SUSTAINABE EASIAN E

INCORPORATING AWA NEWSLETTER

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COMPANY AGROFORESTRY IN ACTION

CASTRATING CATTLE
LAUNCHING AGW EUROPE
COLLABORATIVE MARKETING



A Greener World (AGW) recently worked with the American Society for the Protection 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 end goal of 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. To succeed, 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 abject 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.

Indra Gunther

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BEST FOR EGGS

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 assess 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—for laying hens.

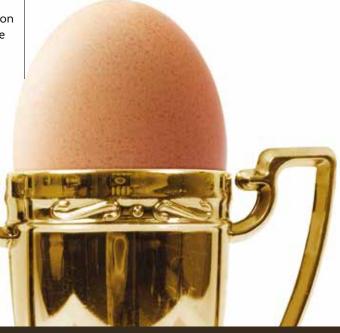
"We're honored to be recognized by Compassion in World Farming as an international leader in the field," says Andrew Gunther, AGW's Executive Director.

"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."

"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."

For more information, visit **compassioninfood business.com**, select 'Resources' and 'How welfare schemes compare to compassion's criteria for higher welfare—laying hens'



IN THE NEWS...

BRAND GUIDELINES

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

VOLUNTEER AGW!

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



FARM BURGER FIRST

Farm Burger is partnering with Anderson Farms in Comer, GA, to offer Certified Animal Welfare Approved by AGW pork at its four Atlanta locations. The regional restaurant is the only group in Georgia to offer verified, high-welfare, sustainable pork burgers from pigs raised outdoors on pasture. "We're thrilled to stand out as a business offering Certified Animal Welfare Approved by AGW pork that's better for people, animals and the environment!" says Farm Burger's Darla Millstein

MONSANTO PAYOUT

Monsanto Company 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.

EGG: FLOORTJE | CUP: VALERIE LO

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 coop's core values and impact the world in a positive way," says Carolyn Twesten, 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."

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 agreenerworld.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 Arcs' mixed milk cheese from Green Dirt Farm, MO; 'Dairyland Farmers' cow's milk cheese from Chapel Hill Creamery, NC; and 'Goatlet' mixed milk cheese and 'Slyboro' goat's milk cheese from Consider Bardwell Farm, VT.

Additional winners included 'Hickory Grove' from Chapel Hill Creamery, NC; 'Dirt Lover,' 'Fresh Garlic Peppercorn,' 'Fresh Rosemary,' 'Woolly Rind' and

'Bossa' from Green Dirt Farm, MO; 'Manchester' from Consider Bardwell 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!"

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 Marta L. Tellado, **CEO** of Consumer Reports.

Visit consumer reports.org to read the full report.

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 Counsel.

POWERED

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 1.8 MW solar project, made up of 5,305 photovoltaic panels, making it a model of true sustainability.

"The new solar project gives us a reliable source of revenue for a sustained period of time and aligns with our ongoing commitment to sustainability on the farm, helping provide renewable energy

to come," says Chad Hunter.

for future generations

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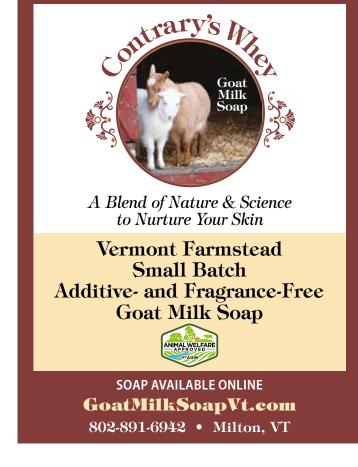
Do you value our work to support market transparency and pasture-based farming?

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



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

When I took up my post, Britain's exit ("Brexit") from the European Union (EU) loomed large. At the time of writing, we are looking down the barre 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.

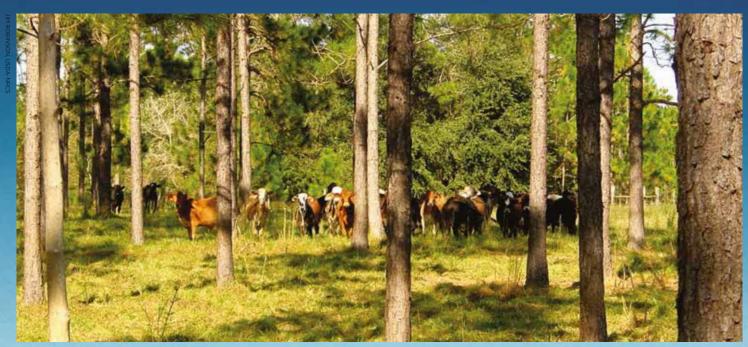
Statistics for farm suicides tell their own tale of the cumulative pressures on farmers. Currently, one a week in UK; one every two days in France; and in America, the suicide rate among farmers and farm workers is an ongoing concern. In UK, we're already seeing low farm gate prices driving intensification, 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 demographic. I'm greatly inspired by an awakening in youngsters across UK and Europe, not satisfied to take the status quo, and exploring so-called alternative food networks. Their questioning of current systems and buying habits is influencing the sourcing strategies of retailers and processors. I'm seeing the direct result of this in my day-today work, both for AGW and on the farm.

Wayne Copp is Executive Director for AGW Europe. Contact him at wayne@ agreenerworld.org

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Livestock grazing in silvopasture paddock (above) | (below) Field and farmstead windbreaks provide maximum protection

AGROFORESTRY

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



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 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

AGROFORESTRY DEFINITIONS

Windbreaks are rows of vegetation used to reduce and redirect wind. They can protect soil, crops, livestock, structures, roads and wildlife

Riparian forest buffers are trees, shrubs and grasses adjacent to streams, ponds and wetlands to protect them from negative impacts from adjacent agricultural lands

Alley cropping systems are where agricultural crops are grown in the alleys between widely spaced rows of trees

Silvopasture
is specifically
designed and
managed for the
production of trees,
tree products,
forage and livestock

Forest farming is where high-value, specialty crops are cultivated under the protection of a managed forest canopy that provides necessary shade and microclimate



Aerial view of large field-scale windbreaks

features that most influence how well it works are height, density and orientation to the wind.

A windbreak functions best when it is oriented perpendicular to the wind. Although variable, wind direction tends to have seasonal patterns. So, if winter protection is the primary purpose, the windbreak should be oriented to intercept winter winds. (For most of the U.S., winter winds come from the north and west.)

Winter protection is a common reason livestock producers utilize windbreaks. The greatest value of windbreaks to a livestock operation is reducing the wind chill effect on the animals. Young livestock and animals with a wet coat are most susceptible to cold winds. In the Great Plains region it is commonly said, "You can plant a lot of trees for the value of one saved calf." Although winter blizzard conditions are the big concern, energy requirements for cattle can increase with winds as low as 10 mph, even during the milder temperatures of spring and fall (see table 1, page 10). Windbreaks can also be designed to manage drifting snow so it does not fill in feeding areas, calving pens and access lanes, reducing labor and equipment time for snow removal and accessibility to livestock.

A slightly modified livestock windbreak is what is sometimes called an outdoor barn or a living barn. Picture a wide U or V-shaped windbreak fenced on all sides. The design creates a fairly large snow-free zone that is still protected from the wind. When the living barn is set away from a field fence line or property line, cattle can go to the most protected side of the windbreak even when the wind direction changes as it does when a storm system passes by.

Windbreaks can also provide shade for livestock, particularly in the morning and early evening, when planted in a north-south orientation at the edges or within a pasture. Though less common in temperate climates, windbreaks can provide a source of fodder; selection of tree species and

How wind speed affects temperature

adapted from John Herrick, Iowa State University

		Actual temperature reading (°F)													
		50	40	30	20	10	0	-10	-20	-30	-40	-50	-60		
		Equivalent temperature													
С	alm	50	40	30	20	10	0	-10	-20	-30	-40	-50	-60		
Wind speed (mph)	5	48	37	27	16	6	-5	-15	-26	-35	-47	-57	-68		
	10	40	28	16	3	-9	-22	-34	-46	-58	-71	-83	-95		
	15	36	22	9	-5	-18	-31	-45	-58	-72	-85	-99	-112		
	20	32	18	4	-10	-24	-39	-53	-67	-81	-95	-110	-129		
	25	30	16	1	-15	-29	-44	-59	-74	-88	-103	-118	-133		
	30	28	13	-2	-18	-33	-49	-64	-79	-93	-109	-125	-140		
	35	27	11	-4	-20	-35	-52	-67	-82	-97	-113	-129	-145		
	40	26	10	-5	-21	-37	-53	-69	-84	-100	-115	-132	-148		
≶	45	25	9	-6	-22	-38	-54	-70	-85	-102	-117	-135	-150		

Little danger to mature animals

Danger: freezes teats and scrotums; causes stress; latent disease

Great danger, especially to young animals

Table 2

Maintenance energy requirements for cattle below critical temperature

adapted from D.R. Ames, Kansas State University

	Animal weight (lbs)							
	440	660	880	1100	1200	1320		
Critical temperature	percent increase per degree (°F) of cold							
59 — summer coat or wet	2.3	2.1	2.0	2.0	1.9	1.9		
45 — fall coat	1.5	1.4	1.4	1.3	1.3	1.3		
32 — winter coat	1.2	1.1	1.1	1.0	1.0	1.0		
18 — heavy winter coat	0.7	0.7	0.7	0.7	0.6	0.6		



Alley cropping walnut and soybeans; east to west is best to maintain sunlight

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 wood, nuts and fruits. 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 hay 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-value timber or other tree crops, while providing short-term cash flow from the livestock component. Silvopastures are created by introducing forage into a wood or a tree plantation or by introducing trees to pasture. Silvopastures can improve the production value and control of invasive species in neglected and poor quality woods. It is not recommended to change a high

quality woodland (with diverse native understory species) into a silvopasture. In the southeast U.S., some producers are creating silvopastures when pine plantations are coming out of a Conservation Reserve Program (CRP) contract.

Silvopastures rely on rotational grazing for good forage utilization, as well as minimizing or eliminating soil compaction. They also have fewer trees per acre than typical woodlands or tree plantations to allow adequate sunlight to reach forage beneath the trees. Some of the reduced timber production due to growing fewer trees as compared to a pine plantation, for example, is offset by more wood per tree being grown, as well as some benefit from the pasture fertilization. Producers can be somewhat responsive to market changes. If long-term livestock markets look good, trees can be thinned to increase forage production; if the tree market is strong, it is possible to maintain more trees and reduce animal stocking. Note that not every pasture in a livestock enterprise needs to be a silvopasture to take advantage of the benefits of this integrated

Producers seeking assistance from foresters and grazing specialists (pasture managers) often find mixed reactions to silvopasture systems. This is undoubtedly from experiences of leaving cattle, goats or horses in a woods for long periods. Soil compaction, erosion, tree damage and questionable nutrition are all possible if livestock are left in woods for weeks or months. On the flip side, just a few scattered trees in a pasture will create weedy, compacted and eroded areas when cattle camp out in the shade.

Why introduce the complexity of adding trees into a grazing system? Market diversification is certainly part of the answer. But the real benefits come from the modified microclimate under a silvopasture, where livestock are protected from wind, cold and heat (see tables opposite). Studies also show the modified microclimate encourages some cool season grasses to green up earlier and produce later growth, potentially extending the grazing season. In addition, the cooler temperatures and higher humidity from the partial shade during hot summer months can improve forage quality.

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 the moderated impacts of heat, cold 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



Thinned hardwood trees at Brian Tomazi Farm

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

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 96-126 lbs/head, which was worth about three or four times the cost of creating his silvopastures in just the first year.

Richard Straight is
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Leader at the USDA
National Agroforestry
Center. The National
Agroforestry Center
website offers a range
of useful information
and guidance on all
aspects of agroforestry,
including practical
advice, publications,
events and more. Visit
fs.usda.gov/nac



Silvopasture:
Establishment &
management principles
for pine forests in the
Southeastern United
States by Jim Hamilton
(ed.) is a good primer
on silvopasture.
Available at fs.usda.
gov/nac/publications

GET IT TOGETHER

Collaborative marketing can offer many benefits. In this two-part series, Amanda Hull investigates



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 farm's
need to increase
supply, buying
animals or product
from participating
producers at an
agreed price.



Sarah Hoffmann of Green Dirt Farm

Cooperatives and producer groups offer today's sustainable farmers and ranchers the opportunity to work together to provide the consistency and quantity often required by larger buyers or contracts. Group marketing also suits farmers and ranchers who are not interested in marketing themselves or selling directly to the consumer. In the first of this two-part series, we meet four individuals who have pioneered group marketing efforts.

The beginning

Colleen Biggs and her husband, Dylan, come 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 add value to our production." Colleen and Dylan took a leap: TK Ranch became one of the first farming families in Canada to direct market grassfed beef to their local community.

"We were way ahead of the trend," Colleen



Dylan and Colleen Biggs of TK Ranch

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. Green Dirt Farm offered Sarah the chance to turn a passion for cheese into a successful business venture. She identified that over 95 percent of sheep dairy products consumed in the U.S. were imported: "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 awardwinning 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!"

From the outset, one thing was non-negotiable:

"We decided every farm had to be Certified Animal Welfare Approved by AGW to join the co-op,"

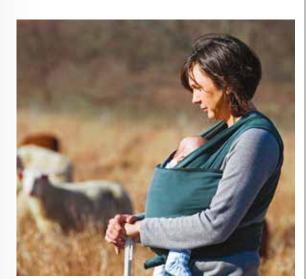
Jeremiah explains. "The third-party audit is like our vetting system and, at this point, we turn people on to certification right away." Last summer, the NCNHGA voted to add another certification to their requirements: Certified Non-GMO by AGW. "We grow quite a bit of our hog feed, so becoming Certified Non-GMO by AGW made sense and will help keep us ahead of the market," Jeremiah adds.

Working many years in sheep dairying, Jacqueline Smith observed that excess lambs were often sold at commodity prices into the feedlot system. She wanted to find a way to keep lambs in high-welfare systems and, in May 2015, Central Grazing Company was born. "From working on and with farms, I learned how to build relationships, network and grow opportunities with retailers and customers," says Jacqueline. "Going through those experiences helped me when I decided to start my own business." Like the NCNHGA, Central Grazing Company requires AGW certification for its members. In turn, Jacqueline rewards producer partners through revenue-sharing programs. "We control the entire supply chain, from processing to distribution, which helps keep our margins as high as possible," Jaqueline explains.

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



Jaqueline Smith of Central Grazing Company



Jeremiah Jones, president of the NCNHGA

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 let's 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," Jaqueline 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

Amanda Hull is AGW's Farmer and Market Outreach Coordinator for the West region.

In the next issue:

Find out how group marketing works in practice—and the key challenges.



CASTRATING CATTLE

When it comes to welfare, early castration is the best option. Anna Heaton looks at the evidence

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 (generally) 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 in cattle are Immunocastration, 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.

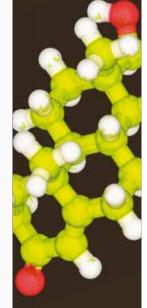
Seven day limit

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.

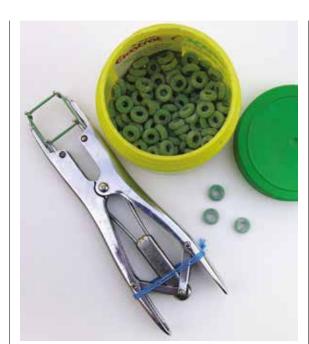
Other studies have shown banding older animals increases risk of secondary infection and lesions. The weight of evidence was sufficient to warrant legislation: in the UK, for example, the use

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. benefiting 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.



Therefore castrating up to and around this age will not produce any growth benefits. Significant evidence also suggests the stress of later castration can result in decreased growth rates in the weeks after the operation potentially negating any benefit from the production of male hormones before castration.



Rubber elastrator rings and pliers

of elastrator rings on calves older than one week is illegal, while farmers in New Zealand can only castrate using high tension bands when pain relief is provided.

What if I can't castrate by two months?

Castrating older male animals without anesthesia 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 scalpel 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



The Burdizzo castrator

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 anesthesia 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 such as xylazine 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

THE BIGGER PICTURE

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 healthcare" 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 byproducts 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 can 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



Wormwood can be an effective natural dewormer

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. The udder 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.

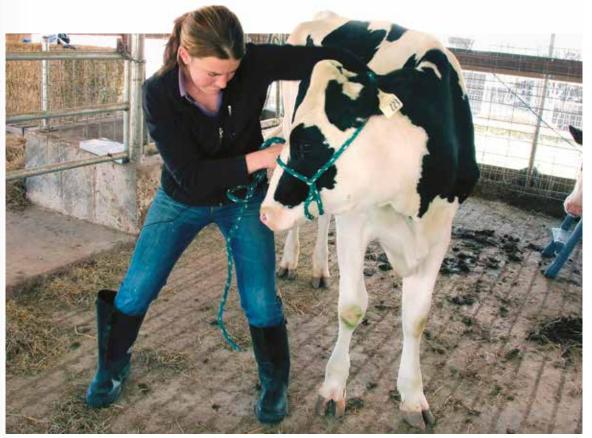
Gentian violet, on the other hand, is not approved for topical use in food animals. In the U.S., any trace of gentian violet (also called crystal violet) in any food product constitutes an illegal residue. But despite the potential health and legal risks, a blue wound spray containing this ingredient 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



Diet can significantly influence milk or meat flavor



Veterinarian Sara Gilbertson performs a chiropractic adjustment on a dairy cow

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, pennyroyal 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.

CHIROPRACTIC TREATMENTS

Used for variety of orthopedic and neurological issues via hands-on manipulation

Injury risk
Low to high.
Likely to depend
on the provider's
chiropractic and
veterinary expertise

Interactions
Few. Can be used in conjunction with other treatments

Residues None

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

THINKING PIG

Understanding animal behavior is vital to ensure they can express their basic behavioral needs

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 seminatural 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 reduce 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 sows that received baleage as over-ground enrichment spend 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. Preparturient sows are highly motivated to obtain nesting material and behavior during nest building and farrowing is related to the general reaction pattern during 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 will have a much greater effect on piglet survival than 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, their urge to root and manipulate different materials must still be met. 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 rack compared to when chopped straw is given via a dispenser.

Article adapted from Farm Health Online. For more information about practical, science-based advice on high-welfare livestock management, visit farmhealthonline.com

ROOT CAUSES

Pigs are opportunistic omnivores who use rooting behavior to find food and nutrients.

root and manipulate materials whether or not they need to root to find food.

manipulating.

If pigs are deprived of opportunities to root and explore it can lead to welfare problems such as tail biting.

© Certification news

SUPPLY AND DEMAND

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

Tim Holmes is Director

of Compliance with

A Greener World

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 1.0.3 states farmers must not use "split" or "dual" systems. where animals or birds 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 guestions they have. To start this process, contact your FMOC, who will provide all the support you

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 animals 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 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.

They continue to

Farmed pigs spend the majority of their active time investigating and

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A GREENER WORLD

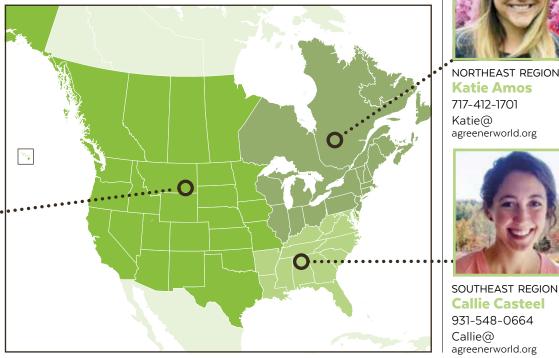
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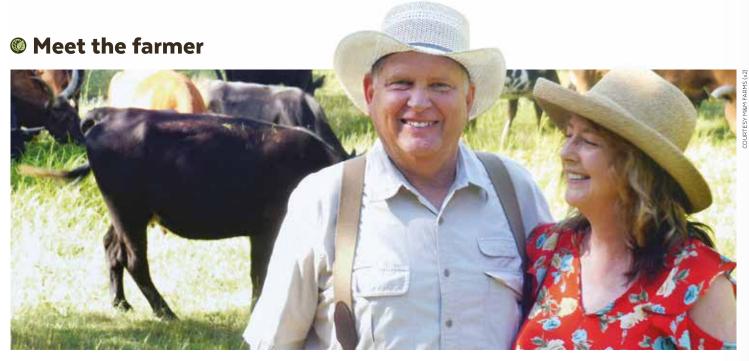


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MOORE THE MERRIER

Sue and Tom Moore raise grassfed registered Longhorn beef cattle on 60 acres of pasture and woodland near Rudy in northwest Arkansas. M&M Farms was the first farm in Arkansas to be Certified Grassfed by AGW for beef cattle.

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 Lim-Flex 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 dependancy 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!

How can the market for AGW food be improved?

Some consumers are overwhelmed with learning about the benefits of grassfed beef, and don't know how to cook it. They should be introduced in a very friendly way.

What is the biggest threat to the sustainable farming movement?

Lack of education. Consumers must be exposed to the benefits of sustainable farming. As sustainable farmers, we are the leaders. We need the followers.

What do you love most about what you do?

Walking among our cattle. Or the sparkle in the eye of a customer when they 'get' what we do.

AT A GLANCE

Farm: M&M Farms, Rudy, AR Certification/date: Certified Animal Welfare Approved, Certified Grassfed by AGW 2015 Size: 30 acres native grass, 30 acres mixed forest Soil type: Sandy loam/rock Altitude: 750 ft **Annual rainfall:** 48 inches Enterprises: Certified Grassfed

by AGW Longhorn

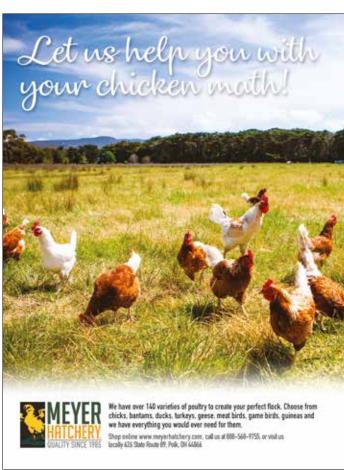
cattle, selling direct

and Limflex beef











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"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

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