Dr. Don Huber speaks to dairymen
WODPA Fall Conference
By SHARON SINKO

The Great Wolf Lodge, Grand Mound, WA was site of the recent WODPA Fall Conference and Organic Trade Show. Andrew Dykstra, fall conference chairman and President Tony Azevedo, opened the conference with a video entitled “Rough Times for Organic Dairy Farms” produced by Melanie Ruiz, UC Berkeley Creative School of Journalism depicting the impact of feed costs on organic dairy farmers. CA organic dairy farmers Tony Azevedo, Albert Strauss and Richard Hughes were featured. In other actions taken by WODPA board to bring the plight of the dairy farmers to the attention of the processors, a letter was sent to eight processors. The letter was picked up by New York Times, which resulted in many calls to the WODPA board for interviews and statements.

Washington Dairy Ambassador, Abby Lohman, was introduced by Andrew Dykstra. Her presentation featured opportunities in agriculture for students.

Mark Bradley, Assistant to the Deputy Administrator of USDA National Organic Program, explained the implications of Farm Bill changes and also gave a chronological history of the development of the National Organic Program which did not exist before 1990. The NOP 2013 area of focus will be origin of livestock, pet food standards, aqua-culture standards, residue testing requirements, guidance documents organic seed, inspector qualifications and market surveillance to name a few.

One of the highlights of the conference was the presentation by Dr. Don Huber, professor Emeritus Plant Pathology, Purdue University. Dr. Huber addressed “Glyphosate contamination and the consequences to crops, humans, and animals.” One of the myths he addressed was, “does a GMO plant really produce more.” Dr. Huber stated, a plant is very dependent on nutrients and when used over a period of several years, glyphosate degrades slowly. As a result, the plant is weakened and does not respond well when attacked by disease. The glyphosate accumulates in the plant tissues and moves into the roots and is ultimately released to the soils, which makes the plant more susceptible to disease. It increases the virulence of soil born disease organisms and is toxic to normal biological control and other beneficial organisms.

According to Dr. Huber, the ecology of the soil has been changed. They are seeing a reduction of crops in the...
President’s Message

Greetings, it’s a new year and new times

First, I’d like to express my thankfulness for all Tony Azevedo has done for the organic dairy industry. His steadfast efforts and willingness to say it as it is are great qualities to have in a leader. You know what I’m saying? His shoes will be hard to fill.

As the new WODPA President, I’ll do my best to better your livelihoods. If you’d like to get a hold of me, you can contact me anytime; my contact info is on www.wodpa.org (hint, hint)

As I mentioned before, these are new times and we need some ingenuity. The valley we are in is pushing two years: feed is up and probably not dropping, inflation is working and probably not slowing down and regulations are probably not slowing down either.

It’s time to look at everything we do. We all need to become sharper at doing our book work and take a look at where we make money or don’t. Instead of looking at how much money we make per cow, we need to look at how much money we make per acre. By looking at what our crops are worth per acre and how much milk money we make per acre, we can determine where the best return on investment is and what options we have available.

How do we market our milk? Most of us were looking outside the box when we switched to organic dairy farming, so let’s make sure we don’t fall back into the box. As they say, “there is lots of dough outside of the cookie cutter.” Ingenuity should not quit the moment we receive our organic certification. Okay, enough of that, my point is let’s not go back to working faster, harder and making up the lack of profit with more volume.

A couple of things WODPA has been working on so far this year is preserving homeopathy and giving input on the organic research and promotion programs. As you know, we are all volunteers, but at the WODPA conference this fall, we voted to pursue a paid Executive Director position. A committee chaired by Ward Burroughs is moving forward with that.

It may not always seem that WODPA is making huge steps but lots of little steps can make an impact. When there is an issue, farmers say “let’s organize and fight this thing!” Well, we are organized and making difference!

Respectfully,

Andrew Dykstra, President
Midwest due to repeated applications of Glyphosate over a decade. The plants are weakened and nutrition values of the crops are lower therefore affecting both animals and humans and giving rise to whole set of health and disease issues.

Drew Falkenstein, food borne illness representing Marlier Clark, Seattle, WA gave a very interesting presentation about food borne illness and some of the scenarios that can develop. Marler Clark’s focus is on the product. The only defense is prevention. It does not matter if you took all the reasonable precautions, and if you manufacture a defective product you are liable. He noted that there is a lengthy lag time between a person getting ill and the actual recall of product as Marler Clark always looks at the incubation period first before taking any action.

WODPA considered the following issues during their general session Wednesday, October 24th. The proxy vote issue, the creation of an Executive Director position, and WODPA’s position on the “technical regulatory fix.”(resolutions and election results listed on page).

Due to the rising cost of hay and grain, the “No Grain, No Pain?” moderated by Doug Sinko generated much interest. Organic dairy farmers Jon Bansen Mike Grauwen Gary McCool, and Dennis Schakel discussed their feeding programs using little or no grain. The general consensus of the panel was as follows: (1) It will take at least a year for your cows to adjust, (2) forages need to be top quality, (3) and cows had fewer health problems. When asked if they would go back to feeding grain if prices dropped, the panel unanimously stated they would not.

Retiring President Tony Azevedo was honored at dinner Tuesday night. Tony has served as WODPA President for six years. His calm tutelage and knowledge of the organic dairy industry has enabled us to move forward and grow WODPA to an effective voice in the organic dairy industry. WODPA would like to express our appreciation to our sponsors and trade show participants. Our conference wouldn’t be possible without your support and participation.

We are looking forward to a successful 2013 Fall Conference at Twin Falls, ID.

The conference concluded with tours of SunTon Dairy, Tony & Sunny Schilter and Rosecrest Dairy, Gary and Sharon McCool.

Retiring President Tony Azevedo and President elect Andrew Dykstra
What We Learned at Calving School
By Amy Peters Oregon State University Extension Service Livestock/Dairy/Forages Agent Coos County

It seems like every time I attend an educational event, whether it be the annual WODPA meeting, farm tours, or an event sponsored by the Extension Service, I learn at least one new idea. Sometimes it’s that one thing that really puts it all together and makes information I already know make more sense. Many times, this translates into saving either time, money, or that next calf. At a recent Calving School hosted by Oregon State University

The first step to a successful calving assistance is recognizing a normal calving. If no progress has been made in 30 minutes, examine the cow to determine if calf presentation is normal and if the calf will fit through the birth canal. Before checking the cow, make sure to have a clean environment. Tie the tail to the cow or have someone hold the tail away from the vulva. Wash the vulva and anus area with soap and warm water. After washing your hands and arms, put on a new disposable plastic obstetric (OB) sleeve and apply lots of commercial obstetric lubricant. Insert your hand slowly into the birth canal, cupping your fingers.

A great trick that can be used prior to assisting a cow in labor is to manually stretch the vulva. Make sure the area is clean (as described above) and then with both hands gloved and lubricated, place hands over the head of the calf in the birth canal. Move your elbows apart to apply pressure on the vaginal and vulvar tissues with your forearms. Do this in all directions for 5-10 minutes. This helps the cow relax, making the birth canal expand for the calf. Relaxation of the tissues inside also gives you more room to feel around and determine if the calf is positioned correctly or not.

Another helpful trick involves rotating the calf in the birth canal to allow it to come out easier. If the front feet and head of the calf are lined up correctly, once the shoulders have cleared the vulva, take the front legs and gently rotate the calf either left or right at about a 90 degree angle to decrease the diameter across the pelvis of the cow. This allows the widest part of the calf, the hips, to be able to pass through the pelvis at the widest part, not straight up and down but at an angle. Delivery will be made with the calf half-turned on its side.

If OB chains are needed, it is important that there is proper placement on the calf’s legs to reduce the chance of a broken leg or injured foot. Too many times I have seen OB chains used incorrectly with just one loop around the foot. This leads to tearing of the skin on the leg, not a good way to start life. To correctly attach the chain, loop it above the fetlock and then make a half-hitch on the pastern. Make sure the chain is positioned so that as pressure is applied, the sharp points of the calf’s hooves are pulled away from the soft tissue of the vaginal wall. If possible, try to always place the chains on legs that are already outside the cow.

Alternate pulling of the calf’s front legs is yet another simple calving trick. Instead of just yanking the calf out, gently pull one leg, then the other, switching sides with
To Join WODPA Please contact Sharon Sinko at 541.396.2409. Joining the organization is free to all organic dairy producers in the Western Region. www.wodpa.org Please see the WODPA Web site for previous issues of the Integrity, conference proceedings, WODPA mission statement and resolutions passed by the general membership.

The next five rules will make calving assistance run much smoother:

1) Patience – The reproductive tract needs to dilate to allow the calf through and this takes time for the hormones to work.
2) Use as much lube as necessary – Trying to deliver a dry calf makes things much more difficult and can harm the reproductive tract of the cow.
3) Pull when the cow is pushing – Pulling against the cow can damage the reproductive tract, which gets swollen and makes delivery more difficult.
4) Do not use excessive force – Avoid the use of the calf-jack unless you are by yourself because it can put too much force on the cow and you won’t notice it. The cow will get damaged in the process since a calf-jack puts 3 times more pressure on the cow than needed. Use “flexible” traction, meaning that when you stop pulling, all tension on the cow stops (as opposed to the calf-jack which would keep the tension), and
5) Steady traction is easier on the cow and the calf. Avoid jerky and irregular pulls.

In addition to the great veterinary tricks, we also learned more about colostrum management. As you know, a calf needs to consume 10% of body weight in colostrum* within the first 2 hours after birth. For organic dairy producers, there is nothing more important than getting colostrum into those newborn calves. Tube, if necessary, but make sure every single calf has been given enough. If you leave calves with the cow to nurse, you might still want to feed that calf colostrum. There is a 35% chance that calf will not ingest enough colostrum if left to only nurse the mother.

*Use Johnnes free colostrum

Pasture calving was another topic of discussion. Organic dairy producers are encouraged to calve on pasture, when feasible. A calving system that has proven effective for beef cattle, sheep, and pasture-based dairy cattle is called the Sandhills Calving System. In this system, cows that have calved are left in the pasture where calving took place and pregnant cows are moved to clean calving pastures once a week. This system helps reduce exposure of newborn and very young calves to pathogens. It also significantly reduces sickness and, therefore, treatment costs and death. Next time, I’ll let you know what we learned at some of our other recent educational
Sprouted Barley Fodder
By Dr. Silvia Abel-Caines – Ruminant Nutritionist

The summer of 2012 saw the worst drought in the nation in more than 25 years. As a result, feed costs reached an all time high, and in August and September farmers had already tapped into their winter feed because of poor crop growth. However, some producers around the country are still feeding fresh green fodder to their herds daily.

Most producers know adding fresh green grass to a dairy cows ration is important because of the increased amount of starches, sugars, enzymes and vitamins. Although many areas of the country do not allow for year-round grazing, producers have the ability to feed fodder everyday by sprouting grain, barley in particular.

Barley fodder is hydroponically-grown barley grass that sprouts from soaked barley seed. Sprouted barley can be grown indoors, year-round, without soil and is ready to feed in six to seven days. In one week, the interwoven white roots of germinated seeds and green shoots form a carpet. The roots will be about two inches thick and a total of eight to 10 inches from the root to the top of the grass.

Before You Grow
Before you start growing, it is imperative to inform your certifier and add growing sprouted barley to your organic system plan. It is also important to conduct small test runs with different seed varieties before purchasing a large amount of seed. This can help determine which types of seed have a higher quality and a lower mold presence. Malting and two-row barley seem to be the most popular with the highest rate of success in growing and palatability.

Many factors, such as soaking time; grain quality; grain variety; temperature; humidity; depth and density of grain in trays; and mold incidence, influence the yield and quality of sprouts produced. To achieve maximum yield and nutritional benefits from the sprouts, the grain should be clean, free from broken or infested seeds, untreated and viable.

Basic Steps
1. Clean and soak the seeds for about eight to 12 hours. Soaking more than 18 hours has been shown to reduce the quality of the sprouts and hinders the germination process.

2. Rinse, drain and spread the seeds into shallow trays that have drain holes. Seeds should be spread to half an inch in thickness.

3. Water a couple times per day, keeping them moist and drained for the duration of the growing cycle at a temperature range of 60° to 75°F. (The lower end of the range may help to reduce mold production.)

4. Harvest at the desired stage of growth (between day six and day eight). Fodder harvested on day six has been shown to have more energy but less overall weight than day seven and eight.

Spouted barley Fodder

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Nutritional Benefits
One of the main reasons farmers are starting to sprout barley is the consistency in the quality produced. Cattle fed sprouted barley have access to high quality fodder year-round, which allows producers to give cows lower-quality feed.

A consistent supply of fodder in the ration may minimize the negative effect of feed changes from grazing to winter feeding or any change in the ration due to feed inventory. Having a consistent supply of fresh green plant matter during the non-grazing season will benefit the cows overall health status. The presence of essential vitamins and fatty acids are present in live green grass and their benefit extend the rumen digestion. Both immunity and reproductive performance has been shown to improve with long term fodder feeding.

Positive nutritional changes occur to the grain during sprouting. Complex compounds breakdown into simpler forms and transformation into essential elements. Energy is the main reason cows eat grain. When the grain seed sprouts, starch converts into sugar, which is better utilized by the rumen. Analysis comparing sprouted versus un-sprouted organic barley showed no increase in starch, but the total starch broke down into more sugars.

Although total energy did not increase, when the rumen receives different types of carbohydrates it reacts differently. So for the health of the rumen, sprouted barley presents a much better composition than unsprouted barley.

Mineral and vitamin levels in hydroponically-sprouted barley are significantly increased over those in grain; in addition, they are absorbed more efficiently due to the lack of enzyme inhibitors present in sprouted grain. Sprouts provide a good supply of vitamins A, E, C and B complex. Like enzymes, vitamins serve as bioactive catalysts to assist in the digestion and metabolism of feeds and the release of energy. They are also essential for healing and repairing cells. However, vitamins are very perishable and, in general, the fresher the feeds eaten, the higher the vitamin content. The vitamin content of some seeds can increase by up to 20 times their original value within several days of sprouting. These nutrients could result in enhanced microbial activity and growth in the rumen and, consequently, better than expected utilization of poor-quality hay.

Livestock Benefits
Producers have found cows eating sprouted barley tend to stay cooler during high temperatures due to sprouted barley’s high digestibility. Fresh sprouting fodder improves digestion and absorption and uses less energy in doing so, which allows cows to use the energy for such activities as milk production, reproduction, weight gain and more efficient waste management.

Cost Benefits
On average, 1 pound of barley can produce seven pounds of fodder. If you want to feed 20 pounds of fodder per cow per day, initially you would need three pounds of grain per cow. Sprouted barley is 17% dry matter, making 20 pounds of fresh fodder equal to 3.4 pounds dry matter. If you are feeding 10 pounds of barley grain and convert that into fodder, it will have the same amount of energy, but improved in protein, starch and sugar.

Producers can purchase lower-quality dry hay because their cows have access to high-quality fodder on a regular basis, saving more money.

Hydroponic fodder production requires as little as 2% of the water used under field conditions to produce the same amount of fodder. Barley is considered the best grain to sprout using hydroponics, not only because it requires less water to produce large amounts of fresh...
fodder, but also barley seeds are available at a lower price than other grains. As of September 2012, barley is $590 per ton compared to $790 per ton for corn. There are many ways sprouting barley can save your farm money, but constantly improving your operation’s efficiency seems to be the most important and beneficial.

Ration
There are no scientific reports available to determine the most effective feeding rate for completely replacing grain with fodder. As of now, 100% barley fodder ration is not recommended. Sprouted barley is a highly digestible protein, but for rumen health, we need to slow down digestion by adding dry effective fiber particles. When you feed fodder, which is 17% DM, along with pasture, cows need to have some dry hay to hold the passage of that matter. To keep the cows eating and utilizing their forages, free choice hay should be available. We know cows will self-regulate in their particle size, so dry hay is important for both the energy and the protein that is going into that stomach.

Including a fodder supplement, at 10% of the total diet represents 4 pounds (DM) of fodder, or 22 pounds as fed. You will need approximately three pounds of dry barley grain. Every herd is unique and farmers have found success with various feeding rations. Some found feeding between 30% to 40% barley fodder worked the best, while others feed between 15 and 20 pounds of sprouted barley per cow per day along with dry matter.

Feeding 10 pounds of corn represents about nine Mcal and feeding 10 pounds DM of sprouts represents 8.8 Mcal. The conversion of 1 pound of dry grain (90% DM) into seven pounds as fed of sprouted material (roots, grain kernel and green shoot – 17% DM) is an actual yield of 1.2 poundsDM.

When calculating dry matter intake for sprouted barley, it doesn’t follow the rule completely because even though producers are feeding a small amount of dry matter, the quality of the sprouts will replace a larger amount of dry matter feed. The high digestibility of fresh, hydroponically sprouted barley means the animal needs fewer pounds of feed to produce the same results. Sprouts act beautifully with the rest of the forage you are feeding, which is why feeding five pounds DM of something that is 17% DM will equal the nutrient value of more feed in their ration.

Even though a lactating dairy cow calls for around 40 pounds dry matter in the ration, sprout fodder has all the vitamins readily available, better starch availability, less

Holsteins consuming sprouted barley fodder
(Barley Fodder continued)
soluble protein and it acts better in the rumen so you don’t need as much feed. Cows get the energy and the protein in an improved form.

Controlling Mold
Mold while sprouting can be dangerous to animals consuming it and costly for producers. Starting with a clean seed is the first step in preventing mold growth. Soaking seeds for 10 to 12 hours, then running them under cold water and allowing them to drain in a bucket should hinder mold growth.

Seeds always have traces of mold in them just waiting for the best opportunity to sprout. However, we can control conditions that allow mold to grow. Temperature and humidity can be controlled with fans and dehumidifiers. Farmers have found that forcing air into the grow room and keeping temperatures below 75°F helps regulate humidity and keeps mold away. Pressurizing the room not only helps with mold prevention, but can also increase production.

Cleaning trays between uses can also be done as a preventative measure. Producers can clean trays with chlorine water or a food-grade hydrogen peroxide solution, and then rinse it off before placing seed on trays.

It is important to check with your organic certifier to see what cleaning solutions can be added to water while seeds are soaking as cleaning agent. Food-grade hydrogen peroxide may be added to the water to help with mold.

No nutrient solution is required for fodder growth; most commercial sprouting systems that come with solution are for controlling mold, not helping the fodder’s nutrient value. Recently, commercial machines have been made available to eliminate and prevent mold growth in production rooms.

Conclusion
The 2012 drought caused stress for both farmers and their animals. In six to seven days, you can make your farm virtually drought proof while feeding cows highly nutritious material. With all the benefits of producing barley fodder, it might be time to reevaluate your current feeding system.

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Along the Organic Trail........
By Sharon Sinko

We hope you enjoy this issue of “Integrity”. If you will notice it features several women who have been prominent voices in agriculture and the organic Industry: Dr. Silvia Abel-Caines, Ruminant Nutritionist, Amy Peters, OSU County Extension Dairy, livestock and forage, and Dr. Cindy Daley, CA State University at Chico. Please take time to read their articles.

The summary of conference features the photography of Johan Doornenbal, son of organic dairy producers, Joe and Astrid Doornenbal. Scio, OR, His photography is also featured on the WODPA web site: www.wodpa.org

WODPA has grown and expanded over the years since our inception in 2006. We were instrumental in passing the new pasture rule, have advocated tirelessly for a sustainable pay price for organic dairy producers, put on seven annual conferences and published a twice yearly newsletter. To that end, we feel that hiring an Executive Director would enable us to continue to work effectively for the Western Organic Producers. Please give us your support!

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**One-Cent Program**
- Brian & Christina Bylsma
- Cowlitz Meadows Dairy, Inc.
- Tim & Dorice Mirands
- CSU Chico, College of AG
- Double T Acres
- Ward & Rosie Burroughs

List of Contributors as of Jan. 31, 2013
Addressing low soil calcium improves forage quality and economic return.
By C.A. DLEY, Ph.D., California State University, Chico, College of Agriculture, Organic Dairy Program

The success of any organic farming system can be linked directly to soil fertility. High quality forages that optimize milk production require well-aerated, balanced soils. Getting “there” takes commitment and in some cases, blind faith that investing in your soils can actually provide a generous return, a return that continues to pay dividends long after the deposit is made into the proverbial soil bank account. Making that initial investment was an important step in the organic evolution of the certified acreage at the University Farm. The investment was considered a pledge to the concept that soil remediation would return value to the operation in some tangible way. With the help and advice of the Organic Dairy Advisory Board, a long-term soil remediation field trial was designed to study the effect of a basic soil amendment program on forage quality and yield, with an emphasis on the economic return that would result from added milk production.

Soils in this area are classified as “Chico Clay Loam”, with a pH of 6.6 and CEC of 13.8. The initial soil analysis would show significant deficiencies in base saturation for calcium (55%), excessive amounts of magnesium (33.8%) and elevated phosphorus (23 ppm), moreover both soil nitrogen and sulfur concentrations were far below recommended norms. Such a significant deficiency in soil calcium (Ca) would likely compromise nutrient uptake in pasture forages, reducing digestibility and consumption.
Although the initial soil organic matter (SOM) assessment was within the normal range (3.5%), soil penetrometer readings were very high (greater than 75% of readings in excess of 300 psi)1, indicating “tight” soils in need of aeration and soil biology. Soil Ca has a positive impact on soil structure by flocculating clays (breaking them up into flakes), in this way, Ca helps to explain (at least in part) the compaction issues in these soils.

Methods: Ten 5-acre paddocks were randomized to one of two treatments, i.e., amended vs. non-amended, for the purposes of monitoring changes in forage quality and yield over time in response to a calcium-based remediation program. Amended paddocks received a combination of soil amendments designed to remediate the soil over a three-year period to defray these initial costs. All amendments were applied in the fall, with the exception of the spring gypsum application. Amendments for the treated paddocks included:

- 1/2 T Gypsum ($53/T) 2x/yr
- 400 lbs Hi-Cal lime ($196/T)
- 1 lb Boron ($1.20/lb)
- 5 lbs Zinc Sulfate ($1.10/lb)
- 2 lbs Manganese Sulfate ($0.90/lb)
- 5 T compost (2:1:2 N:P:K)

Amendments were applied each year for three years at a cost of $289.50/yr. Pastures were all managed the same with respect to intensive grazing management or MIG with a stocking density that varied throughout the season (100 -130 cows/acre). Rest periods also varied with season, for instance during the spring of the year, paddocks were rested 25-30 d, as the summer progressed, the rest periods would take 45 days to achieve 10-12 inches of re-growth that was suitable for grazing. During spring, our pasture DMI can easily reach 70% of DMD, while changes in forage quality during the heat of the summer can reduce pasture forage consumption to approximately 40%. Summer heat changes the plant populations from cool to warm season species, elevating ADF and NDF, therefore reducing forage intake. As NDF rises, pasture DMI drops.
What is more exciting than yield, is the change observed in overall quality. Obviously, as forage quality increased per lb of DM consumed, so will milk production. There is a direct correlation between forage quality and milk yield.

Acid Detergent Fiber orADF was significantly improved (34.45% A vs. 36.67% NA) indicating a reduction in the fiber content of the forages. Neutral Detergent Fiber or NDF was also significantly improved within the amended paddocks (52.02% A vs. 58.10% NA), to the benefit of pasture intake because of the inverse correlation between NDF and DMI. What’s more, the overall digestibility of the fiber content of the feed improved within the amended paddocks as reflected in NDFD or neutral detergent fiber digestibility. As the fiber content of the feed becomes more digestible, more total nutrients are then available to the cow for milk production and maintenance. In fact, for each 1% improvement in NDFD, DMI or dry matter intake improves by 0.37 lbs, resulting in an increase in fat corrected milk production of 0.55 lbs/lb of dry matter consumed.3

The energy content of the forage also improved significantly within the amended paddocks (across all energy categories), improving relative forage quality (RFQ) within the amended paddocks by 20% (189.85 A vs. NA158.69). Improvements in the overall digestibility, total digestible nutrients and the energy component of the forages within the amended paddocks resulted in more milk production produced per ton of DM consumed (3,298 for the A treatment vs. 2,966 for the NA treatment).

Economic impact: Using the milk for every ton of DM consumed. In our grazing system, each cow consumes over 2 T of DM from pasture-based forages over the course of the grazing season. (e.g., @40 lbs of DMD and 50% pasture DMI; grazing 200 days = 2T/cow/season).

All paddocks were measured for dry matter yield pre and post grazing using a Grass Master brand capacitance probe. Total dry matter removed was calculated by subtracting post DM values from pre-grazed DM readings. The difference was considered to be DM yield, as well as actual dry matter consumed. Residual DM measured approximately 1500 lbs/acre, pre-grazing DM production varied by season. Total average DM production per year averaged 6 T/acre.

Results: The results for forage quality and yield are averaged over for the last three years. It was not possible to pick up differences between treatments visually even though changes in forage quality and quantity did occur.

Dry matter production data indicated an additional 180 lbs of dry matter/grazing cycle within the amended paddocks. With 8 grazing cycles / grazing season the additional tonnage/acre was 1,440 lbs of DM/acre. Cost of in the amended paddocks.

If we were to calculate the cost of replacing that 1440 lbs of DM with comparable feed, it would cost approximately $253/acre to buy $300 hay at 85% DM. For the 50 acres within this study, that amounts to roughly $12,600 worth of hay that we didn’t have to buy because we were able to increase our production of pasture-based forages.

Net Energy of Lactation, Maintenance and Growth

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because feed takes longer to break down within the rumen, rate of passage slows, and the cow becomes limited on space (capacity).

All paddocks were measured for dry matter yield pre and post grazing using a Grass Master brand capacitance probe. Total dry matter removed was calculated by subtracting post DM values from pre-grazed DM readings. The difference was considered to be DM yield, as well as actual dry matter consumed. Residual DM measured approximately 1500 lbs/acre, pre-grazing DM production varied by season. Total average DM production per year averaged 6 T/acre.

Results: The results for forage quality and yield are averaged over for the last three years. It was not possible to pick up differences between treatments visually even though changes in forage quality and quantity did occur.

Dry matter production data indicated an additional 180 lbs of dry matter/grazing cycle within the amended paddocks. With 8 grazing cycles / grazing season the additional tonnage/acre was 1,440 lbs of DM/acre. Cost of in the amended paddocks.

If we were to calculate the cost of replacing that 1440 lbs of DM with comparable feed, it would cost approximately $253/acre to buy $300 hay at 85% DM. For the 50 acres within this study, that amounts to roughly $12,600 worth of hay that we didn’t have to buy because we were able to increase our production of pasture-based forages.

What is more exciting than yield, is the change observed in overall quality. Obviously, as forage quality increases/lb of DM consumed, so will milk production. There is a direct correlation between forage quality and milk yield.
Cows that consume 2T of amended forages throughout the season, will produce an additional 662 lbs of milk over cows grazing on non-amended paddocks (2 * 331 lbs of milk/T DM consumed = 662 total additional lbs of milk produced), at $28/CWT = $185.36 per cow. For our 90 cow herd, that would be $16,682.40 for the year due to improved forage quality. The additional yield was calculated to be $5,760 for the season due to the soil amendment program. Collectively, the treatment yielded $22,442.40 in additional income.

The amendments themselves (with application expenses) cost $289.12/acre, for a total investment of $14,457 for the 50 acres allocated to the dairy unit. Net return = $7,985.40 for the season. The actual return on investment suggests that for every dollar invested in soil (under the conditions set by this study), there was a $1.55 returned in additional income.

The caveat is that this study was conducted on low calcium, high magnesium soils, under irrigation, and MIG grazing with primarily Jersey-cross cows. Results on your farm would vary due to specific but no less applicable. You won’t know until you test your soil and run some numbers to establish costs. If your forage quality and yield are not yet there, you may need to test and get started, sooner rather than later.

In summary, achieving balanced soils is essential to improving net profit in a pasture-based organic dairy system. There are a number of things that we did in this study to improve the balance of our soils and increase forage intake and milk production. We added compost and lime to the soil, which improved soil structure and increased water-holding capacity. The amendments themselves (with application expenses) cost $289.12/acre, for a total investment of $14,457 for the 50 acres allocated to the dairy unit. Net return = $7,985.40 for the season. The actual return on investment suggests that for every dollar invested in soil (under the conditions set by this study), there was a $1.55 returned in additional income.

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farm would depend on your current soil fertility and cost of remediation, which are all site specific but no less applicable. You won’t know until you test your soil and run some numbers to establish costs. If your forage quality and yield are not yet there, you may need to test and get started, sooner rather than later.

There are a number of things that we did not factor into the economic picture including the reduction in grain costs. As energy values in the forages improve, the need for energy from grain will be reduced, something that would have a significant impact on feed costs and net profit/cow.

In addition, we did not calculate the economic impact of improved soil organic matter (SOM) that comes from a more balanced soil. Higher SOM values would enhance the water holding capacity of the soil, reducing irrigation costs over time.

In summary, achieving balanced soils is essential to improving net profit in a pasture-based organic dairy system predicated on high forage intake and optimal milk production levels. To get to that next level in your program, test your soil & your forage, find a good agronomist or soil coach that can help you understand the data, establish some achievable goals and pull the trigger.

For additional information contact Cindy Daley at cdaley@csuchico.edu or members of the Organic Dairy Advisory Board: Jon Bansen, Double J Jerseys, Monmouth OR; Ward & Rose Marie Burroughs, California Cloverleaf Farms, Denair, CA; Allen Voortman, Pride & Joy Dairy, Granger WA; George Salsa, California Department of Food and Agriculture, Dairy Division; and Jerry Brunetti with Agri Dynamics at jbrunetti@agridynamics.com, our consulting partner on the study.


**Job Announcement: Executive Director Position**

for the Western Organic Dairy Producers Alliance.

The Western Organic Dairy Producers Alliance is seeking a part-time Executive Director to provide administrative support to the WODPA organization. WODPA is a 501(c)(5) corporation that is dedicated to the preservation and protection of organic dairy farming across the western region. The Executive Director will be responsible to the Board of Directors and will work towards the mission and goals of the organization.

**Minimum qualifications:**
- Have a working knowledge of the organic dairy industry
- Excellent communication skills (written and verbal)
- Familiar with governmental processes and organizations such as the National Organic Program, the National Organic Standards Board and the USDA
- Must work well with a wide variety of personnel, including farmers, processors, legislators and government officials
- Must be able to work from home and supply their own home office

**Preferred qualifications:**
- Must be familiar with social media, web pages, and other forms of telecommunication software
- From an organic dairy background
- Grant writing experience
- Fund raising experience

**Job Description:**
The successful candidate will be responsible for providing administrative support and advice to the Board of Directors and State Representatives in the development of strategies to achieve WODPA’s mission and long term goals. For a complete job description, access www.WODPA.org.

**Application Process:**
The WODPA Board of Directors has established a selection committee to review applications and will interview potential candidates via web conferencing. The entire Board of Directors will interview the final candidates. Salary will be determined based upon the successful candidate's level of experience. Salary is negotiable.

To apply for this position, submit a current resume (complete with references) and cover letter to the Search Committee Chairman Ward Burroughs by **April 1, 2013** or until position is closed. Applicants should provide information on interest and salary expectations within the contents of the cover letter. A full Job Description can be found on the WODPA website at www.WODPA.org. Please forward application material to Ward Burroughs at vista@fire2wire.com.
The following webinars are available at eOrganic Website:
www.extension.org/pages/59461/organic-dairy-production-systems

- Barley Fodder Feeding for Organic Dairies
- Bovine Milk Fats: A look at Organic Milk
- Breeding and Genetics: Considerations for Organic Dairy Farms
- Broadcast of Fly Management on your Organic Dairy
- Developing a grazing system for your organic dairy farm
- Innovations for successful calf rearing on pasture and mob feeders
- Fly Management in Organic Dairy Pastures
- Healthy Soils for Healthy Organic Dairy Farms
- Herd Health on Organic Dairy Farms
- Green house gas emissions associated with dairy farming systems
WODPA Resolutions
Fall Conference, October 24, 2012

1) By Law Change-Proxy Voting
Each eligible member, as defined in Article 4 can submit a written proxy to exercise his or her voting privileges. Member’s proxy is only eligible if they have attended the first day of the annual conference. Motion carried 26 yes 3 no.

2) WODPA Executive Director Position
Ross McMahan made a motion to not support a position of Executive Director, seconded by Heinz Jeg. Discussion followed. Motion failed. 2 yes 26 no Rosie Burroughs made a motion to have new president create a committee to develop a job description for an executive director position and to include a mechanism to support funding and report back to the board staff support for WODPA. Seconded by Ryan Mensonides. Discussion followed. Motion carried 20 yes 4 no.

3) Technical Regulatory Fix
WODPA supports the technical regulatory fix that allows organic farmer to withdraw their check off dollars from supporting conventional agriculture and OTA’s proposed changes as it relates to exemption of organic products from assessment from agricultural check off program. Motion made by Ward Burroughs. Seconded by Tim Miranda. Discussion followed. Motion Passed.

4) OTA’s proposal for Organic Research & Promotion Program
Ross McMahan made a motion to not support extending authority or steps that would ultimately lead to a federal, USDA mandated, “Organic Research and Promotion Program”. Seconded by Ryan Mensonides. Motion passed Yes 16 no 4 Rosie Burroughs made a motion to have WODPA assign a point person to represent WODPA at all discussions related to OTA’s Organic Promotion and Marketing Program. Seconded by Mario Avelar. Motion carried Yes 19 no 4.

5) FMMO in or out?
Ross McMahan made a motion that WODPA support maintaining current status within the Federal Milk Marketing Order. Motion carried Yes 23.
Advertise with us in 2013 and reach 400 plus organic dairymen in the western states. The Integrity is also widely distributed across the nation electronically.

For rates and specifications contact the editor at sinko@sinko6@wildblue.net or call 541-396-2409.