric juices in the stomach. The microbes use the nutrients for growth and reproduction. They release chemicals that can be used as nutrients by other microbes and the cow. The microbes are washed from the rumen into the lower gut along with the liquid and solid portions of the digesta. In the lower gut the microbes become food for the cow.

The important point is that when we feed a ruminant, we are feeding the cow and the microbes. We want the cow to be healthy and productive and we want the microbes to be healthy and productive. More healthy microbes help us provide more nutrients to the cow for her health and production.

Ruminant nutritionists are aware of the need to feed microbes and keep them healthy. They know not to over feed grains and other concentrates that could cause acidosis or other health problems. Diets must have sufficient

forage in the proper form to add "scratch" to the rumen for rumination and overall gut health. Other nutrients like protein, fat, minerals and vitamins must be provided.

Research has advanced greatly over the years in all these areas of study. However, most of that research, even when looking at the prediction of microbial growth in the rumen, has made two assumptions. Those assumptions are that all nutrients were consumed at one time and that a total mixed ration is being fed.

Researchers have conducted pain-staking studies to determine the rate of nutrient breakdown for different feedstuffs in the rumen. They understand the rates at which solid and liquid digesta leave the rumen and proceed to the other stomach compartments and lower gut. For simplicity in calculations, the assumption is made that everything was put into the rumen (feeding the cow) at the same time. In many conventional dairy farm operations, with complete total mixed ration feeding, this is close to being the case.

However, at some conventional dairy farms and all organic dairy farms (at least during the grazing season) that is not the case. Pasture has its own set of meals. Grain fed in the milking parlor during milking is another set of meals. Supplemented feeds like silage, hay, and other concentrates can make up to four or more additional meals daily. These factors are not included in the most popular ration formulation or ruminant nutrition modeling programs that exist today.

Since the science of these animal nutrition factors does not yet exist at this level, this is where art overtakes science when feeding the cow. At this time, the experience of a qualified dairy cow nutritionist becomes important. Successful feeding is not just running a nutritional diet formulation program that spits out a ration. Understanding the interplay between quickly and slowly digested feedstuffs and highly soluble and less soluble nutrients can make the difference between profit and loss. This is true even within the same set of diet inputs being provided to the cow.

Some of the more important factors to consider when looking at these issues by meal type include:

Starch meals: Making sure that a starch meal is not too big for the health of the cow is important. Starch is a major portion of cereal grains. Microbes love it. When microbes eat starch they produce a lot of by-products that provide nutrients to the cow and other microbes. These products are acidic and lower the ruminal contents pH. If the pH gets too low it can begin to kill some of the ruminal microbes and make the cow sick with acidosis. In the

long term it can manifest itself with such things as lameness. Don't over feed starch grains at one time, by themselves, without adequate fiber to help buffer the ruminal contents and maintain a healthy rumen pH.

Fiber meals: Adequate fiber meals, during or within a few hours of large starch diets, help maintain a healthy ruminal pH. Nutritional fiber is the cell wall of the plant material being fed. Fiber is good. However, the fiber has to be digestible. Very young plant material might not have enough physical effectiveness, or coarseness, in its fiber to be adequate. Very old plant material can have a very low digestibility and be of little value nutritionally. Fiber must be provided at an adequate stem material length to provide the scratch and effective rumination stimulation needed to help buffer high starch meals. Forages need to be fed to provide proper fiber amounts at a proper length for a healthy rumen environment.

Protein meals: Most very highly digestible protein sources, such as urea, are not allowed in organic livestock production. While all feeds have some protein, the significant sources of protein are young grasses (often consumed by the cow while grazing), protein meals (soybean, canola, sunflower, etc), and legume forages (alfalfa, clover, etc). Except for grazed young grasses, the protein digestion rate in the rumen is slower than the starch digestion rate. To maximize their growth, microbes need carbon from the starch and nitrogen from the protein available to them at the same time. Thus, high starch meals significantly spread apart from a meal containing adequate protein can waste energy from the starch. Similarly, the lack of available carbon when nitrogen from highly soluble protein feeds becomes available to the microbes can waste protein.

Supplement meals: Meals that contain supplements, in this case rumen pH adjusters like sodium bicarbonate and yeast need to be evaluated within each operation's overall



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feeding system. Unless included in a pellet, bicarb can be difficult to include with grains in a barn grain feeding system. It is often included in other meals during the day. Those meals must be close enough to the starch meal for the bicarb to catch the extra hydrogen ions being released. The extra hydrogen ions lower the pH of the rumen. Thus, timing of the meals is critical to bicarb's ability to help buffer the pH and prevent it from dropping. Yeast can also be critical as it helps buffer the pH effect from the starch as well as enhance fiber digestion.

Providing meals with adequate fiber or ruminal buffers with or near starch meals allow more starch to be fed at one time without negative results.

Supplemental ingredients meant to provide nutrients directly to the rumen microbes will show best results when provided in meals when that growth is occurring rapidly. Different microbe species are most active depending on whether the cow has consumed a starch, fiber, or protein meal. Providing nutrients across various meals in a way that all microbes benefit can be an effective consideration.

Grazing meals: Ideally our organic dairy farms have lush biodiverse pastures for cows to graze. This allows cows to be somewhat selective in which plants they eat. Cows needing more fiber at the time can choose more fibrous material. Cows coming straight from a high starch meal during milking can self-balance with plants providing the protein they need. The biggest concern is a pasture almost exclusively of very high protein legumes. You not only need to be careful of bloat but if the previous meal was also high in protein, researchers have shown situations where intake and productivity both suffer. Almost all protein consumed during grazing is going to be very soluble and rapidly digested. The microbes need available carbon to utilize that much nitrogen without it being wasted.

The state of animal nutrition science is truly 21st Century. We know more about cow nutritional needs and ruminal microbes than ever before.

While the nutrition science for conventional and organic cows is basically the same, the art of feeding those cows can be very different. It could be worth the time for organic livestock producers to consider the factors listed in this article and other similar factors. Research is being done which will help nutritionists understand these areas better in the future. Continued engagement of organic dairy farms with research in these areas, especially at the university and extension level, will help move the knowledge in these areas forward. Such research will help us transition these areas from the art of dairy cow feeding to

further advancement in the science of dairy cow nutrition.

Can organic farmers co-exist with GMO's?

C.A.Daley

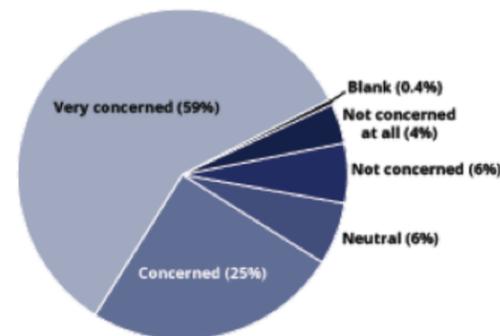
Secretary of Agriculture, Tom Vilsack, coined the term "coexistence" to refer to the idea that organic and GMO crops can both be grown in this country without either adversely affecting the other. However, biology being what it is, organic crops are clearly vulnerable to genetic drift from neighboring fields. Once contaminated, organic crops lose their eligibility for sale as an organic product.

Who is responsible for the economic losses?

In 2011, the USDA convened the Advisory Committee on Biotechnology and the 21st Century Agriculture (AC21) to address the feasibility of coexistence. The 23-member committee was appointed by the Secretary and charged with finding answers to the following questions: 1) What types of compensation mechanisms, if any, would be appropriate to address economic losses that result from genetic trespass; 2) What would be necessary to implement such a mechanism; and 3) What other actions would be appropriate to bolster or facilitate coexistence?

The committee was comprised primarily of biotechnology officials and conventional grain farmers (committed to GMO cropping systems), with a few organic insiders who provided the alternative viewpoint. After two years of meetings and discussions, the committee determined that GMO contamination could be mitigated through informal neighbor-farmer agreements and insurance to cover damages. What's more, the full cost of insurance, in addition to

How concerned are you about GMO contamination affecting your farm?



Charts from "Organic Farmers Pay the Price for GMO Contamination," Food & Water Watch and OFARM Issue Brief, March 2014"

¹Ian Walker. Steve Marsh and the Bad Seeds. The Global Mail. <http://gmo-food.theglobalmail.org/steve-marsh-bad-seeds>

²Organic Farmers Pay the Price for GMO Contamination. Food & Water Watch and OFARM Issue Brief, March 2014 <http://www.foodandwaterwatch.org/briefs/organic-farmers-pay-the-price-for-contamination/>

other loss associated with GMO contamination, should be covered by the organic farmer (or non-GMO farmer).

The committee also recommended that the biotech companies who profit from these patented seeds, and the conventional farmers who use them, should be free of any liability.

This is how Secretary Vilsack defines "coexistence". Mary-Howell Martens, perhaps the only organic grain farmer on the AC21 committee, said "the Final Report describes a model that falls quite short of what is both needed and ethical. If 'sustainable coexistence' is our goal, then the Report's stated definition of coexistence, and therefore the core principle of the Report, defines a simplistic, discriminatory, and inadequate understanding to the problem and the possible solutions."

Committee members recognized that there was very little data to direct the conversation or chart a more informed course of action with respect to adequate compensation measures. Therefore, in the final report, AC21 strongly recommended that the USDA conduct a thorough economic analysis of financial implications that may occur due to "unintended presence" on organic farms. Data of this nature will be critical as the Secretary moves forward with a plan that will adequately compensate farmers who are

inadvertently contaminated by genetic drift.

Without a workable plan for coexistence, disputes between neighbors are inevitable. One such case is currently being tried in Western Australia. Steven Marsh, an organic farmer in Western Australia, was contaminated with GM canola by a neighboring farm and lost his organic certification on 70% of This land. Steve's livelihood depends on his organic status so his only recourse was to file a civil case against his neighbor for negligence and nuisance.¹

To better understand the economic impacts of GMO contamination on organic farms the Food & Water Watch organization partnered with the Organic Farmers' Agency for Relationship Marketing (OFARM). Together they surveyed organic grain producers on preventative measures they use to avoid GMO contamination and when contamination does occur, what are the financial implications?

Over two hundred and sixty-eight responses were collected from 17 states, predominately from the Midwest.² With permission, WODPA has reprinted segments of the F&WW/OFARM report for the purposes of this magazine.

The survey concluded that nearly half (48%) of the organic grain farmers surveyed were skeptical that GMO and non-GMO crop production could coexist as suggested by

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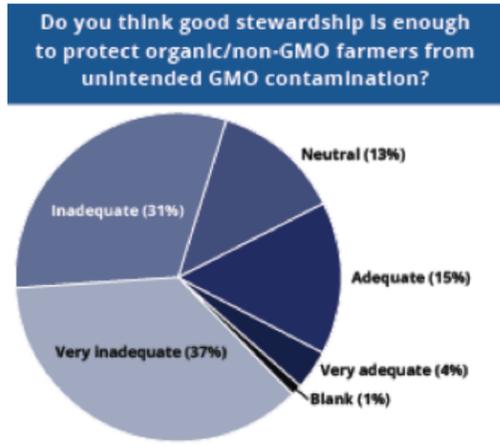
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the Secretary of Agriculture. Moreover, 68% of grain farmers felt that good stewardship alone would not be enough to protect organic and non-GMO farmers from cross-contamination. Five out of six farmers (84%) were concerned about GMO contamination; 59% were extremely concerned. The survey authors suggest that concern will grow as more GMO crops are pushed through USDA, making it harder for organic and non-GMO farmers to successfully sell their crops.

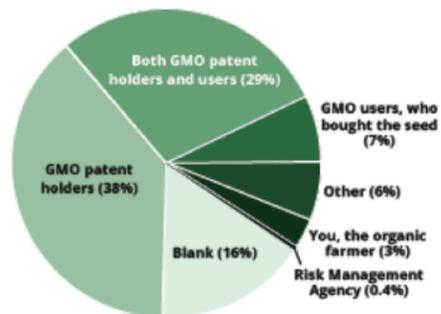
One third of grain farmers surveyed have dealt with GMO



contamination on their farms, and over half of those have been rejected by their buyers for that reason. The reported median cost of a rejected semi load of grain (approximately 1,000 bushels) was \$4,500.

Only half of the farmers surveyed indicated that they

Who should pay the added crop insurance premium for coverage for contamination?



would purchase insurance to protect themselves against contamination. Of those farmers who would purchase insurance, seventy-five percent believe it's unjust. They believe that the GMO companies should be responsible for these costs, along with the conventional GMO farmers who release that GMO pollen into the air.

Organic standards currently require that organic farmers use preventative measures that will minimize the risk of GMO contamination. Farmers often utilize buffer zones to guard against drift from neighboring fields. The necessary acreage required for a buffer varies from site to site, but the median size reported by survey respondents was about five acres. The median buffer zone cost was \$2,500 a year due to production loss (fallow land), with several farmers reporting significantly higher values.

Sixty-seven percent of farmers used delayed plantings to avoid overlap with the flowering stage of neighboring fields. Producers estimated annual losses of \$5,280 on corn and \$3,312 on soybeans due to delayed plantings as they work to comply with USDA guidelines and avoid GMO contamination. Other methods to prevent contamination included additional equipment cleaning, growing crops with less opportunity for cross contamination, and seed testing to determine purity.

The survey revealed that the risks and the effects of GMO

Costs of Preventative Measures to Avoid GMO Contamination	
Method	Median Annual Cost
Buffer Strips	\$2,500
Delaying Planting	\$3,312 to \$5,280
Testing	\$200
Other Measures	\$520
Total	\$6,532 to \$8,500

contamination have unfairly burdened organic and non-GMO farmers with extra work, longer hours and financial insecurity. This has led to a general skepticism of coexistence amongst the organic community. Some even expressed the feeling that their chosen method of production is being seriously threatened. Meanwhile, GMO growers are not specifically required to do anything even though they are the source of DNA contamination.

According to survey's authors, USDA's focus on coexistence is misplaced. Instead of an extended discussion of coexistence, the department must recognize the harm already being done to organic and non-GMO farmers.

In summary:

- Biotech and seed companies holding GMO seed patents should:
 1. Be held accountable for all losses associated with GMO contamination and

2. Pay into a compensation fund to help farmers recover the full costs of their economic hardship caused by contamination.

- The USDA should create and enforce mandatory stewardship requirements for GMO crop production.
- The USDA should commit resources to researching, tracking and analyzing incidence of contamination and associated economic losses at all levels of the supply chain.
- The USDA should dedicate resources through its extension service to help education GMO, non-GMO and organic farmers about the problem.

Sources for additional information:

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The Story of the CowVac

By Tom Spalding

It might be one of the most improbable partnerships in modern dairying. A beneficial insect business teams up with university entomologists, to introduce a revolutionary mechanical device to suck up Horn Flies. About as likely as a seed company starting to build tractors since the usual



bug guys' skill sets don't normally align with machinery skills. But the CowVac, its inventors, designers and manufacturer all go beyond the norm and it makes an interesting tale.

The Horn Fly is very tough to control. It's resistant to most every chemical control. From egg to adult takes a mere 10 to 20 days. Females deposit

their eggs in groups on fresh manure, just after it hits the ground, and the eggs hatch in 1 to 2 days. The maggots develop best in grass-type manure from cattle, meaning

they do well on organic farms.

Horn flies are hugely impactful to dairies with 200 Horn Flies per cow as the starting point for production loss. A cow can easily have a thousand Horn Flies on it. A loss of 15% in milk production has been reported during summer months. Further, a 10% reduction in lifetime milk production has been reported from sub clinical mastitis in young stock caused by Horn Flies before first lactation.

For 16 years, North Carolina State University entomologists, Dr. Wes Watson and Steve Denning, have researched IPM fly control practices for livestock and poultry operations. Horn Flies have been a target for much of their work. They have tested 100's of products and numerous techniques. They have tested different repellents and insecticides, as well as repellent applied to most of the cattle with only a few "trap animals" having insecticide. They have tried electric traps, light traps, walk thru traps, and feed thru products, ear tags, oilers, you name it. They recognized the need for the Organic Dairy community and thought there must be another way.

In 2006, Steve watched as flies scrapped off cows going thru a walk in trap, followed the cows out the exit and got back on. It was then that he had the AH HA moment of "let's see if we could vacuum up those little buggers." Steve being perhaps the most mechanically handy entomologist I've ever known, quickly built a test rig using a vacuum. This vacuum rig sucked up the flies as they came off cows passing under a curtain. After several passes of the 170 cow herd, it yielded 40,000 Horn Flies and Steve knew he was onto something. That was the start of the CowVac.

Over the next 4 years Steve built increasingly more effective units that were more maintainable. The first units pulled the flies through the blower fan which created quite a mess but didn't kill them all. Later units had a filter in front of the blower and a capture room that opened to daylight when the fan was turned off. It was in this capture room that the flies died and fell to the bottom. An opening going to a collection jar was soon added to the capture room. Every year Steve made improvements and the Horn Fly capture counts increased.

Organic Valley heard about this device, made from home improvement store parts, and sponsored a test, placing 6 units on North Carolina dairies in 2012. Steve started building those units in the fall.

The NCSU final prototype

Just after the Organic Valley deal, I heard about the device and we made a trip to Raleigh, NC to see it in ac-



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tion. I knew from our efforts using Fly Predators to control Horn Flies that this little insect was a big deal. Placing Fly Predators in pastures where the cows have just been is a

lot of work and is only effective for those using intensive grazing. Harrowing or running a screen drag over the pastures made a big difference too, but required more time than most dairymen had. If this vac thing worked it would solve a horrible problem every grazer has.

At NC State we saw the working unit at the NCDA/NCSU Goldsboro dairy, and the first of the units being built for OV. It was a very clever design, but needed to be redesigned to be mass produced efficiently and optimized for higher performance. This was early October and there weren't that many Horn Flies left but we saw the collection data which was impressive. You could control Horn Flies with just this device!

While at lunch I asked Steve how he counted all the Horn Flies, which lead to a trip to his pickup. When he opened the tool box it was filled with 30 or more gallon zip lock bags of dead Horn Flies. Holy smokes! Part of that summer's catch of 2.5 million to be exact. Steve was very proud of his bags of flies. Being an entomologist, I half expected to see them mounted on his office wall like a hunter's trophy bucks (he hasn't...yet). We agreed to license the technology from NC State and so began the redesign for production and optimization back on the West Coast where we are based.



This is the second unlikely alignment of the stars. I run a beneficial insect company, but I'm a Mechanical Engineer by schooling and have started a number of high tech companies. Accompanying me on that first trip to Raleigh was my nephew Zac, who is also a Mechanical Engineer. His dad was actually the founder of Spalding Labs with my mom 38 years ago, and we both grew up working in our dad's machine shop. So I was looking forward to building something mechanical again and one that was much needed.

With Zac as the chief engineer, we completely redesigned the CowVac to make it efficient to produce and much higher in performance. Using the latest in Computer Aided Design and Computational Fluid Dynamics we were able to model the air flow thru the system and over a simulated cow. We increased the flow rate by roughly double, while making the unit quieter. One of the big changes was making the airflow as non-turbulent as possible. This increased the flow and decreased the noise, but it required very smooth gradual curves in the ductwork.

However, we are a bug company and did not have a machine shop to make things. But on the first flight to Raleigh with Zac, I had brought magazines to read and one was a metal fabrication publication. It had a story about an 80 year old Chicago company, Midland Metal Products, which had transitioned from old fashion dedicated tooling to computer aided manufacturing. They didn't use blue prints anymore, so we could just email them our Solid-Works files which is the computer aided design program Zac used. Their normal business was making retail metal display racks for companies like CVS and Target. But they had the latest of every automated robotic metal fabricating tool including welders, laser cutters, benders, punches and even their own powder coat paint line. They were perfect to build the CowVac. Yet, you can imagine their response to us on the first call, "you want us to manufacturer a what?????" Finding Midland was the third unlikely alignment of stars.

The first Spalding CowVac was ready for the 2012 International Ag Expo in Tulare, CA in February. From there it replaced the NC State unit at Goldsboro, NC where we refined the airflow on real animals. While the simulated cow got us very close to optimized performance, we were actually blowing too much air on the sides. This sent Horn Flies in many directions, not just into the vacuum. That is why the final production units have one duct per side.

The first production units were shipped starting in September 2012 with Chico State being the first on the West Coast to get one. Results were very promising in the locations that still had Horn Flies. However, most prospective customers wanted to see one running on a neighbor's

farm before ordering. This was still a new and strange product. At the 2012 WODPA meeting in Washington we set up a working CowVac in the dining room and many were amazed how quiet it was when running.

In 2013 CowVacs were shipped to many states in all regions with Jon Banson, Brian Bylsma and Ward Burroughs first to get units on the West Coast. At the end of 2013 I



CowVac in operation

finally knew for sure that the CowVac was going to make it, as almost every installation resulted in a sale to a neighboring dairy. This article is not a sales presentation so I'll stop here.

There is much more information on our website including videos or actual customer units in operation and results of the first University studies to be published with more coming in the next year or two. If you ever own a CowVac, you can thank NC State's Dr. Wes Watson and Steve Denning, Organic Valley, and the lucky alignment of stars in the last quarter of 2011.

Tom Spalding is the Chief Fly Guy of Spalding Labs. This family owned business has provided Fly Predator beneficial insects for 38 years and the CowVac for Horn Fly control for the past 2 years. Visit their website at: e5z5g.spalding-labs.com. Contact him at toms@spalding-labs.com or (800) 706-3132.

This is a revised version of Tom's article first published in the March 2014 Issue of the NODPA News, a publication of the Northeast Organic Dairy Producers Alliance, www.nodpa.com).



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Two West Coast Students Receive HOPE Scholarships

Two West Coast students are among the four student recipients of the 2014 Horizon Organic Producer Education (HOPE) scholarships. Each recipient will receive \$2,500 towards their education, encouraging them to enter the field of organic agriculture. In launching the HOPE Scholarship in 2007, Horizon Organic® became the first national organic dairy brand to offer a scholarship program designed to build the next generation of organic leaders.

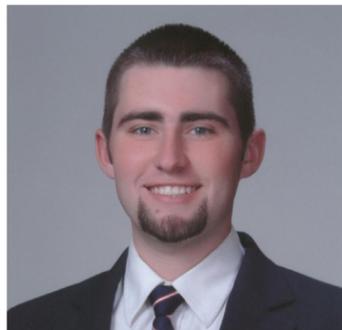
This year's West Coast recipients are:

- Callie Brodt (Ferndale, Calif.), 20, who is inspired by her grandfather, Horizon farmer Jim Walker of Walker Dairy, in Ferndale, California. This is the third time that Callie has received the HOPE Scholarship. Callie attends California State University,



Chico where she is majoring in Agricultural Business. As she heads into her junior year, Callie says she is "even more passionate about the future of organic and what it has to offer for consumers and producers." Callie is helping the university's dairy program research organic feed techniques using a system that produces organic, dependable sprouted fodder in only six days. HOPE Scholarship committee member Robyn O'Brien said that she appreciated "the combination of agriculture and business in Callie's studies. I love Callie's ability to communicate the issues of organic agriculture to a wide audience."

- Phillip Fagundes (Merced, Calif.), 20, is the son of Horizon farmer Ralph Fagundes, who owns and operates Fagundes Brothers Dairy with his brothers in Atwater, California. Phillip, a two-time HOPE Scholarship recipient, plans to graduate in spring 2015 from California State University, Fresno with a degree in Agricultural Business. For Phillip, his continued education in organic agriculture is the single most important factor for the growth of the sector. "I want to use my research skills to develop better methods of organic farming and educate people on why organic is an im-



portant part of the dairy world," Phillip said. For HOPE Scholarship committee member Steve Gilman, "Phillip seems to have his priorities straight and is actively realizing his goals."

"Organic is the original non-GMO label and that is a major factor in the rise of popularity in organic products for families and consumers," said Mike Ferry, Horizon Organic president. "This next generation of organic farmers, like our HOPE Scholarship winners, will help not only meet but further the demand for organic food."

The scholarship recipients are chosen annually by a committee of prominent organic community leaders. The 2014 committee included: Tracy Favre, National Organic Standards Board member and former chief operating officer, Holistic Management International (HMI); Steve Gilman, policy coordinator, Northeast Organic Farming Association (NOFA) Interstate Council; Alan Greene, MD, founder of DrGreene.com; Faye Jones, executive director, Midwest Organic and Sustainable Education Service (MOSES); Robyn O'Brien, author of The Unhealthy Truth and founder of AllergyKids; Bob Scowcroft, a long-standing organic advocate who has served in various leadership positions for 35 years; and Glenda Yoder, associate director, Farm Aid.



Tony Azevedo, Past President of the Western Organic Dairy Producers Alliance, exits the organic dairy business.

Collaboration between David Pinkham and Cindy Daley

Tony T. Azevedo is a giant in the organic world. As he leaves, he wants to help others avoid the pitfalls that caused his family to leave the dairy business. He feels organic folks have become complacent while there is something eating at their livelihoods like a cancer or a sickness. A son who leaves the family business in pursuit of a better living is a symptom of that sickness. In addition, the departure of seasoned dairyman like Tony from the industry after 19 years, is another indication that all is not well with the organic dairy industry. The Azevedo's feel strongly that organic dairymen need to address the issue of economic viability as a top priority. Otherwise, it will be too late for many and eventually the whole organic dream of sustainable family businesses will disappear.

The sickness that plagues the organic industry revolves around economic stability and an equitable distribution of the retail dollar throughout the food chain. Farmers are at the bottom of that chain, and have become "price takers" rather than "price setters". This position has left many farmers in financial trouble and Tony fears that many have become far too complacent and are therefore not proactively strategizing as a group to improve their position.

I first met Tony in the late '90's, trying to fill Organic Valley's hope for a half a truckload of milk every other day. Tony was a cold call. Lloyd Stueve had already convinced his friends Bill and Kathy Douglas to switch to organic. When Tony came on board, those three families were the first members of Organic Valley from California.

Tony's dad had started the dairy in Stevinson, emigrating

from the Azores in 1953 to do so. When he retired, his dad arranged for Tony to buy him out. The family remembers fondly the stories of hardship that an inexperienced son went through as he discovered the vagaries of cash flow and other business facts that Dad had never shared. Dad died just before Tony started farming organically.

The Azevedos met every morning for breakfast, in Tony's mom's house until she passed away. At that point, the tradition was carried on in Tony's house. When Tony's sons Adam and Little Tony were involved on the ranch, they would be there every morning and their kids would show up on weekends sometimes. It is a close family, and they talked things over every day. The Double T is a proud place, filled with memories of three generations working hard to make ends meet.

Tony and his son Adam formed a partnership, with Adam taking over day to day operations of the dairy. They had a good run. Probably the best known was Adam's idea of the "Send a Cow to College!" program that jump-started the Chico State dairy. But then the 2008 financial meltdown and ensuing recession rippled through the agricultural communities and the money saved for a rainy day was wiped out by the drought.

Every family has its own particular circumstances as all families do. But Tony feels strongly that the organic dairymen need to stand together and position themselves for a greater return for all their hard work and investment. All businesses have a rate return that is expected for the value of the assets invested. If that business doesn't yield



that set rate of return, there is a problem that needs to be addressed.

It is not just the market wielding its invisible hand. These difficult times are a challenge to the very foundation of sustainable farming, and everything we know to be true about our way of life. How do we make this an economically viable business while we work to save

our family heritage, our soil, our water, to secure a future for the next generation?

It may be too late for the Azevedo's dairy, but it's not too late for your family farm.



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* Source: Nielsen, 4 weeks ending 7/26/2014

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Haugen Dairy, Buckley, WA

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Preventing and Treating Lameness in Cows

By Dr. Hubert Karreman

Lameness in cows is to be prevented as much as possible and especially in those that walk to pasture and graze for part of their diet, as certified-organic dairy cows are required to do. This article will look at nutritional and environmental factors affecting hoof health and the practical treatment of hoof problems.

Hoof growth and nutrients

The hoof grows downward from the hoof-hairline junction (coronary band) at about 0.2 inches per month (two inches per year overall). At the coronary band are cells, much like cells in our nail bed, which actively secrete substances the “bricks and mortar” of the hoof. These cells are highly sensitive to any changes in the nutrients and toxins circulating in the blood as they are at the “end of the line” - at the farthest point from the pumping station (the heart). A small handful of vitamins, minerals and amino acids have been identified as extremely important for the healthy growth of hooves. Biotin, sometimes called vitamin H, is the most important vitamin followed by vitamins A, D and E. Zinc is the most important mineral followed by copper, selenium and calcium. The most important amino acid is cysteine, which contains sulfur. All these work together in intra-cellular enzymatic reactions to secrete keratin, which

builds up thicker and thicker to make what we see as the hoof itself. Problems with lameness will arise when any of these nutrients are lacking in the diet.

Rumen health and hooves

Equally as important is proper rumen health since rumen acidosis can cause the release of histamine and endotoxins which can go into circulation and alter blood flow to the hoof-hairline junction, changing nutrients delivered as well as depositing endotoxins to the hoof generating cells. You may sometimes see little line(s) wrapped around the hoof wall, parallel to the ground, on all four hooves. This is evidence of a major stress in the recent past, often due to sudden dietary changes, which has upset normal hoof growth. Anytime there are signs of irregularities of growth, there’s a higher likelihood of infectious material in the environment, like that which causes hairy heel wart, setting in. Surprising to many graziers is that rumen acidosis can occur in cows grazing lush pasture early in the spring – but only if the other feed they are eating is baleage and grain. This is due to not enough structural/effective fiber (“scratch factor”).

Pasture vs. confinement

Most university research on lameness is on cows continuously kept inside on concrete. Fortunately for certified-

organic cows, they get to walk on real earth with its natural “give”. I mention this because I’ve been called to emergencies in grazing herds when a bunch of cows have somehow accidentally gotten into excessive amounts of grain in the barnyard yet ended up having no ill-effects on hooves (when treated the day it happens). Usually such a situation results in foundered animals with cows confined on concrete. I believe that the affected grazing cows, being able to walk on earth, were afforded natural cushioning as compared to if they had been stuck on concrete with zero “give”.

However, walking on the land has its own potential problems in the form of pebbles, gravel and stones as well as mud. Dairy farmers which have invested in improved laneways are usually quick to tell others that they have never regretted doing so. Good laneways will have a “crowned” surface to ensure that water sheds away from the center of the walkway as well as a having pulverized, fine material free of stones to walk on – stone dust is often used. Use of a roll of thick rubber matting would be an alternative to actual re-construction on laneways. A cow lane needs only to be 3-4 feet wide, just wide enough for cows to walk in single file.

Not pushing cows too fast as they walk is critical – but especially on un-improved laneways. Let them go at their own rate so they aren’t forced to step down on something that they would otherwise avoid. Stream crossings are also a potential problem with un-seen stones encountered on the bottom. Installing hog slats is a cheap way to create easy walking lanes since they make for a safe and level walking surface, whether submerged under water at a stream crossing or in areas known to easily become muddy.

Visual signs of lameness

While prevention via proper nutrient intake and good walking lanes are critical, problems still can pop up occasionally. Closely watching how cows walk can help with early detection of hoof problems. Normal cows walk with a level, straight back. Any arc to the spine, no matter how slight, is an indication that they are painful in some way – usually in a hoof or limb but also possibly internally in the abdomen. Any head bobbing upward as they walk is a definite sign of lameness. Cows should walk with their heads relaxed and relatively low. Obvious limping indicates the animal needs immediate attention.

Cows can “hide” a hoof problem for a while. This is because they can place their weight on the unaffected toe while keeping weight off the bad one, which will eventually show with extra growth where it is not worn down. This is how to spot a problem area when inspecting a

hoof closely. However, if an abscess happens to develop at the very front point of any toe, they will go lame almost immediately.

Treatment of hoof abscess

Having an area to properly lift a hoof is an absolute necessity for any dairy operation - a stationary chute or a tie-stall so the cow and hoof can be immobilized. For ease of work, the hoof should be hoisted such that the hock is at about the level of the vulva and the hoof itself is about the level of your waist. At all times have ready sharpened hoof paring knives and a set of nippers. There’s nothing worse than trying to pare and trim a hoof than with dull equipment – and the work needed to get done will be avoided, resulting in a terrible problem eventually.

Once hoisted, clean the hoof to see it completely. A normal hoof will have the entire bottom perimeter evenly touching the ground at the same time. The bottom of the hoof should slope slightly up and in toward the center of the toes. Any little bumps or bulging areas anywhere on the bottom surface are evidence of not being worn down normally. These areas should be pared away as that is where an abscess is likely to be. Also, any shiny black line leading to an area of bulging hoof growth should be pared away as this usually leads to an abscess area. Abscesses are usually caused by a stone piercing the weight bearing area of the hoof. Don’t be afraid to open up an abscess – they must be opened up well. Some bleeding is OK. This will bring new circulation and nutrients to the area. Open up abscesses until the existing bottom surface blends once again smoothly to the more inner surface, so there is no “shelf” effect of two different levels of hoof surface. If you can run your finger tip underneath the bottom, there is still a “shelf”.

I usually open up abscesses to about a nickel or quarter size area and even larger. I then cleanse with 3% hydrogen peroxide or iodine tincture and then apply a wrap. Usually if opened up properly, an abscess is a once and done treatment. One thing for sure: getting an abscess treated correctly the first time is very important as cows have a tendency to cover over that area quickly and any abscess area not opened up will go deeper yet.

Foot rot and Hairy heel wart

Foot rot is another problem usually caused by a piercing object – but into the skin area between the two toes. This can become infected quickly with lots of inflammation above the hoof-hairline junction. The cruddy area between the two toes needs to be cut away to allow new blood to come there. The area is then cleansed with 3% peroxide or tea tree oil. Then I make a thick paste of ½

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cup sugar and 20cc Betadine (povidone iodine). I put that on a big wad of cotton and wrap with hoof wrap, having the toes slightly spread apart. The wrap must be changed in 2-3 days. At the change, a dead "core" will be seen and can easily be pulled out. Then cleanse with peroxide and re-wrap with another round of the thick paste on cotton.

The sugar-Betadine mix has worked so well on foot rot in cows, goats and sheep that I actually now use it as my primary "salve" for any hoof problem. And it's cheap and easy to make yourself. I approach all hoof problems similarly: pare away as needed, make it bleed a little, cleanse with peroxide or tea tree oil, and wrap with sugar-Betadine. For instance, with hairy heel wart - much like poison ivy in that it is very much a surface problem - I very shallowly pare away the area (which afterwards is not painful), cleanse with peroxide, and apply a wrap with the sugar-Betadine mix. You can substitute a really thick raw honey for the sugar-Betadine if you like for any condition - the principle behind both is that they are anti-bacterial and healing.

Foot baths

Foot baths are certainly OK to use - but you don't need to actually use a sloppy liquid bath. In fact, copper sulfate baths dumped on your land will quickly load your soil with dangerously high levels of copper. Rather, use a box filled with dry hydrated lime about 4 inches deep so that hooves will penetrate down into it and get a good covering of it. A minor draw back is that you can put the spent material only on uncertified land.

Conclusion

While problems are generally minimal on organic farms, lameness and its effect on efficient grazing really must be prevented. By proper nutrition and environmental improvements, your cows should be able to move freely and easily as they graze contentedly.

Reprinted with permission from the March 2014 issue of the NODPA News (www.nodpa.com)

Organic Certification Cost Share Programs

The Organic Certification Cost Share Programs (OCCSP) reduce the cost of organic certification in accordance with the Agricultural Marketing Service's (AMS) aim to strengthen market support for U.S. agriculture. It reimburses organic producers and handlers for a portion of their organic certification costs. The certification assistance available through the USDA is authorized by two different pieces of legislation. The National Organic Certification Cost Share Program (NOCCSP) is authorized by the Farm Security and Rural Investment Act of 2002, commonly known as the Farm Bill. The Agricultural Management Assistance (AMA) Organic Certification Cost Share Program is authorized by the Federal Crop Insurance Act of 2001.

How Much Money Is Available?

Approximately \$13 million has been allocated for each fiscal year through 2018; \$1.4M for the AMA and \$11.5M for the NOCCSP, annually. Each state is allocated funds based on the number of certified operations in their state and past fund usage.

Who Is Eligible?

Producers and handlers in all fifty states, as well as the District of Columbia, American Samoa, Commonwealth of the Northern Marina Islands, the Commonwealth of Puerto Rico, Guam, and the United States Virgin Islands are eligible to participate in the NOCCSP. Participation in the AMA is restricted to producers in the following 16 states: Connecticut, Delaware, Hawaii, Maine, Maryland, Massachusetts, Nevada, New Hampshire, New Jersey, New York,

Pennsylvania, Rhode Island, Utah, Vermont, West Virginia, and Wyoming.

How Do I Apply For Reimbursement?

If your operation is already certified organic, contact your State Agency for application procedures. You can locate your state agency contact at <http://bit.ly/NOPCostShareStates>. If you are seeking organic certification, you can find information on the process for certification at <http://bit.ly/OrgCertification>.

What Costs Are Reimbursable?

Eligible costs: Application fees, inspection costs, fees related to equivalency agreement/arrangement requirements, travel /per diem for inspectors, user fees, sales assessments, and postage. Ineligible costs: Equipment, materials, supplies, late fees, transitional certification inspections, and inspections necessary to address NOP regulatory violations.

How Does It Work?

The USDA enters into noncompetitive grant agreements with and allocates cost share funds to State agencies (typically Departments of Agriculture) to administer the cost share programs. Organic operators who have

received organic certification or a renewal of certification from an accredited certifying agent between October 1, 2013 and September 30, 2014 are eligible to participate and typically submit a one-page application form, a W-9 Tax Form, proof of certification, and an itemized invoice of certification expenses to their State agency. The State agency reviews the application and then may reimburse the operator for 75% of the cost of certification, up to a maximum of \$750 per category of certification -crops, wild crops, livestock and processed products.

Still Have Questions?

Contact Us.
Dana K. Stahl, OCCSP Manager
 Phone: 540-361-1126
 Email: Dana.Stahl@ams.usda.gov

Rita Meade, OCCSP Coordinator
 Phone: 202-260-8636
 Email: Rita.Meade@ams.usda.gov
 Fax: 202-205-7808

National Organic Program Cost Share pages:
<http://bit.ly/OrganicCostShareInf>

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WODPA Fall Conference and Organic Trade Show

Please join us for our Fall Conference and Organic Trade Show.

When: Tuesday and Wednesday October 14-15, 2014.

Location: DoubleTree by Hilton, Rohnert Park, California.

Hotel Rate and Reservation: The single and double occupancy room rate is **\$119 per night plus tax for reservations made no later than September 22, 2014**. Please go to www.wodpa.com for the link to the hotel. Alternatively, you can call the DoubleTree by Hilton at 707-584-5466. Mention WODPA when making your reservation. **Reservations made after September 22, 2014, will be at the prevailing rate at the time** which can be expected to be about double the current conference rate.

Conference Rate and Registration: The registration fee is **\$100 per person for payment received before October 1, 2014**. The rate increases to **\$125 per person beginning October 1, 2014**. Conference meals are included with the registration fee; however, the cost of meals exceeds the cost of registration. Please help us plan an accurate number of meals by registering before October 1, 2014. To register for the conference, please complete the registration form found on our website at www.wodpa.com. When registering please indicate whether you will be participating in the Tour and Barbeque. This will help us plan transportation and food needs. Please see "Where to Register" below.

Trade Show Rate and Registration: The booth registration fee is **\$500 per booth** and includes one registration to all conference events and meals. Additional conference admissions are available for \$100 per person. **Payment is due by October 1, 2014**. To register, please complete the trade show registration form found on our website at www.wodpa.com. **When registering please indicate whether you will be participating in the Tour and Barbeque. This will help us plan transportation and food needs.** Please see "Where to Register" below.

Where to Register: Mail your registration and payment to:

Western Organic Dairy Producers Alliance
2485 Notre Dame Boulevard
Suite 370-162
Chico, CA 95928

Additional Details: We will be posting information regarding the conference sessions as they become available. We are also posting trade show participant information as they register. **Please periodically check our website at www.wodpa.com for conference updates.**

THANK YOU 2014 Conference Sponsors!

WODPA thanks its 2014 Conference Sponsors for their generous financial support. We rely on donations to help cover conference costs and the following companies have contributed, as of September 6, 2014, to the success of this year's conference:

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The conference purpose is to help organic dairy farmers stay informed about the organic dairy business.

Please support organic dairy farmers by becoming a conference sponsor. You can obtain a sponsorship form by contacting Richard H. Mathews at 717-457-0100 or rhmthw51@comcast.net.

Associate Membership

WODPA is now accepting associate members.

Associate membership is open to any organization, group, or individual who does not produce organic milk.

Associate membership is a way that friends of WODPA can help support WODPA's efforts to preserve, protect, and ensure the sustainability and integrity of organic dairy farming across the west.

The membership fees are:

- Organization/Group Associate Member
\$150 per year.
- Individual Associate Member
\$50 per year.

Associate membership is a nonvoting member.