A Greener World (AGW) recently worked with the American Society for the Prevention of Cruelty to Animals (ASPCA) on an online farmer survey. The aim of the survey was to better understand farmer perspectives on being certified, with an eye to making welfare certification—and welfare-certified meat, dairy, and eggs—more widespread in the marketplace.

The reactions illustrated the diversity of farmers in our program. Some were excited to participate; others were suspicious: “Why is AGW working with an organization that some perceive as opposing all livestock farming?” I was asked. I initially asked myself the same question, but after carefully assessing the project I saw a clear benefit. Like the other certifiers who shared the ASPCA survey, we knew it would provide valuable information and market opportunities for farmers and ranchers.

Writing farm standards and auditing is our bread and butter, and we’re among the best in the world. However, promoting your certified products and growing the market requires significant market reach and influence—more than our resources permit. So, we need to work with others.

I believe good food is a right, not a privilege. One of my longstanding frustrations with some elements in the food movement is the failure to move beyond preaching—and marketing—to the converted.

If we are going to encourage real changes in mainstream food choices, we need to reach beyond our normal networks. This means working with those who might not at first seem like natural partners.

Working with select organizations that have significant membership will open new markets and build reputation. Does this mean we have to agree with everything another organization says or does? Of course not. But by working together where there is common ground, we can ensure sustainable farming is represented, engage in constructive debate and raise awareness of the wide-ranging benefits of your farming systems among new audiences.

AGW is a farmer-based organization. We will never engage with groups who are opposed to animal agriculture. We will never do anything that puts your integrity or reputation at risk. We will continue to use our best judgement to raise consumer awareness and create new market opportunities for your certified products. And we reserve the right to end any relationships that don’t achieve these goals. On this you have my word.

I welcome your thoughts and ideas for expanding our reach, inspiring the consumer demand that will make sustainable, high-welfare farming the norm, not the exception.

Andrew Gunther

AGW receives top marks for laying hens in global certification assessment

A Greener World (AGW) has been recognized as an industry leader in a recent higher animal welfare comparison chart released by Compassion in World Farming (CIWF), a global farm animal welfare non-profit. CIWF compared 34 farm certifications across 10 countries to determine which met CIWF’s higher animal welfare criteria. CIWF analyzed each certification program on 15 metrics and animal welfare criteria—including access to pasture, space requirements for housing, animal breeds, ability for animals to exhibit natural behaviors, and health and animal welfare monitoring programs.

The Certified Animal Welfare Approved by AGW label was the only program that met all of CIWF’s higher animal welfare criteria—including recommendations and requirements—of laying hens.

“We’re honored to be recognized by Compassion in World Farming as an international leader in the field,” says Andrew Gunther, AGW’s Executive Director. “While there is an ongoing industrial effort to rebrand conventional practices as high welfare or sustainable, it’s vital that organizations like CIWF evaluate welfare labels from an objective, science-based perspective, and report back on which ones are really doing what they say. We’re proud to lead the pack on that front and, together with our certified farmers, demonstrate our commitment to transparency and verified, high-welfare, farming practices.”

For more information, visit compassioninfodbus.com, select ‘Resources’ and ‘How welfare schemes compare to compassion’s criteria for higher welfare—laying hens’.

Farm Burger is partnering with Anderson Farms in Comer, GA, to offer Certified Animal Welfare Approved by AGW pork that’s better for people, animals and the environment!” says Farm Burger’s Director.

“Farm Burger is partnering with Anderson Farms in Comer, GA, to offer Certified Animal Welfare Approved by AGW pork that’s better for people, animals and the environment!” says Farm Burger’s Director. “There are a lot of misleading labels out there, but there are also some very good ones.” Gunther adds. “CIWF’s charts will help consumers, buyers, advocates and policymakers distinguish between meaningful labels—like those from AGW and our high-scoring peers—and meaningless greenwashing. If we’re ever to achieve truly sustainable agriculture, we have to ensure the label on the package matches the practices on the farm. We’re proud to be a label that delivers on its promise and thank CIWF for keeping the market honest.”

AGW has launched a volunteer program, engaging people across the U.S. and Canada to create positive change in the food system. The program will use volunteers to help expand AGW’s reach and build awareness of the family of certifications. Projects will suit a wide range of individual availability, skills and experience—including opportunities for retail outreach, event and social media support and more. Find out more—and help spread the word—at agreenerworld.org/get-involved/volunteer.

New AGW brand identity guidelines are available to help certified food business communications—including the full suite of downloadable logos. The guide is specifically designed to help certified farmers and food businesses,” says Stephanie Wuorenma, AGW’s Communications Coordinator. “The consistent use of the guidelines will bring a unified messaging and identity system to consumers, farmers, supporters and employees.” Find out more at agreenerworld.org/brand-identity-guide.

Monsanto has been ordered to pay $289 million in damages to a former school district groundskeeper for his terminal cancer. In the landmark lawsuit, a California jury unanimously agreed that Dewayne Johnson’s non-Hodgkin’s lymphoma was caused by Monsanto’s Roundup herbicide and that the corporation failed to warn him of the health hazards from exposure and had “acted with malice or oppression.” Monsanto is facing more than 4,000 similar cases across the U.S.

IN THE NEWS...
NC FARMERS CELEBRATED AT CO-OP FAIR

AGW-certified farmers were the focus of celebrations at Weaver Street Market’s recent semi-annual cooperative fair in Hillsborough, NC. Held on September 9, the event highlighted the many Certified Animal Welfare Approved by AGW farmers who supply product to area retailer Weaver Street Market’s locations in the Triangle area of North Carolina. Weaver Street Market uses a cooperative model with 20,000 consumer household owners and 200 employee owners. The semi-annual fair gave member-owners a chance to meet and speak to the farmers behind many of their favorite AGW-certified products.

“We’re proud to offer products that reflect the co-op’s core values and impact the world in a positive way,” says Carolyn Tweten, Weaver Street Market’s Produce and Meat Merchandiser. “By sourcing AGW-certified products, Weaver Street Market is supporting North Carolina’s independent, sustainable farmers and rural economies while giving our customers a high-welfare, sustainable meat, dairy and egg label they can really trust.”

AGW FARMER TALKS FARM BILL

AGW-certified farmer Rachael Taylor-Tuller met with Washington state representatives at the Capitol over the summer to discuss the Farm Bill and share her experiences as a first-generation, sustainable farmer. Taylor-Tuller, veteran and owner of Lost Peacock Creamery in Olympia, WA, and her husband, Matthew, discussed the Farm Bill with Deputy Secretary of the USDA, Stephen Censky; Senator Patty Murray, House Representative Denny Heck (10th Congressional District); Senator Maria Cantwell; and House Representative Mike Conaway (11th District of Texas), who is also the chairman of the House Committee on Agriculture.

“My husband, Matthew, and I were honored to represent independent, young and beginning farmers, Certified Animal Welfare Approved by AGW farmers, female farmers and veteran farmers,” says Taylor-Tuller. “A few things really stuck out to us. Because America’s ties to rural agriculture have changed, and fewer people are farming, our representatives in Congress have fewer ties to the land themselves.”

The trip was funded by Northwest Farm Credit Services, a program of Farm Credit Services of America.

POWERED UP

An AGW-certified Georgia farm is harnessing sunlight to produce high-quality beef and electricity on one innovative, sustainable farm. Chad and Bishop Hunter of 360-acre Hunter Farms, Inc. in Jakin, GA, harness the power of the sun to grow nutrient-rich pastures and raise high-welfare, sustainably produced Certified Animal Welfare Approved by AGW beef cattle. Working with United Renewable Energy and Constellation, Hunter Farms, Inc. is now home to a newly completed 1.18 MW solar project, made up of 5,305 photovoltaic panels, making it a model of true sustainability.

A GOOD YEAR

AGW’s annual review highlights the major activities of AGW, its programs and staff over the previous 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 agreanerworld.org/library

CHEESE AWARD WINS

Five Certified Animal Welfare Approved by AGW farms took home a total of 19 American Cheese Society Awards at the 35th American Cheese Society (ACS) Competition in Pittsburgh, PA.

Five AGW-certified cheeses earned first place from almost 1,960 entries, including Claire’s Mandell Hill goat’s milk cheese from Ruggles Hill Creamery, MA; Aux Arts’ mixed milk cheese from Green Dirt Farm, MO; Daryland Farmers’ cow’s milk cheese from Chapel Hill Creamery, NC; and Goatlet mixed milk cheese and Silver horser’s goat’s milk cheese from Conside Rardwell Farm, VT.

Additional winners included Hickory Grove from Chapel Hill Creamery, NC; ‘Dirt Lover; ‘Fresh Garlic Peppercomb,’ ‘Fresh Rosemary,’ ‘Woolly Rind’ and Bossa from Green Dirt Farm, MO; ‘Manchester’ from Concepteardwell Farm, VT; ‘Ellie’s Cloudy Down,’ ‘Ada’s Honor’ and ‘Brother’s Walk’ from Ruggles Hill Creamery, MA; and Atika from Tomales Farmstead Creamery, CA.

Certified Animal Welfare Approved by AGW farms have won major ACS awards every year for the past six years.

“We believe every step of the cheesemaking process influences the final product and that high animal welfare improves milk quality, which improves the final product,” says Portia McKnight, owner of Chapel Hill Creamery. “We’re so pleased to bring home a couple of American Cheese Society awards!”

CHEESE AWARD WINS

Drugged Meat

A Consumer Reports investigation has found trace amounts of unsafe drugs in meat and poultry. Food scientists analyzed USDA data from samples collected over an 11-month period from 2015 to 2016. The review reveals that restricted drugs, including ketamine, phenylbutazone and chloramphenicol, may appear in the U.S. meat supply.

“The presence of banned drugs, even in trace amounts, raises questions about government oversight,” said Mark L. Tello, CEO of Consumer Reports.

Visit consumerreports.org to read the full report.

IN THE NEWS …
Like what you read?
Do you value our work to support market transparency and pasture-based farming?

Here’s how to help us help you—and others

AGW is an independent and non-profit organization. Because we are not dependent on certification fees, we can remain completely impartial in our auditing, resulting in unrivaled integrity and trust. But we DO rely on supporter donations.

Please consider supporting us with a one-time or regular donation and membership, or promoting the AGW membership program with your friends, family and customers!

visit agreenerworld.org and select ‘get involved’ / or donate at agreenerworld.org/donate

OPINION

Farming Across the Pond

Wayne Copp

AGW Europe launches in turbulent waters, writes Wayne Copp

You may not know this, but in the last 12 months AGW has opened offices in South Africa and Europe. And it’s from the latter that I’m pleased to write this today.

The seeds for AGW Europe blew in on trade winds from the U.S. and Canada—and are demand led. The increasing popularity of AGW’s brand among North American consumers and retailers has not gone unnoticed over here. Processors and producers with existing markets in the U.S. and Europe are keen to add value and credibility, and are approaching AGW for high-welfare, sustainable livestock production certification.

We’re very fortunate to be able to launch from the solid reputation built by AGW farmers and ranchers and the increasing positive profile enjoyed by the program worldwide.

I was delighted to be appointed Executive Director for AGW Europe earlier this year, and the team is already busy on major projects that will come to market later this year and next. I am also a livestock farmer, tending my cattle on England’s windswept north Devon coast, looking out across the Atlantic. Together with my wife and four children, we keep 100 Red Ruby Devon suckler (momma) cows and followers (calves), along with some Hebridean sheep and a few acres of cereal.

Brexit uncertainties

What I’ll look up by my pot. Britain’s exit (‘Brexit’) from the European Union (EU) loomed large. At the time of writing, we are looking down the barrel of a ‘no deal’ and ugly exit from the EU in March 2019. Erik Millstone, professor of science policy at the University of Sussex, bleakly summed it up in a recent paper:

‘The idea that, once the UK leaves the EU, it will become a rule-maker, not a rule-taker, is illusory. Exporting to other countries requires accepting their standards. The choice is: Which rules to take—the EU’s, the USA’s or the World Trade Organization’s? ... If UK products don’t match their standards, they won’t buy them.’

Whatever happens, UK farmers are facing the biggest change since World War II. In this context, the AGW brand is more relevant than ever. Brexit could open the flood gates to cheaper imports produced to significantly lower standards. The stability enjoyed by UK farming families through the EU Common Agricultural Policy will stop and there is huge uncertainty over what (if anything) will replace it. The UK government is quietly nodding to forecasts of 25 percent of farms going to the wall as a result of cheap imports, restricted (tariff) export to EuroZone and reduced/no subsidy as acceptable collateral.

Statistics for farm suicides tell their own tale of the cumulative pressures on farmers. Currently, one a week in UK, one every two days in France; and in America, the suicide rate among farmers and farm workers is an ongoing concern. In UK, we’re already seeing low farm gate prices driving intensification, with all the associated impacts on welfare, environment, independent farmers and farming/rural communities.

AGW Europe: our vision

Our vision is to offer UK—and European—farmers a credible and accessible way of showcasing good practice that connects with consumers and achieves a price that properly reflects the cost of production and environmental footprint. Sustainably produced, high-welfare food should be available to all, not an exclusive part of the profile enjoyed by the program worldwide.

AGW Europe is keen to add value and credibility, and is approaching AGW for high-welfare, sustainable livestock production certification.
Agroforestry is a collective name for land-use systems and technologies where woody perennials (trees, shrubs and so on) are deliberately used on the same land-management units as agricultural crops and/or animals.

Agroforestry is actually a very old approach to food production and land management, with roots in the tropics. But over the last 50 years, agroforestry has been increasingly researched, adopted and promoted in temperate regions of the U.S., Canada and Europe, and is now commonly separated into five practices: windbreaks, riparian forest buffers, alley cropping, silvopasture and forest farming.

Agroforestry practices are adaptable to a variety of situations and producer goals and it isn’t necessary to convert an entire operation to agroforestry to take advantage of the benefits. Similarly, management practices can change over time as trees grow, markets change and priorities shift.

In the U.S., we focus on the five agroforestry practices (see panel right) for ease of promotion, research and program support. However, they really exist as a gradient, transitioning from very few trees (as with windbreaks) to lots of trees, as with forest farming in association with agricultural crops/livestock. These different configurations provide opportunities to integrate productivity and profitability with environmental stewardship, resulting in sustainable agricultural systems.

Conventional agriculture and a focus on maximizing production has led to a more simplified landscape, with ever larger fields and decreased crop diversity. Agroforestry systems tend to increase diversity, maintain perennial plants on the landscape and are dynamic over time. These and other qualities of agroforestry systems can play a role in risk management, long-term productivity and environmental protection.

Agroforestry is particularly relevant to livestock producers. Integrating trees, forests and woodlands with livestock has a long history in North America. The agroforestry practices that lend themselves better to livestock operations are windbreaks, alley cropping and silvopasture. Riparian forest buffers and forest farming may accommodate some limited livestock activity, but more likely as incidental than part of their regular and ongoing management.

Windbreaks

Windbreaks are linear plantings of trees and shrubs primarily designed to reduce wind speed and provide benefits to people, livestock, crops, soil, wildlife and facilities; although windbreaks are increasingly being considered to provide shade—or even produce an alternative crop. The windbreak design will depend on its purpose, but the key

AGROFORESTY

North America has a long history of integrating trees, forests and woodlands with livestock. Richard Straight explores the wide-ranging benefits of agroforestry
How wind speed affects temperatures

<table>
<thead>
<tr>
<th>Wind speed (mph)</th>
<th>Actual temperature reading (ºF)</th>
<th>Equivalent temperature</th>
</tr>
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<tbody>
<tr>
<td>0</td>
<td>50 40 30 20 10 0 -10 -20 -30 -40 -50 -60</td>
<td>0 10 20 30 40 50 60 70 80 90 100 110</td>
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</tbody>
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Calm
5 48 37 27 16 6 -5 -15 -25 -35 -45 -57 -68
10 40 28 16 3 -9 -22 -34 -46 -58 -71 -83 -95
25 30 16 -1 -29 -44 -59 -74 -89 -105 -120 -137 -155
40 22 4 -5 -46 -64 -82 -100 -118 -135 -155 -175 -195
45 19 -1 -10 -52 -72 -92 -112 -133 -154 -175 -197 -219 -242
50 16 -2 -17 -62 -84 -106 -128 -150 -173 -197 -222 -247
120 -3 -19 -84 -160 -200 -242 -286 -332 -380 -430 -482 -536 -600

The ability to limit livestock access is critical when growing fodder.

Alley cropping

In an alley cropping system, rows of trees and/or shrubs create ‘alleys’ for agricultural crop production. The combinations of trees, shrubs and crops is almost limitless, as is the spacing between trees and tree rows. The increased tree canopy creates a microclimate of partial shade and reduced wind, as well as greater plant root diversity and associated soil microbes and fungi.

Alley cropping systems primarily focus on growing crops, including tree crops, such as woodland. Livestock can have limited access to clean up crops after harvest under the protection of trees, while dropped fruit and nuts can supplement livestock feed. A less common application of alley cropping and silvopastures was proposed and studied by J. Russell Smith in the 1920s in his book, Tree Crops: A permanent agriculture. Smith proposed intentionally using native tree fruits, nuts and leaves as part of the livestock diet, comparing it to equivalent grain and hay feed value. One advantage of this approach is that producers do not need to harvest, prepare and store fruits and nuts in order to add value to the farm or ranch. Although alley cropping is focused on growing crops, it can easily be transitioned to a production system, as the trees create more shade, and later into a silvopasture system.

Silvopasture

Silvopasture systems combine trees, forage and livestock on the same piece of land. Silvopasture management is based on the agronomic and forestry principles used to profitably produce and harvest forage and forest products, guided by the limitations and potential of the land, and is predicated on rotational grazing. It often incorporates improved forages and fertilization. Silvopasture is different from forest grazing, which is based on ecological principles and requires the management of native grasses, forbs, shrubs and trees and their interactions. Note silvopasture and forest grazing are different from simply turning livestock into the woods for weeks/months at a time, which has significant negative ecological consequences.

Silvopasture systems are designed to produce high-volume timber and/or timber. But it is the economic and production aspects that are attracting more producers and landowners. Agroforestry practices can also form part of an overall risk management strategy, where a moderate impact of temperature, heat, and drought on livestock and forage production and diversification of income sources can help producers meet their operational goals.

Wider benefits

Agroforestry systems are often referred to as conservation practices. But it is the economic and production aspects that are attracting more producers and landowners. Agroforestry practices can also form part of an overall risk management strategy, where a moderate impact of temperature, heat, and drought on livestock and forage production and diversification of income sources can help producers meet their operational goals.

The Brian Tomazi Farm, Southeast Missouri

Shade plays an important role in Brian Tomazi’s cow-calf operation near Cuba, MO. Over the past few years, Tomazi has thinned the hardwood trees at the edges of his grazing paddocks to create silvopasture edges about 150-200 yards wide. Tomazi says his 70 cows and their calves respond well to a pattern of cooling off under the shade trees, grazing across open pasture, visiting a water source and grazing their way back to shade.

After weaning, Tomazi backgrounds groups of calves in his intensive grazing setup. “The animals use shade to regulate their body temperature. After they cool off in the shade, they go back out and graze until they’re full and hot again,” says Tomazi. He added about 4 acres of grazing by creating the silvopasture edges. The combination of thinning competing trees and fertilization has increased the growth of remaining hardwood trees and the oaks produce bumper crops of acorns to attract whitetail deer. Calving season runs from August 15 to October 15 and he keeps expectant cows in paddocks with plenty of shade. “Before we had access to this much shade, I lost a few calves from cows that gave birth in direct sun in hot weather. Given a choice, my cows have their calves in a cool, shady area during the early part of the calving season.”

In summer 2010, the high heat caused many area livestock producers to experience cattle weight losses of about 1 lb/head/day. In contrast, Tomazi’s cattle continued to gain between 1.6-2.1 lbs/head/day. Over the hottest two months he figures he gained 94-126 lbs/head, which was worth about three or four times the cost of creating his silvopastures in just the first year.
Collaborative marketing can offer many benefits. In this two-part series, Amanda Hull investigates.

WHAT IS A COOPERATIVE?
A cooperative is defined as a group of farmers who work together and market their product under one name or brand, mutually benefiting from the profits and other shared activities/resources. Producer or marketing groups are privately owned companies; they usually evolve from an individual farmer’s need to increase supply, buying animals or product from participating producers at an agreed price.

The beginning
Colleen Biggs and her husband, Dylan, came from a long line of pioneering Canadian ranchers. But in the mid-1990s, the family faced a crossroads: “The bottom had fallen out of the cattle market and we couldn’t make ends meet,” Colleen explains. “We had two options: quit ranching or work together to provide the consistency and quality often required by larger buyers or contracts.”

Sarah Hoffmann of Green Dirt Farm says, “No one understood the importance of grassfed beef until we started selling to chefs and getting into high-end restaurants.” After years of hard work, demand increased to the point where they decided to approach neighboring ranches to discuss opportunities to supply beef—and they haven’t looked back. Today, they have six Certified Animal Welfare Approved by AGW, Certified Grassfed by AGW producers supplying additional beef cattle under the TK Ranch brand.

Sarah Hoffmann spent 10 years as a medical doctor before establishing Green Dirt Farm, a successful sheep dairy and creamery in Missouri. "I stumbled upon a real market niche, plus I really like sheep," she says. "It was a win-win!"

Sarah had no trouble selling the cheese she produced. “We had great sales just from word of mouth,” she explains. However, she soon realized the farm couldn’t become economically sustainable at current levels of production. “We didn’t have the farm infrastructure to grow, so we needed another source of milk to meet demand.” Sarah works with five Certified Animal Welfare Approved by AGW dairy sheep producers who supply milk to produce Green Dirt Farm’s award-winning cheeses.

Jeremiah Jones always wanted to farm; while his relatives got out of farming, he began taking out loans to start his own farm. In 2007, Jeremiah and several local producers started a cooperative, the North Carolina Natural Hog Growers Association (NCNHGA), to meet growing demand for high-welfare pork. When asked why he was voted as the point person, Jones recalls: “I was the youngest. Plus I had a cell phone!”

The hard work, demand increased to the point where they decided to approach neighboring ranches to discuss opportunities to supply beef—and they haven’t looked back. Today, they have six Certified Animal Welfare Approved by AGW producers supplying additional beef cattle under the TK Ranch brand.

Certification benefits
All four farmers agree that AGW certification helps set themselves apart in the marketplace: “We use our AGW certifications as the primary differentiating factor to set our brand apart,” Colleen says. “It is very important to our business. Most other humane certifications aren’t worth the paper they’re written on.”

After establishing Green Dirt Farm, Sarah chose to become certified in 2008 as a way to add validation and credibility to her business. But 10 years later, she says her certification is more important than ever: “We have a substantial amount of cheese to sell, so a lot more work goes into marketing our products. Our AGW certification is what makes our cheese different from others.”

AGW certification also plays a vital role when marketing NCNHGA pork to prospective customers. “I always tell prospective customers if you’re buying from a farmer and they’re not third-party certified, then you just have to trust in their practices—and that’s not something I would recommend,” Jeremiah explains. “Our AGW certification lets people know what our farmers are doing and how they’re raising their pigs.”

Final thoughts
Sharing the workload among members—and making the most of available skill sets—can offer many advantages. “Co-ops have a difficult time being successful when all the work lands on one person’s shoulders, so my advice is to try and share roles among members,” Jeremiah says. “Recently, we’ve had new farmers join who have different backgrounds, including marketing or PR work. That’s been super helpful to fill in the gaps and benefits everyone.” Colleen agrees. “If you can find people that have the same goals and synergies, and find ways to outsource some of the work, that increases the likelihood of business success.”

With increasing demand for high-welfare, sustainable food, producer groups and cooperatives offer farmers and ranchers a unique opportunity to work together and pool production capacity—and hopefully establish fairer trading practices and prices. “Scaling up doesn’t have to mean sacrificing animal welfare or the environment,” Jacqueline adds. “Certified Animal Welfare Approved by AGW farms need to come together to get into larger markets. It is the only way we can achieve economies of scale and get the value-added revenue back to farmers.”

“Co-ops have a difficult time being successful when all the work lands on one person’s shoulders” Jeremiah Jones

Jeremiah Jones, president of the NCNHGA
Castration is probably the most common procedure carried out on cattle and involves the removal or destruction of the testes or testicles to stop the production of male hormones. Entire bulls tend to be more aggressive to stockpeople and other cattle, and can cause problems with unwanted breeding. They also typically produce lower quality meat. Castration eliminates these problems.

AGW’s standards permit the castration of calves provided the operation is performed by a competent person. However, the standards also place restrictions on castration methods and age of the animal.

**Different methods**

A number of different methods of castration are available. Surgical castration involves the complete removal of the testicles using a scalpel or Newberry knife. AGW standards allow surgical castration for calves up to the age of two months.

Emasculator or Burdizzo castration uses a clamp that crushes the blood vessels around the testes, cutting off blood supply and causing them to die and drop off. AGW allows emasculator or Burdizzo castration for calves up to two months old.

Ring or band castration involves fitting a tight rubber or latex ring or band to the scrotum neck to cut off blood supply to the testes, causing them to die and drop off. AGW standards allow rubber ring or band castration for calves up to one week of age. Less common methods are emasculator and castration, which involves using hormones to suppress testosterone production; and Chemical castration, where toxic chemicals are injected directly into the testes to cause irreparable damage. Both methods are prohibited under AGW standards.

**Seven day limit**

Using any type of band or ring on calves over seven days old will cause greater pain and stress than other types of castration at this age, such as Burdizzo or scalpel; and so reduces welfare. In comparative tests, when cattle were castrated at 500 lbs, the animals appeared to behave and grow ‘normally’ after castration by high tension bands, while cattle castrated surgically showed an immediate pain effect and reduced growth rates in the same period. However, at three to four weeks post castration—when surgically castrated calves had mostly healed—banded calves were just at the point when they were sloughing their scrotums, and overall the surgically castrated calves had better growth rates.

Other studies have shown banding older animals increases risk of secondary infection and lesions. The weight of evidence was sufficient to warrant legislation: in the UK, for example, the use of emasculator or scalpels is illegal.

**Tackling testosterone**

The most common justification for later castration is the assumption that it allows sufficient time for the animal to produce some male hormones, benefit growth rates. While studies show that bulls left entire do grow faster, the growth rate benefit comes from testosterone, which is not produced until 3.5–5.5 months old.

**What if I can’t castrate by two months?**

Castrating older male animals without anaesthesia is increasingly regarded as unethical and inhumane. Based on available scientific evidence of pain at castration, AGW sets an age limit of two months for castration using scapular or Burdizzo methods under normal circumstances. However, this age limit can present problems for farmers with very extensive systems or those producing breeding stock, for example.

Farmers who can demonstrate their system otherwise meets all of the AGW standards—and who are genuinely unable to meet the two-month age limit—can apply for derogation to castrate at up to three months of age. Similarly, farmers that select certain male calves as potential breeding animals may find some animals only exhibit traits after two months of age that make them unsuitable for breeding. In such cases, farmers should contact AGW for derogation and only scalpel or Burdizzo methods are acceptable—and pain relief must always be provided.

**Pain relieving drugs**

Significant research has examined the effects of different methods of castration on bulls of different ages. As the testes and scrotum are richly supplied with nerves, all physical methods of castration will cause some degree of pain, exhibited both during and after castration.

Best practice for castration would therefore involve the use of pain relief at whatever age the operation is carried out. However, options for pain relief drugs for cattle are currently limited. It is therefore important to talk to your vet about suitable options for pain relief during castration.

Options for anaesthesia and pain relief include short acting (45–90 minutes/local anesthetics such as lidocaine, delivered into the testicles or spermatic cord or as an epidural injection to block pain in the hindquarters. Longer acting pain relief drugs will last for several hours. Local anesthesia combined with a systemic analgesic, such as non-steroidal anti-inflammatory drug (NSAIDS), can aid in pain relief caused by Burdizzo or surgical castration. (NSAIDS alone may not eliminate pain-induced behavior seen during the castration process.) Local anesthesia will also eliminate any short-term, acute pain caused by rubber-ring or latex-band castration.

**Discuss the options**

Research shows early castration does not penalize animal growth rate to a point where it will affect the economic viability of a farm, and differences in growth rate from early versus later castration will be very minor for most farms. All types of castration will cause pain and stress to cattle; however, scientific research shows that young calves will recover more quickly and experience fewer complications compared to older calves. AGW recommends that farmers castrate cattle as early as possible—ideally within the first seven days. If you cannot avoid later castration, contact AGW to discuss options.

Anna Heaton is Lead Technical Advisor with A Greener World. This article is a summary of AGW’s Technical Fact Sheet #9, Castration of Cattle, available at agreenerworld.org/resources/science-and-research.
Jennifer L. Burton explores the world of alternative therapies—and the potential hazards to consider

Medical therapies should alleviate suffering, reduce the spread of disease and aid healing. Health decisions would be much easier if these short-term outcomes were the only important effects of treatment! But as managers of entire agro-ecosystems, farmers must look beyond medical science and beyond the short-term. An ecological approach to healthcare can help you put your labor and economic resources where they do the most good for the sustainable well-being of your animals, farm and wider community.

In my previous summer article, we explored how medical science can interface with community and personal values, achieving “ecological health-care” with help from integrative specialties. This article examines hazards to consider when selecting treatments for food animals.

Residues

Have you ever wondered what happens to the medicine after you treat a sick animal? Physical stuff that is ingested, injected or absorbed becomes part of the animal’s body, eggs or milk, or is excreted to become part of the environment. Metabolism alters the substance, and the by-products can be transformed again by water treatment or soil microbes—sometimes back to the original substance! One thing is sure: medicine doesn’t just go away. Before administering any substance to a food animal, one must safeguard ecosystems and human health by asking, “Where does it go? What does it do?”

If your finishing pigs have eaten acorns or pumpkin, for example, you may have noticed that meat flavor varies with diet. Milk and meat from 100 percent forage-fed ruminants contains more omega-3 fats than products from grain-fed animals. Egg yolk color is affected when poultry consume marigold flowers. Some material deposits in these foods can be positive for consumers, but what about other substances?

“Violative residues” are prohibited because they can harm the eater through allergy, carcinogenicity, hormone mimicry and more, or because their presence helps microbes develop resistance to antimicrobial drugs. Before a pharmaceutical is approved for use in food animals, the duration of deposition in milk, meat and eggs is measured to establish withdrawal times and prevent harmful residues. But withdrawal information is not available for most botanical (plant-based) and nutraceutical (food-derived) products. Theudder health formulation Phyto-Mast is a rare exception: researchers found that thymol (derived from thyme) was detectable in milk 12 hours, but not 24 hours after dairy goats were treated with this product.

Gentian violet, on the other hand, is not approved for topical use in food animals. In the U.S., any trace of gentian violet (also called crystal violet) in any food product constitutes an illegal residue. But despite the potential health and legal risks, a blue wound spray containing this ingredient is commonly marketed to farmers. Before using any treatment, it is advisable to ask a veterinarian if residue might pose a health risk for consumers— or a legal risk for your farm.

Toxicity

Though they act in myriad ways, treatments are generally intended to affect physical function. For many botanical compounds, effectiveness is directly related to their original function: protecting the plant from pathogens, pests and hungry animals. Some alternative treatments disrupt cellular processes to disable bacteria; others weaken parasites by blocking signals in the central nervous system. Some of the cellular, neurological and other physical processes targeted by these compounds are also present in livestock, which means treatments have the potential to harm the very creatures we aim to help. The safety margin—the difference between therapeutic and toxic dose—can be particularly small for dewormers. For example, pennroyal and wormwood (Artemisia) can be effective in dewormer formulations, but their narrow safety margins warrant caution as even a moderate overdose can harm the patient. When toxicity is a concern, a veterinarian can evaluate your animal’s medical history to help establish safe dosing.

Interactions

A body can only absorb, metabolize or excrete so much each hour. When treatments are used simultaneously, one substance can modify how another is processed, effectively altering the dose. Herb-drug or herb-herb interactions may be more likely with natural treatments that use the whole plant rather than a single active ingredient. Inform your vet of any recent treatments before they prescribe additional therapies, and consult an alternative practitioner if possible when combining treatments.

Take care with chiropractic

The greatest risk with any intervention is the possibility it will do harm, either directly or by delaying a better option. Manual therapies such as chiropractic are largely free of the risks discussed above. In livestock, trained veterinary chiropractors can treat misalignment of joints caused by trauma, breeding and birthing. Combined with other therapies, this specialty can be used to address orthopedic pain, joint mobility, gait abnormalities and more. However, it can be difficult to obtain safe, competent chiropractic care for farm animals. Human chiropractors may lack knowledge of skeletal differences between species, while liability laws might prevent your DVM from collaborating with a trusted non-veterinary provider anyway. If your chiropractor is not certified to treat animals, it is advisable to avoid utilizing chiropractic for your livestock.

Conclusion

Sustainable well-being requires an ecological approach to healthcare. Your farm health plan should ensure prompt, effective treatment while considering consequences for not only the animal, but also the environment and eater. Your veterinarian can help identify animal-specific risks and help determine when a different approach is needed. When possible, work with someone who specializes in the type of therapy you wish to use, and avoid therapies for which appropriate expertise is not available.

Jennifer L. Burton, DVM, is a veterinarian and educator with a special interest in the intersection of food animal medicine and public health.

In the next issue: Dr. Burton will discuss alternative practices that mitigate the negative effects of trauma and painful procedures.
Studies of domestic pigs that have escaped into the wild show their behavior closely resembles the European wild boar from which they originated. By understanding the natural behavior of pigs, we can identify and improve pig welfare. Natural behavior can be defined as the range of different behaviors animals show when kept in environments where they can carry out behaviors created in the evolutionary process. Despite domestication, welfare problems arise when these natural behaviors and needs cannot be met.

**Rooting**
Rooting behavior is an important part of the behavioral repertoire, a rewarding experience and perhaps a behavioral need. Under semi-natural conditions, sows spend 10-20 percent of their active time rooting. Because of the strong behavioral need for pigs to root, AGW standards prohibit the use of nose rings, used by some farmers to retain rooting. Consequently, certified farmers must manage their land and their pigs to minimize soil damage while providing a good environment for the animals. There are apparently no real differences between rotational and set-stocked systems with regard to levels of rooting, foraging and feeding behavior. Manipulation of edible substrates—for example the provision of turnips or other root vegetables—may substitute for rooting behavior in outdoor sows, and sow that received burlap as an over-ground enrichment spent less time rooting the paddock.

**Sociability**
Social behavior is highly developed in pigs. Within hours, newborn piglets begin to form social dominance relationships with littermates and eventually a stable hierarchy is formed. This hierarchy often includes setting a “teat order”—in other words, which teat a piglet will always suckle from. There is some evidence that the front teats provide more milk and so the piglets that get those teats will be larger at weaning. In the wild pigs (aside from mature males) generally live in single or multiple family groups and this group behavior can also be seen in domestic pigs.

**Farrowing**
Farrowing environment and the opportunity to construct a nest are two important behavioral requirements. Piglets born to sows are highly motivated to obtain nesting material and behavior during its building is related to the general reaction pattern-helping, stress, especially in inexperienced gilts. A stimulating farrowing environment (with plenty of straw) has been shown to have a beneficial effect on maternal behavior after farrowing. This is particularly important for extensive systems where maternal behavior in the peripartal period is particularly important for extensive systems, stimulating farrowing environment (with plenty of straw) has been shown to have a beneficial effect on maternal behavior after farrowing. This is particularly important for extensive systems, where maternal behavior can be maintained as well as possible in intensive conditions.

**AGW standards**
AGW standards allow the removal of pigs from pasture, when conditions are too poor for them to be outdoors. However, they urge to root and manipulate different materials must still be high. Research shows straw is more effective than other materials in providing sustained occupation and reducing pig-directed negative behaviors, and the provision of straw gives an important stimulus and outlet for exploration, foraging, rooting and chewing behaviors. Pigs also seem to prefer long straw provided via a tuck-on ramp when chopped straw is given via a dispenser.

**How can I maintain compliance and grow at the same time? Tim Holmes looks at the options**

With ever-increasing demand for high-welfare, sustainable foods, farmers in the program occasionally find their markets grow faster than projected supply. While this is a good thing, it’s important to take certain AGW standards into account when sourcing additional livestock to make sure you stay compliant.

For example, Standard 2.3.1 requires farmers to source feeder animals (destined for meat) from other certified farms. While Standard 2.3.5 states farmers must not use “split” or “dual” systems, where animals of one species are simultaneously kept in systems that both do and do not meet Certified Animal Welfare Approved (AWA) by AGW standards.

**Sourcing additional stock**
We advise farmers who are looking for additional market animals to seek current certified farms that have feeder or store animals for sale. A good place to start is AGW’s Farm-to-Farm Sales page, where farmers can offer animals for sale. (You can also advertise for animals here, too.) Second, you can use AGW’s online Product Directory to search by location, city, species and type of farm for possible sources of certified feeder animals or finished animals. Finally, your regional Farmer and Market Outreach Coordinator (FMOC) can help identify certified farms on your behalf.

Another option is to encourage the farm(s) you want to source from to certify with AGW. We will work with you to make this happen. For example, we can contact a farmer with whom you have discussed the program and answer any questions. Better still, we can arrange to meet a group of farmers in person and address any concerns or questions they have. To start this process, contact your FMOC, who will provide all the support you need.

**Other options**
In some cases, you may have farmers with animals available who are willing to be certified, but need to sell the animals before the certification process is completed. At your own risk, you may source feeder animals from this non-approved farm, provided the farmer first agrees to an audit. However, the following rules apply. First, you cannot use the AWA seal on any purchased feeder animals (or their products) until the source farm is certified. Second, if your source farm decides not to go ahead with certification, you must stop sourcing animals from them and ensure all animals (and their products) purchased from these farms are NOT sold under your certificate. If the seal is used on any animals or products before a source farms is approved, you may lose your certification.

**A last resort**
There is one final (emergency) option. This allows you to buy from non-certified farms at the point of slaughter to meet short-term product demand. However, the Certified Animal Welfare Approved by AGW seal cannot be used. Under this option, animal(s) must only be purchased at the point of slaughter and must be taken directly to the plant for slaughter, and must never set foot on any farm you own or operate—even for a couple of hours. You must also maintain clear supply chain records that confirm all products from the animal(s) were not sold using the seal or represented as coming from a AGW-certified farm. If your records do not satisfy the above requirements, or if it is found that products have been misrepresented as coming from certified animals, your farm will lose its certification. If you wish to consider this last option we strongly recommend you contact us first. In the next issue, we’ll look at sourcing replacement breeding stock under AGW standards.

**ROOT CAUSES**
- Pigs are opportunistic omnivores who use rooting in part to find food and nutrients.
- They continue to root and manipulate materials whether or not they need to root to find food.
- Farmed pigs spend the majority of their active time investigating and manipulating.
- If pigs are deprived of opportunities to root and explore it can lead to welfare problems such as tail biting.

Tim Holmes is Director of Compliance with A Greener World
Your regional point of contact

From Alaska to Wyoming, Alberta to Saskatchewan, our outreach team offers a one-stop shop for farmers, ranchers and food businesses!

From advice on applying, label design and technical support, we’re here to help...

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COTTON BANDANA
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• Low-style cotton twill with Velcro strap
• Khaki crown/strap and navy visor/button
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From advice on applying, label design and technical support, we’re here to help...
Tell us about your farm
We purchased the hilltop farm back in 2004. Our love of woodland, with good pasture, plentiful water and wonderful views to across the Arkansas River, made it the perfect farm setting. We did our research about the cattle breeds best suited to our land and our type of farm management, buying a Longhorn cow and three young heifers in March 2010. In July, we bought five registered Longhorns from Lone Wolf Ranch in Oklahoma, and a LimFlex bull, and M&M Farms was officially born.

Describe a typical day
We’re both usually up around 5–6 a.m. After coffee (a must!), we check the garden and feed the dog and our small flock of chickens. After a few office chores, checking emails and seeing what people are talking about on Facebook, we’ll get the day’s meat inventory packed and I’ll head to work at our business, The Paint Store, in Van Buren. Tom usually heads up to see the herd, checking their fresh water source and the perimeter, as well as other chores. An average day usually includes a trip to the farmers’ co-op for supplies.

Who are your customers?
We mainly sell beef to local folks making dietary changes to a healthier protein source with a beneficial fat content. Many are in the 20–40 age group who understand the benefits of sustainability and want to know their food source. An ever-expanding group are folks who realize a certified grassfed component in a healthy diet can reduce their dependency on prescription drugs.

What’s the benefit of being certified by AGW?
It keeps us on our toes and helps keep a tight handle on our farm and quality. While certification requires a lot of record keeping, it makes a significant contribution to herd management and ultimately provides additional proof that customers are getting exactly the kind of beef advertised.

What are your business plans for the future?
To source locally raised certified grassfed beef to supply the ever increasing demand for quality meat. We intend to apply our history of good business practices instead of the physical demands of farming. We’ll pass that on to the next generation!

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What are your business plans for the future?
We intend to apply our history of good business practices instead of the physical demands of farming. We’ll pass that on to the next generation!
“Our AGW certification gives customers an idea of what we’re doing on the farm without them having to come out. Since we got certified, we’ve had a 20 percent increase in sales. People love it!”

TIMOTHY HAWS, Autumn’s Harvest Farm, New York