

SUSTAINABLE FARMING

INCORPORATING AWA NEWSLETTER

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MUTTON A CHALLENGE OR OPPORTUNITY?

PLUS
CLINICAL MASTITIS
FARM HEALTH ONLINE
NON-GE LABEL



WE'RE BACK!



Welcome to the first edition of *Sustainable Farming* magazine, which incorporates the former *AWA Newsletter*. After operating as a program of the Animal Welfare Institute for almost eight years, AWA joined A Greener World

in late 2014, and we've been busy finding our feet.

So what is A Greener World, and what's changed?

A Greener World (AGW) is a non-profit organization that serves as a beacon of positive change, helping people to make sustainable food choices, and supporting our nation's sustainable farmers. We have a portfolio of leading farm certifications under our wings—including Certified AWA, Certified Grassfed by AGW and the new Certified Non-GE label. Our goal is to promote real-life farming models and farm certifications the public can trust, while offering practical guidance and support to farmers and ranchers on transitioning to sustainable livestock production.

We're proud to work with more than 1,500 farmers and ranchers, managing over 3 million acres across North America—with more joining every week! Their products are available online, at farmers' markets, co-ops, restaurants, through distributors, as well as in regional and national retail outlets, such as Publix, Lowes Foods, Kroger, Dean & DeLuca, Whole Foods Market stores, Earth Fare—and more!

While *Sustainable Farming* includes the same news, opinion, technical features and case studies on sustainable livestock production as the old *AWA Newsletter*, the new title enables us to move beyond our former focus on animal welfare to encompass broader sustainability issues. Why? Like many of you, we believe the way we farm our animals, the impact of farming systems on wildlife, the environment and wider society, and the nutritional quality of the meat, milk and eggs produced are all connected. We're looking forward to including interesting, informative and thought-provoking articles on these different areas.

We hope you enjoy *Sustainable Farming* and, as always, welcome your feedback and suggestions.

Andrew Gunther
Executive Director, A Greener World

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NEW NON-GE LABEL

New label offers trust, integrity at a highly competitive price point



The Certified Non-GE by AGW label is now available to farmers and food producers.

Launched by AGW in May, the new program guarantees that food products are produced without genetically engineered (GE) feed, supplements or ingredients, and come from animals raised according to the highest animal welfare standards using sustainable agriculture methods.

While other non-GE and non-GMO labels exist, Certified Non-GE by AGW is the only such label to offer further assurances about animal welfare and environmental sustainability, as all products approved as Certified Non-GE by AGW must also come from livestock approved under the Certified AWA farm standards.

"Our primary function is to bring greater transparency to the food system," says Emily Lancaster Moose, AGW's Director of Outreach. "In a marketplace crowded with misinformation and greenwashing, sustainable producers and conscientious consumers are hungry for ways to connect. Trusted third-party certifications like the Certified Non-GE by AGW label make that connection possible."

Public concern about the labeling of GE (also known as genetically modified, or GM) food products continues to grow. The market for non-GE products is surging in response to consumer concerns, with several high-profile companies, such as Campbell Soup, General Mills, Del Monte and PepsiCo, recently announcing non-GE labeling initiatives. Packaged Facts—a leading publisher of market research in the food and beverage

sector—forecasts a near doubling of the global market for non-GE foods and beverages by 2019.

"Most Trusted and Respected"

With guidance from USDA's Food Safety and Inspection Service (FSIS), AGW developed the new Certified Non-GE by AGW label in response to significant demand from retailers, farmers and food businesses for a verified non-GE label claim for meat, dairy products and eggs they could trust. Certified Non-GE by AGW is the only non-GE certification in North America audited in conjunction with AWA's ISO 17065 International Accreditation, demonstrating excellence in auditing and certifying and is the gold standard for supply chain verification.

Anthony Koch of Koch Ranches in San Antonio, TX, is the first business to use the new label: "After considering several other certifying organizations, we determined that Certified Non-GE by AGW will provide our customers with the most trusted and respected verification of our farming and ranching operations, as well as the products we sell," says Koch.

The new label will also come at a significant saving to food businesses. While similar non-GE certifications can cost upwards of \$3,000 per year, Certified Non-GE by AGW costs \$500 (plus auditing expenses). AGW is also making this label and its associated market even more accessible by offering non-GE certification at only \$300 for the first year. To find out more about the Certified Non-GE program—and to apply online—visit CertifiedNonGE.org

IN THE NEWS...

FARM HEALTH ONLINE

AGW has launched a free, interactive website to support high-welfare management of farm animals in outdoor systems.

Developed for farmers, ranchers, veterinarians and advisors, Farm Health Online covers four species—cattle, sheep, poultry and pigs. The fully referenced website includes information on over 100 common livestock diseases and provides immediate access to practical, science-based advice on positive livestock management and sustainable farming practices. For more information, see page 20.

TOP EGGS

Certified AWA eggs at TreeBird Organics (formerly Sunnybrook Farm) in Trout Lake, WA, and Kingbird Farm in Berkshire, NY, were awarded first and second place on The Cornucopia Institute's latest national Organic Egg Scorecard.

The Scorecard seeks to showcase ethical, pasture-based family farms and their brands, and expose industrial producers and brands that can house as many as 150,000–200,000 "organic" hens in single buildings.



VALUE-ADDED GRANTS

USDA Rural Development is accepting applications for its Value-Added Producer Grants (VAPG) program.

Open to farmers, ranchers, cooperatives and producer groups, the \$44 million VAPG program is designed to help farmers and ranchers develop and market value-added products. Maximum award per project is \$75,000 for planning and \$250,000 for working capital. Deadlines are June 24 (electronic applications) and July 1 (paper applications). A useful application guide is available from the National Sustainable Agriculture Coalition at SustainableAgriculture.net

FARMERS OF THE YEAR

Alease and Donnie Williams (right) of Certified AWA D&A Farm in Autryville, NC, were named the 2016 North Carolina Small Farmers of the Year by the Cooperative Extension Program at a ceremony at the North Carolina Agricultural and Technical State University in March.

"One of the reasons why I think they deserve the Small Farmers of the Year award is their willingness to share the knowledge they've gained to help other people," said James Hartsfield, Area Specialized Agent with the Sampson County Cooperative Extension. Congratulations!





IN THE NEWS...

GRASSFED CONCERNS

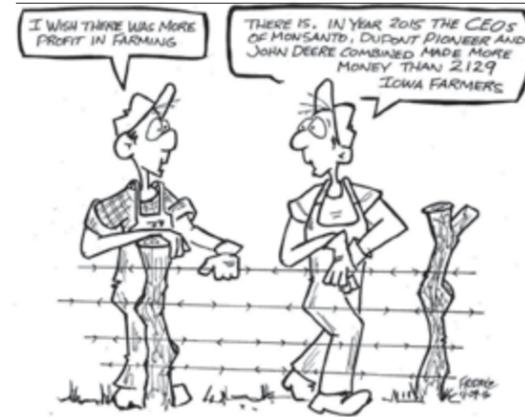
The USDA Agriculture Marketing Service's sudden withdrawal of the USDA Grassfed Standard could erode consumer trust on all grassfed label claims, warns AGW.

The USDA advised AGW that any grassfed label claim will still require official USDA approval before use, and that approval would only be granted where "sufficient documentation" is provided to support the specific grassfed claims being made. However, a signed statement (affidavit) is typically considered sufficient documentation for approval, and there is no requirement for any further verification, such as an on-farm audit, leaving the process open to potential abuse.

"While the USDA grassfed label had major

deficiencies, the standard set a minimum baseline for grassfed production," says Andrew Gunther, AGW's Executive Director. "We are concerned USDA's sudden decision in January to withdraw its Grassfed Standard could allow unscrupulous operations to market meat or dairy products as 'grassfed' when their production methods do not even meet the previous low requirements of the USDA standards.

"In light of the USDA's announcement, third-party certifications that clearly define 100 percent grassfed production like Certified Grassfed by AGW become more important than ever to protect the interests of conscientious consumers and genuine grassfed farmers alike."



DRAWING THE LINE ON FRIDAY FUNNIES

Rick Friday of Lorimor, Iowa, has drawn a cartoon for the *Farm News* every week for the past 21 years. But he claims this cartoon (left)—which will resonate with most farmers and ranchers—cost him his job. Friday says he was fired in early May because an unknown corporate advertiser took offense. The subsequent public outcry saw national coverage, including the *New York Times*.



LOOKING BACK AT 2015

AGW's 2015 in Review report is now available.

The 20-page document outlines the major activities of AGW and its staff over the last year, as well as the key successes of more than 1,500 sustainable farmers and ranchers with whom we work, responsible for managing more than 3 million acres across 43 U.S. states and five Canadian provinces.

Download your free copy at agreenerworld.org/2015review

TK RANCH



TK RANCH RECOGNIZED FOR ANIMAL WELFARE

Dylan and Colleen Biggs (above) of TK Ranch in Hanna, Alberta, received an Award of Distinction at the recent Alberta Farm Animal Care's Livestock Care Conference in Olds College, Alberta.

The Biggs, who were the first ranchers in Canada to be Certified Grassfed by AGW for beef cattle and sheep, were recognized for their long-term commitment to animal welfare and sustainably produced food, which has inspired many others in the region to follow in their footsteps. The couple regularly hosts farmer clinics at the ranch on low-stress livestock handling, while Dylan travels extensively, teaching no-stress cattle handling techniques.

"The clinics give practical hands-on experience to each participant so they leave with tools they can use at home," said Owen Nelsen of Full Nelsen Farms in Vegreville, AB, a source farm for Certified Grassfed by AGW beef cattle. "Everyone feels welcome and takes something away."

NO RESTROOM RELIEF FOR POULTRY WORKERS

Poultry workers are routinely denied bathroom breaks leading some to wear diapers on the processing line, according to a new report.

Oxfam America's *No Relief* report says poultry workers' requests for bathroom breaks are routinely mocked or ignored, workers are forced to wait up to an hour or more, and requests are often met with threats of punishment or firing. "It's not just their dignity that suffers: they are in danger of serious health problems," said Oxfam America.

The report outlines coping strategies that occur within production plants, including workers urinating and defecating while on the line, wearing diapers to work and limiting fluid intake to dangerous levels. The report calls on Tyson Foods, Pilgrim's, Perdue and Sanderson Farms to implement immediate changes that will improve conditions for workers nationwide.

IN THE HEAT OF THE NIGHT

Hunter Cattle Company in Brooklet, GA, took first place in the recent Flavor of Georgia competition for its aptly named 'Hot Georgia Night' sausage, using Certified AWA pork.

"Many of customers want some heat, but can't handle too much," said Del Ferguson of Hunter Cattle Co., in *Savannah Now*. "So we created an awesome flavored sausage like our summer evenings here: Hotter than normal, but not so hot it ain't bearable ... like a Hot Georgia Night!"



TAKING PICTURES

Good photos are increasingly important for businesses—especially farms and ranches. But taking good quality shots, particularly of animals, is far from easy. Written with AGW's go-to photographer, Mike Suarez of Gorilla Byte Media, AGW's *Taking Pictures of Your Farm* guide will help you take better photographs on your farm or ranch for use in social media and other promotional materials.

Download your free copy at agreenerworld.org/library

RESTAURANT CONCERNS

Farm-to-table restaurants are making false or inaccurate claims about the food on their menus.

Writing for the *Tampa Bay Times*, journalist Laura Reiley found many Tampa Bay restaurants were profiting from using terms like "local" and "sustainable" on their menus—or claiming to source directly from well-known farms—when they were actually serving standard ingredients bought from national food service industry suppliers.

"Unfortunately, such misleading practices are far too common in the food industry, and this underscores the need for consumers and chefs to ask questions and demand verified sustainable, high-welfare food," says Emily Moose, AGW's Director of Outreach. "Many of our farmers and ranchers have expressed frustration about the lack of transparency in restaurants, and we're glad to see this conversation happening."

A SUSTAINABLE FUTURE

Modern consumers are increasingly motivated by health, food safety and social impact, according to new industry research.

A joint report by Deloitte Consulting, Food Marketing Institute and Grocery Manufacturers Association (GMA) found that 51 percent of consumers across all demographics are now motivated by so-called evolving drivers, such as health and wellness, social impact and

transparency, as well as more traditional drivers like taste, price and convenience. "There is no doubt that the consumer value equation has changed—as taste, price and convenience are now only the foundation with the need to leverage the emerging value drivers," says the GMA's Jim Flannery. "Brands that win with consumers will likely be those that provide the information they seek, well beyond what is on the label."



POAG PHOTOGRAPHY



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Opinion

DON'T BELIEVE THE HYPE



Science shows grazing ruminants will play a vital role in feeding the world, says Peter Mundy

With ongoing media reports of the health and environmental impacts of livestock (particularly cattle), it may seem counterintuitive—or even unscientific—to claim that ruminants will play a vital role in feeding the world sustainably. Yet this was a key conclusion from the international Steps to Sustainable Livestock conference in January. More than 50 leading global scientists gathered in Bristol, UK, to consider the stark challenges of feeding the world—and the unsustainability of industrial food animal production. Speaker after speaker highlighted the significant direct and indirect greenhouse gas (GHG) emissions; the localized pollution from concentrated fecal waste; the widespread soil degradation and erosion; the reliance on grain as feed; and the human health threats from farm antibiotic abuse. With ever-increasing demand for food animal products across the world, it's easy to assume that adopting a plant-based diet is the only responsible solution. But it's not.

The science presented at the Steps to Sustainable Livestock conference confirms our long-held position that grazing ruminants (managing cattle, sheep, goats and bison on pasture) will not only help feed the world sustainably, but can also provide vital environmental and societal benefits.

The most important take away from the conference was that industrial, grain-based livestock production is no longer justifiable—and may even be morally suspect. Livestock consume around 70 percent of grains used by developed countries, and a staggering one-third (or 795 million tons) of all grain grown. Industrial, grainfed animals compete directly with hungry humans for food. With over 800 million people going to bed hungry, there was near unanimous agreement that governments must pursue a 'food not feed' strategy, reserving agricultural land for growing human food—not livestock feed (or biofuels).

We know grazing ruminants have evolved the unique ability to convert high-cellulose plant materials (read grass and forage) we cannot eat into high quality protein, enabling us to produce food from marginal land unsuitable for crops. But the benefits do not end there. We learned that grazing livestock are a vital source of high-

quality, protein-rich and nutrient-dense food. While excessive consumption of industrial grain-fed meat is clearly unsustainable (not to mention bad for health), the scientists argued that modest quantities of high-quality pastured meat and dairy products (as part of a balanced diet) offer significant health benefits, providing a vital source of lean protein, healthy fats and essential micronutrients. Indeed, one researcher suggested that diets lacking the key micronutrients found in plentiful supply in livestock products are already leading to health problems in high-income countries.

We learned that grazing livestock systems offer many environmental positives—from improved biodiversity (above and below ground) to soil carbon sequestration. We heard about promising research on alternative livestock diets that could significantly reduce methane emissions, while geonomics (not genetic engineering) in breeding could aid selection for positive methane emission traits. Potential technical solutions are emerging fast, but more research and support is needed to encourage development and uptake.

We were also reminded that animal health and welfare is directly related to future food security. Unhealthy animals are not only less productive, result in less nutritious food, and inevitably require routine drugs like antibiotics to maintain productivity, but present real disease risks to humans—as we are now learning at great societal cost.

The quest for sustainable food production is highly complex. There is no 'one-size-fits-all' farming solution, just as there is no single diet solution. Consuming nutritionally appropriate levels of pasture-raised livestock products as part of a healthy diet (with plenty of sustainably produced vegetables and fruit) is not just an acceptable option, it's a vital one. While Westerners must reduce their consumption of intensively raised livestock products and highly processed foods, current science shows that pasture-based live-stock systems will not only continue to supply high-quality, nutritious food to global populations, but provide key ecosystem services and mitigate anthropocentric GHG emissions, too.

Peter Mundy is AWA's Writer/Editor



For most sheep producers, cull stock is of little financial interest, and most unproductive older sheep are sold at auction to supply price-sensitive ethnic markets. However, new opportunities are now emerging for sheep producers to explore and develop quality markets for their older sheep. By working to educate customers—and adopting short-term finishing strategies for otherwise healthy cull sheep—farmers could add carcass value to cull stock through the sale of quality mutton.

What is mutton?

In the U.S., mutton generally refers to meat from sheep over a year old, and is often considered as inferior to lamb. To qualify for Choice or Prime Lamb grade under USDA Agricultural Marketing Service (AMS), a lamb must have no hardening of tissue in the front knee joints, which usually occurs between 12–20 months, meaning sheep over 12 months can still be marketed as AMS Lamb. “Quality mutton,” however, refers to older sheep that have been selected and actively farmed for the quality of their meat and eating experience. If we are serious about producing *quality* mutton, we must promote the different eating experiences of lamb and true mutton from older sheep.

A much maligned meat

So why isn’t the market for mutton thriving? The truth is that mutton has had an unfortunate (and arguably unfair) recent history in the U.S. While the public’s current aversion to mutton may appear to be a long-standing condition, it is not. Americans may never have fallen in love with mutton like the British (in Victorian Britain mutton was actually more popular than beef!), but U.S.

mutton production was positively thriving by the end of the 19th century. Public literature of the time is scattered with positive references to eating mutton, with discussions about which breeds produced the best mutton. An official report from 1899, for example, states “the Chicago market alone in 1894 took nearly a million more mutton sheep than during any previous year, and the receipts during 1898 are the largest on record.” The report went on to say, “The production of prime mutton for American and European markets is rapidly becoming a permanently established industry of vast proportions in the United States.”

Yet by the 1950s, mutton consumption had plummeted, and the meat was almost publicly reviled. So what went wrong?

The rapid demise of mutton consumption in the U.S. can be largely traced to the return of millions of American GIs after World War II who had eaten meal after meal of canned Australian mutton. The infamous “Mutton Stew with Vegetables” was the most unpopular of all military rations; as a result, the poor reputation of mutton entered the American psyche almost overnight.

Dispelling the mutton myth

But do people in the U.S. really dislike mutton? Could it have been the low quality of canned mutton, or the fact they had to eat it every day for months that turned soldiers so strongly against mutton? Many pre-war references to mutton suggest that quality mutton was widely popular; the GIs’ bad experiences were specific to wartime canned meat (a very different product than quality, fresh mutton). So surely there are grounds to expect that we can dispel the “mutton is bad” myth once again?



In 2015, the U.S. imported over 34.9 million pounds of mutton—an increase of 40 percent since 2012



George Washington was a mutton fan: “My manner of living is plain and I do not mean to be put out of it. A glass of wine and a bit of mutton are always ready.”

MUTTON: CHALLENGE OR OPPORTUNITY?

Could emerging quality mutton sales offer sheep producers an opportunity to add value to cull stock? Bob Kennard thinks so ...



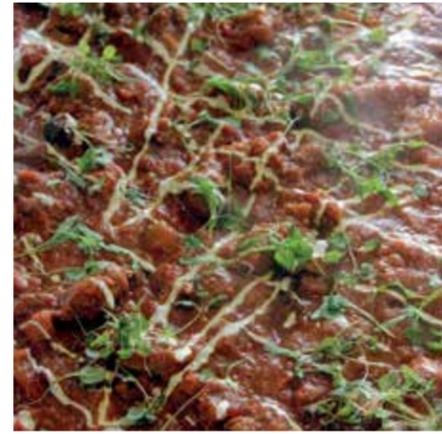
The raw: mutton sausages



Rack of mutton



Ground mutton...



... and the cooked: mutton curry



Mutton tagine



Mutton burger

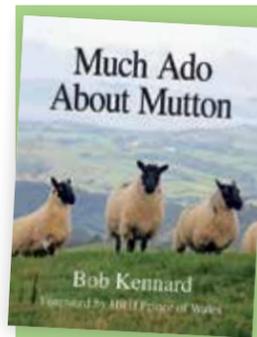
While many people may think they dislike mutton, few have actually (knowingly) tried it. Mutton can also have a reputation for being “strong” or somewhat “gamey,” yet this is not the case. Yes, mutton has a more complex flavor and is different from lamb, but then so does beef when compared with veal. During my visit to the U.S. in October 2015 to speak to farmer and consumer groups about mutton, I attended an event in Paonia, CO, where samples of cooked quality mutton were given out. Most visitors had never eaten it before, and yet the comments were overwhelmingly positive. If America loves quality beef, there is no real reason why Americans shouldn’t take quality mutton back to their hearts (and plates)—particularly with the increasingly accepted health and environmental benefits of pastured meat.

Many specialty producer-retailers already produce and sell quality mutton direct to consumers. Indeed, if the statistic is true that one third of all lamb sold in the U.S. is marketed direct to the consumer by farmer-retailers, then why shouldn’t more sheep farmers start selling quality mutton or explore opportunities to supply local restaurants and retail outlets?

Selecting animals

While quality mutton is a more obvious option for lamb producers, dairy and wool sheep producers should not dismiss it. To produce a quality product, it is essential to select only the best animals. Castrated males or ewes are generally used for quality mutton production, while some low-input systems produce yearling mutton (1-2 years old). Rams are not suitable in the breeding season, due to the danger of flavor taint. Flavor intensity increases from 1-2 years, but then soon reaches a plateau. So a 6-year-old mutton will not have a dramatically stronger flavor than a 2-year-old animal.

It is vital to explore and understand your market



MUCH ADO ABOUT MUTTON

With a foreword from His Royal Highness The Prince of Wales, *Much Ado About Mutton* by Bob Kennard is the definitive guide to the story of mutton in the UK and around the world. The book seeks to get people back to eating quality mutton and covers the history, social and cultural impact of sheep farming, and includes numerous authentic mutton recipes. Available through good bookstores and online sellers.

(see below) and what weights, conformation, fat levels and breeds are required. Spend some time talking to potential customers and consider whether your present set-up will deliver. Experiment by buying in animals of different breeds and compare results on the plate, using family and friends as guinea pigs. Breeds such as the Shropshire, Hampshire, Southdown and Oxford are particularly suited to quality mutton production. Limited research exists on whether larger-framed American breeds produce good quality mutton, although 1940s research showed that crossing the Rambouillet with various British breeds offered good results.

When selecting, discard any unhealthy, very thin or very fat animals, and exclude those outside your weight range. The final stage of producing a quality product is very important, so will need some management time. Choose animals which have a decent amount of muscle, then feed thinner animals to put a bit of finish on or slim down those with too much fat. If you have quality grass or forage to feed, this can be used to add a level of finish to a mutton animal. If not, some concentrate feed will also do the job, bearing in mind not to over feed.

Your supply chain

When no established market currently exists—as is the case for quality mutton—it is up to individual producers to create their own supply chains. In practice, this means becoming a producer-retailer.

Your market: A few questions to ask yourself initially:

- Where will you sell your mutton? Individual consumers, local farmers’ markets, on-farm shops selling via the internet, or stores and restaurants are all possibilities.
- How will you store and transport the meat? Can you offer continuity of supply of your

animals year-round? Selling frozen meat can help with continuity of supply and means you have time to develop a market for all the cuts.

- Do you know your state regulations about selling meat?
- What sort of cuts or processed products (like sausage) will you offer?
- Will you establish a brand? If so, think about packaging and labeling (AWA can help) and the story behind your meat (the farm, the animals and you). Telling this story is essential for producer-retailers, giving you a point of difference from the mass market, and connecting to your customers.

Processing: If you’re considering on-farm slaughter or further processing, are you familiar with the regulations? Do you establish your own on farm butchery or contract this out? Much will depend on the availability of local facilities.

Dry aging: Once slaughtered, mutton (like all red meat) benefits from traditional dry aging, where naturally occurring bacteria break down the connective tissue and enhance the flavor and texture of the meat. Beef is often dry aged for four weeks or more, but mutton should only need around two weeks.

Adding (more) value: Apart from the standard mutton cuts, mutton is ideal for a range of added-value products (if you have the facilities), such as sausages and burgers, mutton ham and bacon (macon), as well as mutton pies and traditional dishes, such as tagines and stews.

Grassfed mutton: Current interest in certified grassfed meat is highly relevant to mutton, not only for flavor, but also in the higher omega-3 fatty acid levels. While not possible on every farm, Certified Grassfed by AGW mutton production could be attractive to consumers.



FURTHER INFORMATION

Information on mutton is scarce, but it is available.

Contact the American Lamb Board to register your interest in their forthcoming mutton promotion.

The UK’s National Sheep Association’s mutton website offers a range of information—including ideas for leaflets and posters. Visit nsamutton.org.uk

Point-of-sale materials: If customers are not familiar with mutton, leaflets, posters, social media and a website will all help spread the word. Mutton is definitely not fast food and slow cooking is needed, so providing clear cooking advice and recipes is essential. Plenty of recipes are available on the internet.

The future

American sheep farming is at a crossroads. The traditional market is declining and cheap imports threaten the domestic producer. Joined-up thinking along the supply chain offers great opportunities, especially at the quality end of the market, where telling the story is a vital asset.

Now is also a particularly good time to be considering quality mutton production, as the American Lamb Board (ALB) is planning promotion of the meat. A roadmap task force is looking at the mutton market, and has developed new value added products and recipes, while a summit is planned to explore ways to define and market lamb separate from mutton. According to the ALB, the key challenge will be getting enough producers to collaborate to ensure supply.

So, challenge or opportunity for U.S. quality mutton? As with any emerging market, supplying mutton will not be an easy option. But if you are willing to work at it, mutton sales could provide a way to add value to previously low-value cull stock—particularly as consumer awareness and popularity looks set to grow.

Bob Kennard is an international food & farming consultant, actively involved in the revival of mutton in the UK through the National Sheep Association, and has spent 25 years marketing the meat. His book, Much Ado About Mutton, is the definitive guide. Find out more at aboutmutton.com

No matter how careful your management, antibiotics may sometimes be required to treat illness and alleviate pain. For Certified AWA dairy farmers, antibiotic treatment can necessitate the dumping of milk for at least twice the licensed withdrawal period of the antibiotic used; for certified organic farmers, it can even result in the decertification of treated cows.

But research shows that not every case of clinical mastitis needs antibiotics, and a promising on-farm technique using simple bacterial culturing kits could potentially reduce antibiotic use for clinical mastitis by up to 50 percent.

Antibiotic concerns

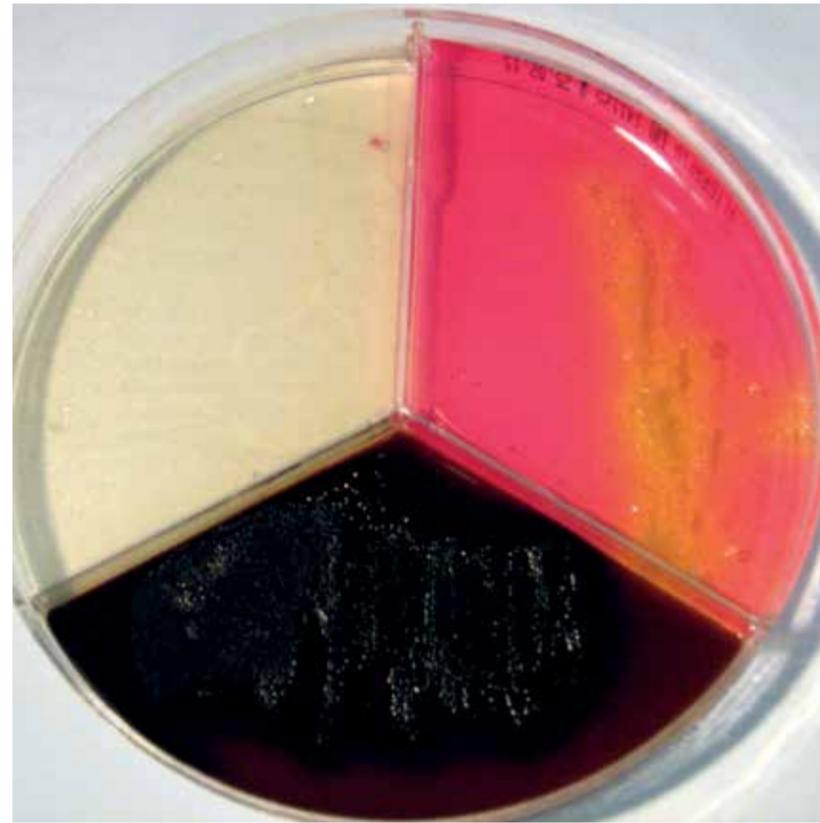
The conventional practice on most dairies is to treat every case of clinical mastitis with an antibiotic as the case is detected. Indeed, prompt and effective treatment to achieve clinical and bacteriological cure has become a cornerstone of most mastitis control programs.

With 80 percent of antibiotics used in non-organic dairy cows for the prevention and treatment of mastitis, pressure is mounting on farmers to minimize antibiotic use—not to mention the growing number of ‘no antibiotics ever’ programs prohibiting antibiotic treatment outright. But while no one can deny the urgent need for more responsible antibiotic use in dairy production, the outcome of withholding treatment for clinical mastitis is variable and unpredictable, and often detrimental to animal welfare.

A practical solution

Evidence from the U.S. and Canada shows that not all cases of clinical mastitis benefit from antibiotics. Gram positive organisms such as *streptococci* and *staphylococci* have low self cure rates (if untreated, the cow is unlikely to recover) and show a good response to antibiotic treatment. But this is not the case for Gram negative bacteria (for example, *E. coli* and coliforms), where the cow will get better in 90 percent of cases *without* antibiotic treatment. In other words, if the mastitis bacteria are Gram negative, there is no need for antibiotics and no loss of milk sales—or the cow.

This knowledge is the basis for a new targeted antibiotic treatment approach using on-farm culture kits, such as the Minnesota Easy Culture System™. These offer a fast and relatively inexpensive way to identify the cause of mastitis, allowing farmers to target treatment to the right bacteria. Instead of treating every case, a milk sample is collected from a cow with mastitis, swabbed onto a culture plate and then incubated on the farm. With special culture media and training, the farmer can quickly and easily distinguish between different types of bacteria that may grow, and identify whether an organism



Culture plate with three sections. Bright red selects for Gram-positive growth (*Staphylococci*); dark red selects for Gram-positive growth (*Strep* and *Strep-like*), clear selects for Gram-negative growth

TARGETED TREATMENT OF CLINICAL MASTITIS

Could a new on-farm culturing technique help reduce antibiotic use in dairy cows? Peter Plate reports

is Gram positive or Gram negative. Once identified, antibiotics are only given in Gram positive cases. (Cases which involve sick cows are excluded from culturing and treated immediately according to the farm's health plan.)

Results have been extremely positive: Although the potential for reduction varies between farms, and is highly dependent on the ratio of Gram positive and Gram negative organisms, a large U.S. trial saw a 50 percent reduction in antibiotic use for clinical mastitis without any significant impact on cow welfare and mastitis and milk quality parameters.

Experiences so far

In trials, most farmers are supportive of the on-farm culture approach and quickly get the hang of the test kit, which simply requires you to identify whether or not organisms are growing on any of the three media in the culture plate after the appropriate incubation period. (There is no complicated assessment of the shape or color of the culture, for example.) However, the concept of *not* treating some mastitis cases can still feel very alien to dairy farmers and herdspeople. The practice of not treating a case of mastitis immediately after detection can be much more challenging and takes time to get used to. Like any skill, it must be learned and practiced, and confidence soon grows with numbers of tests taken—and once you see positive results!

Every farm is different and you will need to balance the cost of the test kits and the incubator (plus the additional time spent for culturing) against the potential savings and benefits of not giving antibiotics to some cows (less dump milk, saved medicine cost, less danger of antibiotic failure), as well as getting quick feedback on the bacteria causing problems on your farm. While trial results show the cost-benefits of the on-farm culture approach are generally favorable on most farms, the benefits and savings are likely to be highest for certified organic farmers, where there is a real risk of the decertification of cows unnecessarily treated with antibiotics.

It is also important to discuss your interest in using the on-farm culture technique with your vet. Experience in the U.S. and Canada shows that most vets enthusiastically support their clients in the transition, and can offer excellent advice and guidance.

Limitations of approach

The on-farm culture technique is *not* a replacement for specialized accredited laboratories. Identifying bacteria beyond the Gram positive/Gram negative level takes years of training and experience, and cannot be done by on-farm culture. Accredited laboratories will



Culture plates are incubated for 18-24 hours on the farm. Incubators range from \$70 for a plastic foam egg incubator to \$300+ for a lab incubator

continue to play a vital farm animal health role when, for example, you need to identify the main bacteria involved in clinical mastitis and high cell count problems. Some Gram negative bacteria (for example, *Klebsiella* and *Pseudomonas*) that occur on a minority of farms may require special measures and deviations from the standard treatment protocol. So if you find you have ongoing mastitis problems it is important to send samples to an accredited laboratory on a regular basis to get more detailed information about prevalent mastitis organisms, which will also help you to evaluate the quality of your on-farm testing system.

Specialized laboratories also play an important role in national disease surveillance. By gathering data from large numbers of farms across the country, they can rapidly detect shifts in disease patterns, such as when certain bacteria become more prevalent or if new disease organisms arise. So while on-farm culture is a highly promising tool, laboratory testing will continue to be important.

A promising tool

In the face of increasing concerns about antibiotic-resistant bacteria and farm antibiotic use, the on-farm culture technique may offer a win-win situation for farm profitability and public health, ensuring antibiotic treatments for mastitis are only ever used when they are needed.

Peter Plate qualified as a veterinarian in Hannover, Germany, in 1990 and has a special interest in high-welfare farming. He works at Endell Veterinary Group in the UK. Contact him at peter@endellfarmvets.co.uk

FURTHER INFORMATION

Speak to your vet about on-farm culture; or visit the University of Minnesota website at vdl.umn.edu (select ‘services and fees’; then ‘udder health and mastitis’); or just Google “Minnesota easy culture system.”

FARM HEALTH PLANS

What's the point of writing a farm health plan?

Good husbandry practices and a preventative approach to pest and disease challenges are the keys to success in all well-managed, sustainable livestock systems. One way of ensuring the adoption of better preventative measures is to develop a farm health plan—a written strategy for the positive management of the livestock on your farm or ranch.

At its most basic, a farm health plan is an active management tool aimed at promoting the health and welfare of farm animals by setting out disease prevention, detection and management procedures. At its core, it should list all significant livestock pests and diseases you might face on your farm or ranch, how you intend to prevent them, and what treatments you will use if any problems occur. But it should also identify how you intend to improve overall herd or flock health and reduce reliance on veterinary treatments in the long term. If you have a good relationship with your vet, he or she can often provide excellent advice when developing your plan.

Why have a health plan?

Put simply, a good farm health plan will maximize the herd or flock potential, and lead to a system that is progressively less dependent on veterinary medicines without jeopardizing animal welfare. From a welfare standpoint, you don't just want your animals to survive: you want them to thrive. This is sometimes known as the concept of positive health. Positive health is not just the absence of disease, but a state where the animal's immune system can easily overcome potential disease challenges without reliance on veterinary inputs.

Writing your plan

As a rough guideline, the farm health plan should start by identifying key personnel on the farm and external contacts, such as a vet and feed suppliers, and then details of your stock, such as numbers, breeds and ages. It should outline the different management practices to develop natural immunity for all ages and livestock species, including the feeding regime, housing details, current use of vaccination/medication, grazing policy and management practices (e.g. selection for breeding, choice of pasture for young stock, etc.). It should identify all management operations such as castration, disbudding, supernumerary teat removal and animal identification (tags, brands where appropriate), and detail the method and age these are carried out. It should list all persistent mineral deficiencies, disease and parasite problems known on the farm, the measures you intend to take to avoid them, and the treatments used in the event of any problems. Finally, it should outline all record-keeping procedures and systems on the farm.

Keep it up-to-date

Once you've developed a health plan, don't see it as something you had to do for compliance with AWA standards and file it, never to be looked at again. It is extra work, but if you revisit and revise your plan on a regular basis (perhaps once a year), including progress or problems you have experienced, it will become a useful management tool for monitoring pest and disease problems, identifying what has or hasn't worked, and highlighting recurring problems that could save you time and money.

Be SMART

Ensure your plan is **Specific, Measurable, Achievable, Relevant** and **Time-based**. Setting SMART targets is one of the best ways of agreeing and achieving health plan objectives.

Specific: Use actual measures and observations to set targets e.g. "I want to reduce pneumonia in my calves to less than five cases a year."

Measurable: Ensure you can measure changes (e.g. "I currently have 15 cases a year.")

Achievable: Ensure the targets and objectives are realistic, gradual and not overly ambitious (e.g. "I will consult my vet, adapt my buildings and use appropriate vaccines.")

Relevant: Use objectives that will give you benefit (e.g. "This will increase my productivity by an estimated 15 percent.")

Time-based: Ensure the time periods are realistic and achievable (e.g. "I want to do this within 12 months.")

For more information on developing your farm health plan—including guidance and templates—visit Farm Health Online at farmhealthonline.org, select 'Veterinary Questions' and 'Animal Health Planning.'

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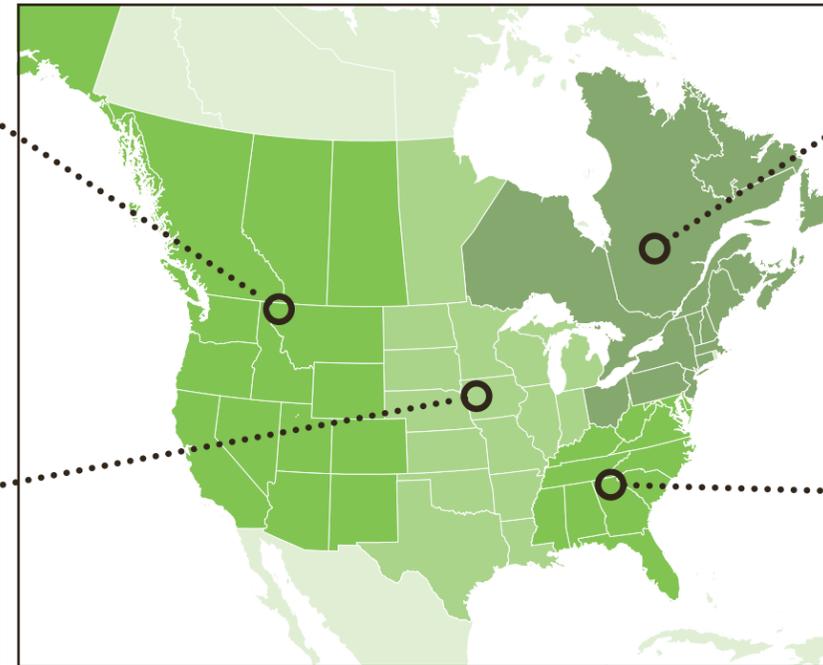
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For details visit AnimalWelfareApproved.org/farmers/labeling or call us at 800-373-8806.

"Your labeling service transformed my idea into a reality. My label tells a story. A job well done!"

Chard Hunter, Hunter Farms Inc., Jakin, GA



Services

Need advice?

If you have a question about our farm standards or certification procedures, just get in touch! We also offer a range of *Technical Advice Factsheets*, packed with practical information on numerous topics—from record keeping and biosecurity to best practice castration or avoiding tail docking.

Marketing materials

We offer a variety of free marketing materials to farmers, ranchers and food businesses—including quality metal signs, food labels, vinyl banners (good for farmers' market stalls), point-of-sale brochures, post-it notes—and more!

Is your farm profile up to date?

To help raise awareness about your business, we upload a short profile about every farm and ranch on our website. If you are new to the program the outreach team will be in touch. But if you ever feel your profile needs updating, just contact your regional coordinator.

Got some news? Share it!

We write a dedicated press release for every farm or ranch that joins our programs. But if you're launching a new product or hosting a farm event, we'll do our best to spread the word through our social media and communications networks.

Online directory

Our searchable online directory is the single most popular area on our website, and helps thousands of visitors find suppliers of Certified AWA, Certified Grassfed by AGW and Certified Non-GE by AGW products every year. Make sure your listing is up to date and contact your regional coordinator, if necessary.

Sign up for monthly e-news

Our monthly "Focus on Farming" email keeps you up to date with relevant news and information, as well as our program of activities and events.

For further information about any of our services—or if you have any questions—contact your regional outreach coordinator (see map above).

Programs

Animal Welfare Approved

Acknowledged by Consumer Reports as the *only* "highly meaningful" food label for farm animal welfare, outdoor access and sustainability, Animal Welfare Approved (AWA) is an independent, non-profit farm certification program—and one of the top 5 fastest growing certifications and label claims in North America.

AWA is the only farm certification that guarantees animals are raised outdoors on pasture or range for their entire lives on an independent family farm using sustainable agriculture methods, and is one of only two certifiers in the U.S. to require audited, high-welfare transport and slaughter practices.

Certified Grassfed by AGW

The *only* grassfed certification and logo in the U.S. and Canada that guarantees meat and milk products come from animals fed a 100 percent grass and forage diet, raised outdoors on pasture or range, and managed according to the highest welfare and environmental standards on an independent family farm.

Certified Grassfed by AGW is an optional, additional accreditation for farmers and ranchers who are meeting Certified AWA standards of production, and provides grassfed farm businesses with the tools they need to clearly differentiate themselves in the marketplace.

Certified Non-GE by AGW

Certified Non-GE by AGW is the only food label in North America that helps consumers avoid genetically engineered (GE) products *and* support high-welfare, environmentally sustainable food animal production.

Available to farmers, ranchers and food producers, the Certified Non-GE by AGW label guarantees food products are not only produced without GE feed, supplements or ingredients, but is the *only* non-GE label to offer further assurances about animal welfare and environmental sustainability (Certified Non-GE by AGW is an optional addition to AWA certification).



WELFARE ON THE WEB

Our new farm health website offers practical, science-based advice on positive livestock management and sustainable farming practices

High-welfare, sustainable farmers face many challenges in keeping their animals healthy and thriving—not least the lack of detailed support and information on alternative approaches to livestock health management.

The American Veterinary Medical Association estimates that just 6.8 percent of the 105,000 or so vets employed in the U.S. work with food animals. What's more, few of these vets have the training and knowledge to advise on alternative or preventative management practices that seek to minimize reliance on veterinary treatments such as antibiotics.

AGW is all about providing real solutions, and helping farmers and ranchers in the transition towards truly sustainable, pasture-based methods of livestock production. That's why we're so proud to launch Farm Health Online, a new free access website for farmers, advisors and veterinarians, offering practical advice and support on managing farmed animals for positive health.

Working in partnership with the the UK-based Rural Business School at Duchy College, our new interactive website covers all aspects of health and welfare for cattle, sheep, poultry and pigs. With comprehensive information on over 100 common livestock diseases, extensive advice on nutrition, housing, breeding and husbandry, as well as public health, biosecurity and legislation, Farm Health Online offers free and immediate access to practical, science-based advice on positive livestock management and sustainable farming practices.

While online advice can never replace support from a qualified vet, the website provides the necessary tools and resources to help bridge the current knowledge gap, helping farmers have

AT YOUR FINGERTIPS

Over 100 indexed pig, poultry, cattle and sheep diseases

Each disease entry covers:

- About the disease
- Control and prevention
- Treatment
- Animal welfare
- Best practice

Key veterinary Q&As

Useful guides on topics such as lameness assessment and body condition scoring

Fully referenced research (with links to original sources)



CHRIS FERTING

informed conversations with their vet about preventative management and alternative treatments.

A vital tool

So, what does the Farm Health Online website offer? The website currently covers four main species: cattle, sheep, poultry and pigs. Each animal species has two key sections: 'Disease Management' and 'Health and Welfare.'

The Disease Management section was built to provide the critical information a farmer or veterinarian needs to develop farm health plans. Over 100 diseases are listed alphabetically (using both veterinary and common names); each entry provides key information on incidence and risk factors, as well as guidance on best practices, prevention and control. There's also a comprehensive glossary of terms throughout, as well as links to scientific research.

The Health and Welfare section provides information that promotes positive welfare, including knowledge on animal behavior and practices designed to enhance farm animal welfare. Sections include information on breeding, feeding, housing, rearing young animals and husbandry. There is also a generic section entitled 'Veterinary Management' that provides information on key and emerging issues, such as antibiotic resistance, health planning and vaccination. Each section will be updated regularly based on new findings and relevant information.

Farm Health Online gives farmers and vets easy access to a huge amount of relevant research from around the world, and the opportunity to apply this knowledge to your own farm situation. Check it out today!

Certification news

THINKING OF APPLYING?

So you'd like to use the Certified AWA logo on your products? Julie Walker explains how to get started

You've heard about the AWA label and you'd love to use the logo on your products to let your customers know you're raising animals according to the highest welfare and environmental standards. Great! Here's a step-by-step guide to the process...

First, visit the AWA website and read the standards for the species you are looking to certify. The standards cover everything from breeding to feed, shelter to slaughter. Your farm audit will look at aspects of these standards, so it's good to become familiar with them early in the process. If you don't have internet access, don't worry: Call us and we can mail you paper copies and an application form. If you have *any* questions about the standards, give us a call or send us an email. We'll get back to you as quickly as we can.

Remember that AWA is a birth to slaughter program, which means we'll audit your farm and review your slaughter process. If your slaughter facility is already recommended by AWA for the species you're certifying, we're all set. (If you aren't sure just ask our main office.) If we haven't visited your plant, we'll ask you to introduce us to the owner. We need to do this before arranging a farm visit. If you slaughter your animals on your farm premises, we'll coordinate that visit with you directly.

Once you are comfortable you are running your farm in compliance with the standards (or you are willing to do so), it's time to apply. Simply complete the online application or contact us for a paper copy. AWA's Eligibility Coordinator will call you within 10 working days to go through your application in more detail. This "mini-interview" is essential to the application process and should only require about 30 minutes of your time.

Once the Eligibility Coordinator verifies your farm will be a good fit for our program, an auditor will contact you to schedule your farm visit. Remember that while AWA is a free program, each individual farm audit can cost us \$750 or more to arrange. So we will try to group your farm with other farm visits nearby to minimize the cost of the auditor's time and travel. We promise to arrange your visit as quickly as possible, but please be patient if it takes a few weeks to arrange. In the meantime, we will coordinate a visit with your slaughter plant, if necessary.

After your farm visit, the audit review process may take 4-6 weeks, so sit tight. We will contact you with a copy of your audit and a list of any non-compliances (or issues you may need to address). AWA is *not* a "pass/fail" program and we will give you an opportunity to tell us how and when you will make any necessary changes to your operation. We'll ask you to respond within a month of receiving your report.

Once we've approved your audit and visited your slaughter plant, you're almost there! As the final step we will ask you to sign and return an affidavit, pledging to abide by AWA standards and to allow yearly inspections (or more often if necessary). On receipt of this signed affidavit, we'll send you a goodie box with your certificate, labels, pens and other promotional materials, as well as information on regulatory approval for using the AWA logo. And our Marketing and Outreach team will be standing by to help you to promote your farm as Certified AWA!

Julie Walker is AWA's Director of Operations



DO read the standards carefully. You'll save yourself (and us) a lot of time if you know what you're getting in to.

DO have a business model. One of our requirements is that you are selling food, fiber or breeding animals. If you're just starting out and don't have anything to sell yet, don't worry. We'll still be here when you do!

DO remember that we are a free, not-for-profit program, funded entirely by donations.

DON'T hesitate to ask questions at any point. Our staff is very responsive to general questions or specific queries about the standards.

DON'T forget that we are a voluntary program: Going through the application and certification process is entirely up to you.

DON'T sell your products without the AWA logo! Once you are certified, you've earned the right to tell customers your animals are raised according to the highest welfare standards.

Visit AGW's farm health website at farmhealthonline.org

Meet the farmer

GRASSFED FROM MONTANA



Christy and Patrick Lohof raise grassfed beef cattle in southeast Montana on the grasslands that Patrick's grandfather originally purchased to add to the family homestead in the 1960s. LOHOF Grass-Finished Beef was the first ranch in Montana to be Certified Grassfed by AGW.

Tell us about your ranch ...

Our family has raised beef cattle on grass here for over three generations. In the early 2000s, we began selling beef to friends and family, who always commented on how good it was. After learning more about the health benefits of pasture-raised beef, we started to expand our market. We finished several more animals and had no trouble selling them. In 2009, we decided to attend the Sheridan Farmers' Market in Wyoming. As the grassfed beef market continued to grow, we learned about the AWA program. We really appreciate the technical advice fact sheets and liked the idea of working with our slaughter plant to be reviewed by AWA. In 2014, we were Certified AWA and added the Certified Grassfed by AGW label when it first was launched in 2015.

Describe a typical day ...

There are no typical days on a ranch! Work tends to be seasonal, but our favorite days are moving cattle to new pasture on horseback.

Who are your customers?

We mostly sell beef to individuals—people who care what they feed their families. Our sales grew from our presence at Sheridan Farmers' Market and we now have customers in several neighboring states. We also sell to four stores in the Sheridan area and ship beef across the U.S.

What's the main benefit of being Certified AWA?

Even though most of our customers are now good friends, a trusted third-party certification offers a sense of authenticity. And as our beef has moved into stores, we think the label attracts attention and sets our product apart. We are very impressed with the technical, marketing and labeling support offered by AWA.

How can the market for Certified AWA products be improved?

Promotion, education and continuity are the cornerstones of getting sustainable food to customers. Keeping costs low is a priority too.

What are your business plans for the future?

We recently made significant water line and electric crossfencing improvements, allowing us to increase animal numbers and improve range management. Our goal has always been to provide delicious beef with the renowned "terroir" of our land to customers who care about people, livestock and land.

Can you explain "terroir"?

"Terroir" is a French word and refers to the concept that local soil and environmental factors influence the flavor of food, such as wine, cheese and beef.

Sustainable farming principles: why do they matter?

A lot of different words are being used these days... Some people prefer the term "regenerative," since agriculture is really about fostering all sorts of diversity and life while in dynamic equilibrium. But all these ideas seem to point to the fact that we need to take care of the land so we can survive and thrive. Healthy land produces healthy animals and plants, which become nutritious food for people.

The most important lesson life has taught you?

Don't take anything for granted and do your best to act with the highest of integrity.

What single thing would most improve your life?

A full-time housekeeper!

What's your vision for the future?

It would be wonderful to see a larger percentage of the population more directly involved in agriculture. We hope to foster young people interested in agriculture through internships on the ranch.

"If I was President I would ..."

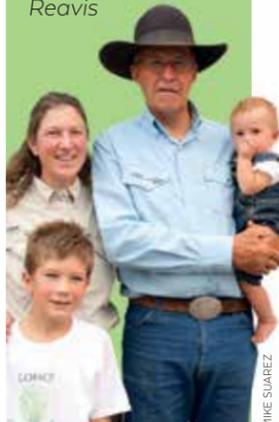
Eat grass-finished beef daily and set an example for the rest of the country.

AT A GLANCE

Farm: LOHOF Grass-Finished BEEF, Otter, MT
Certification/date: Certified Grassfed by AGW 2015; Certified AWA 2014
Size: 3,000 acres
Altitude: 3,700 ft
Annual rainfall: 15 inches
Enterprises: 65 Red Angus beef cattle, selling Certified Grassfed by AGW beef

Find out more: Read about LOHOF Grass-Finished Beef at lohofgrassfinishedbeef.com or find them on Facebook

Christy and Patrick Lohof, with their sons, Hans and Reavis



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