

SUSTAINABLE FARMING

INCORPORATING AWA NEWSLETTER

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**STILL
DELIVERING
A GREENER
WORLD**

PLUS
COVID-19: FIGHT OR FLIGHT
CATTLE: STAY IN CONTROL
REGENERATIVE STANDARDS



TIME TO REBUILD



It’s easy to sound glib in these unprecedented times but farmers and ranchers—and their families and local communities—have been on our minds 24/7.

As the scale of the COVID-19 pandemic became clear, our first priority was the safety of AGW staff and farming families in the program. We halted all physical site audits and all staff travel in March. It was the right decision because the situation rapidly worsened.

When the nation shut down, countless farmers who sold to restaurants, schools and other institutions lost markets almost overnight. In response, AGW took immediate action to help. First, we sought to minimize the strain on farmers and ranchers in the program—for example, by suspending audit fee collection and extending deadlines for compliance documents. With farms unable to sell product, and many communities seeing increasing dependence on food assistance, we set up a nationwide campaign—‘Help Farmers Feed Hungry Families’—to connect farmers who have excess supply with local food banks. In this way, we can help get food to people who need it the most while helping to keep farms in business.

When we learned that thousands of independent farms were ineligible for federal support, we joined over 20 other sustainable food companies and advocacy groups (including Farm Aid and the Sustainable Food Trade Association) to urge

Congress to ensure independent farmers could access the \$1.8 trillion emergency relief fund. We approached key representatives to express our anger that most federal funding has gone to large commodity players instead. We will continue to engage on behalf of independent farmers.

Our FMOC team has reached out to every certified farm to assess their individual situations and we’ve been sending out a weekly email to keep everyone informed. We’ve regularly updated the COVID-19 resources on our website with useful information on direct marketing, grants and funding, e-commerce, shipping and more, as well as advice on emergency planning going forward.

While public safety is paramount, it’s in everyone’s interests to maintain the integrity of AGW programs and certified businesses. So we have introduced new protocols for remote auditing and will resume on-site audits as soon as it’s safe to do so (see page 19). The situation remains highly fluid: as I write, the infection rate is rising again in many states.

But COVID has fundamentally exposed the fragility of our centralized food system and many consumers won’t forget the empty grocery store shelves or the way independent farmers stepped up to help. We will have an opportunity to rebuild. When that times comes we must all be ready. In the meantime, please let us know if we can help navigate this ever-changing environment.

Andrew G. Mundy

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NEW STANDARD

Get early access to regenerative markets—without being organic



The Certified Regenerative by A Greener World (AGW) label is now available to farmers and ranchers.

Launched this summer, the new program offers whole-farm assurance of sustainability, measuring benefits for soil, water, air, biodiversity, infrastructure, animal welfare and social responsibility. While other regenerative labels exist, Certified Regenerative by AGW is the *only* regenerative label that ensures audited, high-welfare animal management and slaughter.

“We’re delighted to launch our Certified Regenerative by AGW standards, which promote ecological balance through continual improvement of healthy, thriving ecosystems from the soil up,” says Emily Moose, Director of Communications and Outreach. “Truly regenerative farming means better treatment for workers and animals, and healthier farm ecosystems with cleaner air and water—which grow healthier food.”

“Open to all farmers, regardless of organic certification, Certified Regenerative by AGW is the only regenerative agriculture program that functions as a management tool, helping producers meet their own regenerative goals through an audited, regenerative plan and meeting farmers where they are and partnering on a journey of regeneration.”

Before introducing the new standards, AGW carried out a comprehensive analysis of best practices and the latest science on the regenerative approach. Certified Regenerative by AGW farms are audited each year to detailed standards, criteria and principles that ensure comprehensive verification of regenerative practices. The new standards are rigorous, practical and achievable, offering a common understanding of regenerative production that delivers sustainability and meets consumer expectations.

Interested? Contact your regional FMOC for more information (see page 24).

IN THE NEWS...

ROUNDUP LAWSUITS

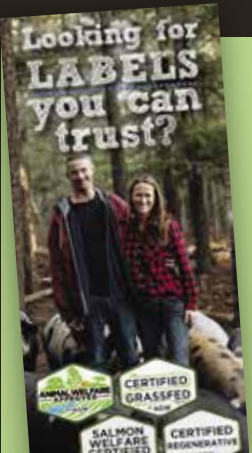
Bayer will pay up to \$10.9 billion to settle a number of lawsuits about the potential carcinogenic effects of its glyphosate-based herbicide, Roundup.

The German agrichemical giant acquired its rival Monsanto in 2018 for \$63 billion and has been facing over 125,000 claims in the U.S. after a California court issued the first ruling linking the herbicide to cancer. The company continues to deny any safety concerns: “We stand strongly behind our glyphosate-based herbicides.”

DAMAGING PRACTICES

Scientists at Rothamsted Research UK have definitively demonstrated that intensive farming practices drain the soil of carbon, altering the structure of soils’ microscopic habitat.

Writing in the Scientific Reports journal, they say, “the shift from manure to ammonia and phosphorous based fertilizers has caused microbes to metabolize more carbon, excrete less polymers and fundamentally alter the properties of farmland soils when compared to their original grassland state.”



NEW BROCHURE

A new consumer brochure is now available to certified farmers and ranchers. Part of AGW’s extensive promotional merchandise range, the tri-folded consumer brochure describes AGW’s third-party certifications using easy-to-understand information and eye-catching images, and is designed to show customers the wide-ranging benefits of AGW’s family of certifications.

For farms and businesses selling AGW-certified products. To order, see page 25.

BEE BRAIN IMPAIRMENT

Pesticides can impair brain growth in bumblebees, warn scientists. Published in *Proceedings of the Royal Society B*, researchers at Imperial College London used micro-CT scanning technology to show how parts of bumblebee brains grew abnormally when exposed to neonicotinoid pesticides during their larval phase, making them poorer at performing tasks later in life. They argue that direct exposure to pesticides through residues on flowers should not be the only consideration when determining potential pesticide harm.



IN THE NEWS...

HELP FEED HUNGRY FAMILIES FUNDRAISER

A Greener World is leading a nationwide campaign to help farmers deliver products to people severely impacted by COVID-19.

Rising unemployment, school nutrition program closures and massive strain on traditional support networks led to skyrocketing demand for food assistance. At the same time, farmers who depended on sales to restaurants, schools and other institutional customers lost markets overnight. While \$19 billion in COVID relief was promised to support farmers, this is expected to benefit large commodity producers.

AGW's peer-to-peer fundraiser, Help Farmers Feed Hungry Families, is connecting certified farms with excess food to local food banks, homeless shelters, meals on wheels, and other nonprofits to feed those who need it most, enabling AGW supporters to provide financial assistance to help farms and their communities in need.

Hunter Farms in Jakin, GA saw beef sales drop and the farm was left with excess supply. With the support of AGW donors, they were able to share their Certified Animal Welfare Approved by AGW beef with Manna Drop's monthly food box pickup at Friendship United Methodist Church, a program serving 300 families year-round. Robert Braun of Pigeon River Farm, WI is providing pasture-raised eggs to the Interfaith Food Pantry in Portage County, which serves around 230 families twice a month. For every \$10 given, the Brauns deliver three dozen eggs to help families in need. "Our goal is to provide 180 dozen eggs twice a month," says Braun.

"By connecting farmers with excess supply with their local food banks, we can get food to those who need it while helping farms stay in business," says AGW Executive Director Andrew Gunther.

Visit give.agreenerworld.org/covid19



Robert Braun, Pigeon River Farm



Chad Hunter, Hunter Farms



April Thatcher, April Joy Farm

THE WHITE STUFF

Water and milk are the only drinks recommended for toddlers, according to the Food Safety Authority of Ireland (FSAI).

Their report, *Scientific Recommendations for Food-Based Dietary Guidelines for 1 to 5 Year-Olds in Ireland*, defines milk as a "key food," specifying a daily intake of 18.5 ounces of cow's milk or equivalent amounts of yogurt or cheese.

The report also warns that "some beverages such as almond 'milk', coconut 'milk' and rice 'milk' ... are nutritionally inadequate."

Read the full report at fsai.ie



ZEAL APPEAL

Zeal Grass Milk is the first Midwest brand to offer Certified Animal Welfare Approved by AGW milk.

Part of the Free Range Dairies Group, Zeal Grass Milk Creamery sources milk from partner Missouri farms where cows are raised outdoors under an intensive rotational grazing system. The milk comes in two popular flavors—whole and chocolate—and is available at select Chicagoland stores including Sunset Foods, Sugar Beet Food Co-op and Fresh Farms.

"Zeal Grass Milk's products perfectly showcase where we're driving the food system: unmatched integrity, excellent quality and real nutrition," says Sarah Hanlon, Director of Marketing at Sunset Foods.

Visit zealgrassmilk.com

A WIN WIN

Members of two retirement communities in North Carolina are benefitting from nutritious Certified Animal Welfare Approved by AGW pork, sourced from local farms.

Sam Suchoff, owner of The Pig, Lady Edison and Deli Edison in Chapel Hill, is supplying the Carolina Meadows and Galloway Ridge retirement communities with fresh pasture-raised pork sourced from farmers in the North Carolina Natural Hog Growers Association (NCNHGA).

"Many restaurants and farming businesses have been severely impacted by the COVID pandemic," says Callie Casteel, AGW's Farmer and Market Outreach Coordinator covering North Carolina. "Sam's sourcing relationship with the two retirement communities not only supplies nutrient-dense pork to some of the most vulnerable, but offers a new outlet to NCNHGA farmers at a time when they need it most."

left to right: Wallace, Jones and Suchoff



AUDIT SUSPENSION

AGW has introduced temporary remote auditing procedures to maintain integrity of all programs and certified businesses. "Our first priority is keeping people safe and minimizing the spread of this deadly disease," says Tim Holmes, AGW's Director of Compliance. "We didn't want a farmer who just lost their market to worry about paying their audit invoice. So we introduced several temporary measures to help, including a hold on collecting audit fees up to June 1st and extending some deadlines for compliance documents."

See also page 23

HEAL THE LAND AND PEOPLE

Hundreds of delegates took part in a 'Heal the Land, Heal the People' webinar in early June, organized by the Integra Trust, to raise awareness of the social, economic and environmental benefits of sustainable food and farming practices in South Africa.

AGW South Africa Executive Director, Tozie Zokufa, was one of 30 expert speakers, which included numerous sessions throughout the day. Zokufa spoke on a virtual panel, chaired by Dr Pieter Prinsloo of Certified

Grassfed by AGW Langside Meats, to discuss the importance of producing food with integrity and sustainably and the role AGW South Africa can play in bringing sustainable farmers and consumers together through food labels they can trust.

"This was an exciting and timely initiative, with the opportunity to significantly raise the profile of A Greener World and our trusted food certifications in South Africa—and beyond," says Zokufa.



CHOOSE NON-GMO



Thinking about becoming Certified Non-GMO by AGW? If so, now is your chance: for a limited time we're offering a 25% discount.

The market for non-GMO products is surging 17% annually and is expected to reach over \$1.1 billion by 2023, according to industry analyst, Technavio. A lack of clear labeling around GMOs means that consumers must actively seek out Certified Non-GMO products to avoid them.

Available to farmers, ranchers and food producers, the Certified Non-GMO by AGW label guarantees food products are produced without genetically engineered/modified feed, supplements or

ingredients, and that meat, dairy and eggs come from animals raised according to the highest animal welfare standards in the industry.

With independent annual audits to ensure compliance, Certified Non-GMO by AGW provides farmers, ranchers and food producers with a robust, trusted and highly competitive non-GMO label claim. If you would like to discuss the benefits—and how Certified Non-GMO by AGW stacks up to other non-GMO labels out there—get in touch today!

Visit agreenerworld.org/certifications/certified-nongmo-agw



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

Your donation supports real change.

A Greener World is a nonprofit that is made possible by donations from people like you. Because we are not dependent on certification fees, we can remain impartial in our auditing, resulting in unrivaled integrity and trust. Your donations help us stay independent. Will you partner with us to build a greener world by giving today?

Learn more at agreenerworld.org/donate

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call 800-373-8806

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FLINT PLANTATION HERITAGE BE

WALLACE

LOOKING FOR A STANDOUT LABEL?

Our labeling team can help you create a high-impact design that complies with all relevant food labeling guidelines.

Available FREE OF CHARGE to farmers, ranchers and food businesses in the AGW certification family.

For full details visit agreenerworld.org/farmer-services/labeling-support
or call 800-373-8806

Opinion

BRITAIN AT BREAKING POINT?



Don't fall for the UK's anti-U.S. rhetoric, warns Wayne Copp

Over the coming weeks and months, American farmers and ranchers will probably hear a lot of apparent anti-U.S. farming reaction from the UK. On behalf of all British farmers, please don't take it personally.

The 'B' word

In 2016, 51.89% of Britons voted to leave the European Union in what is now known as the Brexit referendum. Objectively, it is fair to say that most British farmers were more than a little 'misled' in the pre-election promises and predictions from the Vote Leave campaign.

After leaving the clutches of the EU, we were promised, British farming would once again flourish. By 'taking back control' and cutting away all the EU red tape we would be free to trade with the EU and the rest of the world but without all the regulations and paperwork. We could have our (British) cake and eat it.

Yet three years on and the penny is finally dropping: many farmers now realize they may well have voted for their own demise.

Post-Brexit realities

The reality is that the future of thousands of British farming families—and our hard-won environmental and animal welfare standards—is now effectively up for sale to the highest bidder. And the going price? A successful free-trade deal with the Trump administration.

Despite all the pre-election promises and seductive words, it is clear the current government, led by prime minister Boris Johnson, is callously reneging on its Brexit campaign rhetoric. At the time of writing it looks increasingly certain the UK faces a disastrous 'no deal' Brexit where we default to trade under WTO rules. Food imports

produced to lesser standards will give most UK farmers limited options: either lowering their production standards to compete or go out of business. It's a stark choice.

Make no mistake: the 'perfect storm' that is unfolding before us could devastate UK farming culture. Just take away farm subsidies, cut off easy access to the biggest market on our doorstep and flood the domestic market with cheap imports that would be illegal to produce here in the UK. Despite all the promises, British farming families, their animals and the environment are simply 'collateral damage' in the pursuit of a Trump trade deal.

It's not you, it's me

So, yes, we are angry. We fear for the future. But despite what you are likely to hear, our problem is **not** with U.S. farmers. Like many of you, we have faced decades of mounting pressure to 'get big or get out.' So far we have managed to remain independent and resist the vertically integrated industrial 'contract' farming model that is so prevalent in the U.S. And thanks to extensive animal welfare and environmental regulations (and perhaps Britain's long-held reputation as a nation of animal lovers), the large-scale CAFOs and feedlots you know so well are still a rarity over here. But this is now all under threat.

I have always been proud of the steps that farmers have taken in the UK to be world leaders in pastoral, high-welfare farming. And I am horrified at the prospect of this being 'traded away.' We are calling on the government to listen to the public and farmers and honor its election and Brexit promises. If they fail to do so, Boris Johnson will go down in history as the prime minister who sold off UK farming and the environment—and failed the British public.

Wayne Copp is
Executive Director,
AGW UK and Europe

COVID-19 FIGHT OR FLIGHT

We must grasp this moment and use it to reimagine agriculture, says Andrew Gunther

As a farming organization certifying high-welfare, pasture-based farming practices, we are used to challenges. But this is unlike anything we have faced before.

As COVID-19 spread across the world like an unwelcome smog it became increasingly obvious that organizations and businesses paralyzed by the overwhelming feeling of helplessness would struggle to survive. As the weeks roll on, we realize this may be the defining lesson for the future of sustainable agriculture.

Key observations

Early in the pandemic, A Greener World paused auditing, transitioned to remote work and focused solely on meeting our farmers' needs and helping them adapt to a radically different reality. While this shift happened relatively quickly, I saw more complex supply chains struggle to adapt. If there is wisdom to be gleaned from reflecting as this pandemic unfolds, we hope our observations and conclusions can be of use.

From the vantage point of independent, sustainable agriculture, this is what we've seen:

- ▶ Panic-buying and shocked supply chains. While conventional supply chains are very efficient, they can also be unwieldy—when they stop, they stop hard, putting a lot of volume on hold.
- ▶ Farms whose products are normally processed further (e.g. milk) having to dispose of products due to supply chain disruptions, low processing capacity and predatory practices by processors. This is hard for farmers, made even more distressing in the face of widespread food insecurity.
- ▶ Rejection of science on a terrifying scale, even among the most powerful decision makers. We saw conversations quickly polarized, preventing obvious and sensible solutions.
- ▶ A range of personal reactions. Team members with practical farming experience pivoted extremely quickly from one role to another, while those without farming experience appeared to take a few days longer. This may reflect the two groups' different skillsets, as well as the unshakeable ingenuity of farmers.
- ▶ Immediate adaptation by farmers able to market directly to consumers. Many of the supply chains we're working with are shorter and more nimble, allowing them to respond quickly to changing needs.
- ▶ State and federal governmental responses all over the map, with some states going in and out of lockdown seemingly without justification, others coordinating country-worthy responses, and others proudly burying their heads in the sand.

Lessons to learn

Many have observed that COVID-19 is a practice round for how we as a planet will respond to the increasing threats of climate change. If so, I fear we will fail the test tragically unless we make some urgent changes. While this pandemic is still unfolding, I hope we may draw some lessons that could strengthen future efforts to tackle global challenges constructively:

- ▶ Let go of assumptions. What worked before will likely fail now, and traditional strengths may be weaknesses—and vice versa.
- ▶ Ensure the health and safety of the most vulnerable: the elderly, the healthcare workers, economically disadvantaged, the incarcerated, those on the front lines of food and farming. Whether for altruistic or selfish reasons, caring for these groups keeps us all safer.
- ▶ Listen to farmers and scientists—they understand the short and long-term impacts better than most. Lock the corporate lobbyists in the closet.
- ▶ Give everyone a way to engage (example: A Greener World's supporters pitched in to fund food bank donations from farmers without markets, getting nutritious, pasture-raised meats, dairy and eggs to people most in need).
- ▶ Get comfortable with a certain amount of redundancy. Airplanes have two control systems in case one goes down, yet we have no backup in agriculture. Eliminating all of the redundancies in our food system in the pursuit of "efficiency" has made it fragile. Planning and redundancy are keys to a functioning system—whether it's food or healthcare.

These lessons are learned through a lens of agriculture, but I challenge you to find a global challenge that isn't. In five decades of farming I've noticed that nothing makes us think about farmers as much as empty grocery store shelves. Our flagship certification and food label, Certified Animal Welfare Approved by AGW, was launched on the precipice of a national recession here in the United States, and I would not be surprised to see a resurgent interest in those who feed us.

A broken system

We work with farmers operating largely outside of the current norm. The vast majority of farm animals in the United States are raised in industrial confinement systems that rely on routine antibiotics, lax environmental and labor regulations, uncompetitive markets and subsidies maximizing supply to the benefit of processors and detriment of producers. Animals are also brought to market just in time, which means that as processing capacity failed, production continued, leaving massive oversupply. The

"If we continue to be satisfied making a limited impact we will not make the changes the next generation deserves"

system is so finely tuned that a few weeks' pause results in animals too big for processing and handling equipment, as well as too late for the projected demand. This is resulting in animals being euthanized and dumped. This is not an indictment of farmers in this system—farmers can only produce for the markets available to them. The way we farm in the United States is a direct product of seeing food through the sole lens of price and profit, and of not demanding better.

A challenging time

The UN's FAO has called for agroecology as solution for climate change. This is what our farmers do—biodiverse stewardship that protects the environment, supports public health and nourishes rural economies—but these neighbors and environmental stewards are at risk.

The most vulnerable part of sustainable agriculture is the part that was just making it into the mainstream—the restaurant suppliers, the school meal suppliers, all those approaching change at the scale we so desperately need. We have just started to see schools serving pasture-raised meats, dairy and eggs from independent, sustainable producers, foods renowned for their nutritional benefits and valued for keeping food dollars in the local community. I am very concerned about these markets and their ability to rebound, unless we fight for them now.

This is a challenging time for sustainable agriculture. Not necessarily on every farm—many are doing what they do every day: raising animals, fruits and vegetables for appreciative communities—but challenging for the trajectory of this movement. And this challenge will require new and honed skills as we navigate a post-pandemic world. Tweaking at the fringes will not work—now or in the future.

The future

If we in sustainable agriculture continue to be satisfied with having our impact quarantined to farmers markets and private gardens, we will not make the changes the next generation deserves. I challenge everyone meeting this moment to use it to reimagine the scale of the problems before us, as well as the urgency of their solutions, and face both head-on with clear purpose.

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A BRAVE NEW WORLD

No one can predict what will happen next. But the COVID pandemic means we must all plan for an uncertain future

Following the global outbreak of COVID-19, we know that many farmers (particularly those who supply the hospitality sector) lost the majority of their markets almost overnight. We also know some farmers with established home delivery services, online sales or farm shops have been inundated by desperate customers. At the same time, many of the services and supply chains that farmers rely on—think animal feed or veterinary services, slaughter facilities and outlets like farmers' markets—are at risk of disruption.

Survival mode

Regardless of your business model, many farmers are now in 'survival mode,' forced to make rapid decisions that will impact the future of their farms.

So how do you decide what to do when faced with a total market collapse or unprecedented demand that is sudden, unexpected, unavoidable and unplanned for?

At A Greener World, we're proud of our reputation for being a practical, common-sense program that's grounded in the realities of everyday farm and ranch life. Indeed, most of our auditors and Compliance staff have many years of practical experience in farming. And we know from personal experience that when markets collapse suddenly—or demand unexpectedly explodes—it is important for farmers to take time out to look objectively at their own unique situation in order to make realistic and honest decisions for the future. This takes a lot of discipline: it can be very hard to remain objective when you have so much of your identity and life invested in your farm business. But it is an absolute necessity.

What is your market?

Farmers who are selling daily or weekly will have very different options compared to those who are selling monthly, quarterly or even once a year (for example, those who raise turkey or geese for the Holiday seasons).

In the case of market collapse, is it possible to delay marketing an animal? Producers who are raising pigs and poultry have very limited options once these animals are in a growth system due to



the ongoing feeding costs—even if keeping animals on a maintenance diet. For farmers with ruminants it is often easier to find more land on which to keep animals or to reduce associated feed costs. But delays in selling or moving stock can quickly result in farms running out of lower cost pasture options and increasingly relying on more costly conserved forage and feeding alternatives.

In either case, pastures and housing can quickly fill up fast. Where freezer space is available, farmers can go ahead and slaughter and store. But this obviously presents additional risks if the market does not recover quickly enough, for example, or where your customers are seeking only fresh product.

On the other hand, when demand suddenly explodes, a farm can be faced with excess demand—and the risk of losing their market to those who can meet it. In such situations, a farm can quickly move all their current production and start selling next year’s product as well. However, we are aware that obtaining slaughter slots to process the extra sales can be a big problem. With many species, such as cattle, it can take two years or more to increase supply with the farms’ own breeding herd production. Similarly, it generally takes 10 months or more to bring farrow to finish pigs to point of sale. The only option is to rapidly source either feeder animals or point-of-slaughter animals to meet excess demand.

What alternative markets are available?

Is home delivery an option? Or, more likely, can you work with existing local, regional or national distributors and marketers who are supplying local, regional and national markets?

In many areas, local restaurants that have been forced to close are attempting to operate as takeout/delivery services or local food hubs. Could they provide a new outlet for your products? Or are there other more general markets available that could help mitigate costs and lesson potential losses? We have seen an explosion of online suppliers of high-quality, specialized meats; perhaps these outlets can offer new market opportunities without the complications of marketing and shipping yourselves.

If you are interested in setting up home delivery or online sales there are plenty of options available. Check our online resources for sources of online sales advice and associated suppliers.

How secure are your markets?

Farmers’ markets and similar locations where large numbers of people gather in one place are now subject to significant restriction, and some have even closed. Will your existing clients and outlets still exist or be able to buy from you in the future? It is an open question as to who will remain

BIG QUESTIONS

Take a minute and ask yourself a few simple questions ...

1. Where does my animal feed come from and what supply interruptions could occur? Do I have sufficient on-farm supplies to see me through? What’s the lead time for ordering?

2. What if I have to keep my animals on the farm for a prolonged period? Where will I put them? What would I feed them? And how much will that cost? Can I afford the cost?

3. If my slaughter plant closes down, what alternatives exist? How do I communicate with my customers if my product may not be available?

4. If my distributor or delivery service is forced to close how would I get product to my customers?

5. If all of the things that could happen DO happen, have I got enough resources to be ready?

financially viable when everything settles and what marketing opportunities will exist. Talk to your customers. Seek to minimize your exposure to risk, wherever possible.

Supplies and resources

Will the necessary supplies and resources to maintain your business—such as feed, slaughter capability, delivery and processing—continue to be available in the short-, medium- and long-term? Supply chains are rightly being prioritized for human food; and we are already hearing animal feeds are taking (quite rightly) second seat to human feed. Veterinary services, feed suppliers, slaughter/processing facilities and other important services have also been reduced or shut down due to virus-related labor shortages, for example.

We are aware that the sudden availability of previously dedicated commodity animals for finishing and slaughter has caused unexpected complications, because the animals can be sourced for a fraction of their normal value—and huge short-term profits are possible. Some plants that slaughtered for individual clients temporarily switched to slaughtering excess commercial production, either halting or significantly cutting back on slaughter for their normal clients. We have also seen consumers purchasing animals direct from farms that did not previously have a direct market program and having them slaughtered for their freezers. Again, this has caused slaughter slots to fill quickly.

Try to stay in regular contact with your customers, suppliers and service providers. Talk to your vet about potential shortages of key products like medicines and disinfectants, and discuss possible mitigating strategies/alternatives.

How long will the current situation last?

At present there is no answer to this question. The situation is constantly changing. Try to listen to trusted sources for information or guidance.



MIKE SUAREZ

Set aside time to plan for the future

NO SHORTCUTS

In some cases, the lure of cheap—or even free—commercial animals as a ‘quick fix’ to help meet unprecedented consumer demand has proved too irresistible. As the old saying goes, “there’s no such thing as a free lunch.” Some farms have bought in ‘cheap’ animals only to discover they were harboring unexpected surprises, including serious diseases like PRRS or troublesome parasites such as mange that were not previously an issue, and may well end up costing them their businesses.



What is my current financial situation?

What resources can you bring to bear to help weather the current situation? How much access to capital do you have, and what type?

How long will it take my farm to recover?

This will depend on your unique situation: your markets, how long the crisis lasts, any government action/support, personal resources available and tolerance to debt and future income producing ability.

What is my risk tolerance?

You are going to be making decisions based on imperfect information. There may be some facts, alongside educated guesses and some wild speculation on how things will unfold. You will be right on some of it and wrong on others, as will all the “experts” out there. Some people are more comfortable with higher uncertainty than others. Similarly, the tolerance of different levels of debt and risk will be different for everyone, too. You will have to decide how much you are willing to invest to keep the farm operating. How much of your own savings are you willing to risk, or money borrowed from others?

Time to make plans

You need to make both short-term and long-term plans, based on the questions above. Situations like this are very fluid and plans must be adjusted based on the latest information.

We must remember that sometimes things are simply beyond our control and that the best solution may also be the hardest. In the extreme, that might be to exit farming—or to shut down the farms’ direct marketing operation and try again once things have stabilized.

Timing and where you are in life will make a big difference. If you have good markets and are well-funded, the coronavirus outbreak may represent just a bump in the road. If you just started farming and you won’t be marketing until next year, then it all could be forgotten by then. But if you were already struggling and you are resource-scarce it may be time to look to other options.

Every farmer needs to evaluate their situation based on their individual goals and the resources available to them. By being prepared and planning ahead, you can lessen the impact of potential supply-chain interruption over the coming months. It is always better to make a decision based on the facts of your situation than to have it made for you.

As always, please let us know if we can help you to navigate this ever-changing environment.

Turn to page 24 to contact your regional AGW Farmer and Market Outreach Coordinator.



AGW RESOURCES

We are actively compiling a list of online resources for farmers and ranchers who are working through challenges brought about by COVID-19.

These include:

- ▶ Grants and financial assistance/advice
- ▶ Full-service online sales platforms
- ▶ Social media marketing advice
- ▶ Taking payment (online, in-person)
- ▶ Inventory management
- ▶ DIY online storefront and e-commerce
- ▶ Shipping resources
- ▶ Shipping material suppliers
- ▶ COVID-19 news on impacts for farmers and food businesses

The list offers a wide selection of practical guides, case studies, useful tools and more from AGW and external organizations—including USDA/Agriculture and Agri-Food Canada and other government agencies, state extensions, relief funds, representative organizations and other nonprofits—and is constantly being updated.

Visit agreenerworld.org/a-greener-world/covid-19-collected-resources-for-farmers/ or contact your Farmer and Market Outreach Coordinator (see page 24).



IN CONTROL OF OUR IMPULSES

Understanding the effect we have on our cattle when we are working them is the key to success, says Dylan Biggs

What defines success when we are working cattle? Years ago success for me was just getting the job done. Now, success is about specific outcomes I want to achieve. At the end of the day, regardless of techniques, do's and don'ts or rights or wrongs, they are all academic if the outcome isn't achieved.

The outcome I strive for now is calm, relaxed cattle. When I pressure cattle to ask them to move or turn, slow down or speed up, I want them to respond in a calm, voluntary manner. When a cow walks calmly through the gate into the corral or onto a stock trailer or out of the squeeze; or a herd walks calmly into a new pasture and they put their heads down grazing, that is my definition of success. To do this, I had to learn to take my cues from the cattle. I had to learn to listen to them so I could be in the right place at the right time and in the right manner.

Self-awareness

Getting cattle to do what we want can be quite a challenge. There are times when cattle truly are not interested in going along with our plan. There are also times when, in our efforts to get them to do what we want, we end up being in their way without even knowing it. On the surface this may seem rather unlikely—and 30 years ago if anyone had told me that I was the cause of many of the problems I was having moving an animal or a herd,

I wouldn't have believed them. It is always easier to blame the cattle, the dog, our spouse, kids, our help, the weather or various other circumstances for the problems we are having working our cattle. But if we are going to have consistent success handling cattle, it is imperative that we become acutely aware of counterproductive positioning, pressure and/or timing. Otherwise we will be doomed to struggle from our own errors.

Negative associations

Something people often feel compelled to do is increase the pressure on cattle the closer they get to the destination, whether it's the gate, the corral, the barn or the back of the stock trailer. The closer we get the more you start feeling the anxiety of "I sure hope we don't lose them now"—and the more pressure we instinctively want to apply. Without even knowing it, we start to push the cattle harder as added insurance. After all, no one wants to get to the gate, corrals, barn door or stock trailer only to have the cattle turn around and run off. Just when the animal is at the threshold is when we feel the strongest urge to rush the cow: to slap, poke or prod her to "make sure" she goes. It is almost an instinctive response and easily becomes a habit.

Whether she goes or not, we have communicated to her that the closer she gets to where we want

her, the more pressure she'll experience—in other words, the more unsafe her life becomes. Then we assume that the cows don't want to go there because they are afraid of ["whatever"].

It is something I observe everywhere I go, whether at places with thousands of head of cattle or with 10. We unintentionally teach our cattle that the places we want them to go are not safe because of the stress we create for them.

I am not saying there aren't circumstances where more pressure isn't required. But the question is: are the cattle slowing down or on the verge of stopping, signalling the need for more pressure? If we are just pushing the cattle harder in response to our own insecurity or impulse there is a high probability of unintended consequences that can result in the moment, and that stress can accumulate over time.

Trust and respect

Some people believe all that is necessary to handle cattle successfully is enough kindness, compassion and patience. Yes, a compassionate heart is essential as a foundation for patience when working with animals. But if a cow's mind is firmly fixed elsewhere we can whisper all the sweet nothings we want: it will be to no avail! If a bull's mind is on cycling cows, sweet nothings will not walk him home. Nor will it prevent calves from

"It is always easier to blame the cattle, the dog, our spouse, kids, our help, the weather..."

TK RANCH

running back to find Mom or get cows to go pair up with their calves if fresh spring grass is on the menu after a long, cold winter on dry hay.

What will work in all these situations is an approach to cattle handling that establishes enough trust and respect that the cattle will voluntarily yield to your position and pressure to go when and where you choose. If cattle are going to yield to your position in a calm responsive manner they must trust you and they must respect you. If you observe the hierarchical social structure of a herd you will know that the boss cow does not establish or maintain preferential access to the best of all things in her world without firmly establishing and maintaining respect from the rest of the herd.

Observation is the key

The reality is that the majority of cattle handling problems actually stem from instinctive human behaviors and it is imperative that we become aware of these impulses and tendencies around livestock so we can avoid the unintended consequences. Over the years I have had plenty of folks explain to me that their cows don't want to do this or that because of "X, Y or Z"; my response is that while this may be true, it may also be that the cows want to avoid the human commotion that they associated with those specific locations. Several times I have been told that "the cattle won't go into the corral." But then I have worked their cows and have walked them right into the corral with no problem, where they stand there calm and quiet.

Whether we are aware of it or not, every time we are handling our cattle we are training them. Training them to be more trusting, responsive and controllable—or less trusting, less responsive and less controllable. Becoming aware of the effect we have on our cattle when we are working them requires that we observe how they respond to us, what are they telling us. If we are listening they will tell us what we need to know to be in the best position possible at the right time and with the right kind of movement. Once we are aware of—and in control of—our instinctive behaviors we will be better equipped to handle cattle in a manner that gets the job done efficiently and safely, and with minimum stress.

Further information

Dylan Biggs offers regular practical seminars on low-stress livestock handling, including: introductory one-day seminars; intensive two-day cattle handling clinics; advanced cattle handling clinics; and custom cattle handling clinics. Find out more at dylanbiggs.com or call 1-888-857-2624. Watch Dylan in practice in a Canadian Centre for Health & Safety in Agriculture video: [youtube.com/watch?v=45jAC5PEqTI](https://www.youtube.com/watch?v=45jAC5PEqTI)

How to corral OK

Cattle that are nervous and flighty in corrals are almost always behaving that way due to the residual nervousness of the 'pasture gather, move and penning' experience. The behavior in the corral is an indication and reflection of what went before the corral. If the milk is spilled getting to the corral it can be tough to remedy how the cattle behave in the corral itself. How you work them can make it worse, but even if one is very conscientious they are not going to calm down right then and there.

Let's assume the location is the gate into the corrals. Ideally the cattle will be comfortable coming to and going through the gate into the corral. We don't want them to associate the gate with fear or anxiety, yet that is what we risk if every time they get close to the gate we get anxious and start pushing harder, especially if we start making a commotion with noise and arm waiving to get them to go through the gate. We want them to want to be there but because of impulse we can easily do a good job of training them to actively avoid the gate. Maintaining a calm confident demeanor in all situations is ideal.

The next impulse that is often acted on in combination with pushing harder is the impulse to push directly into the rear of the herd from behind. What this risks if this is sustained for any time at all is flaring out the side of the herd which will stop your movement and or worse the lead will flare out and in no time the herd is turning around and coming back on top of you. All of this can happen in short order and happen as a result of our actions, yet we invariably blame it on the cattle.



Dylan Biggs works with a group of yearling heifers

Dylan and Colleen Biggs raise Certified Grassfed by AGW beef cattle and sheep and Certified Animal Welfare Approved by AGW pigs at TK Ranch in Alberta. Visit tkranch.com

KRISTEN KELDERMAN, FARM AND FOOD CARE ONTARIO

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Scanning electron microscopic image of larval nematode (worm) trapped in sticky loops of *D. flagrans*

NEW APPROACHES TO WORMING

Joan Burke explores innovative approaches for gastrointestinal parasite prevention and control in sheep and goats

Any experienced livestock producer knows that parasites are a natural part of livestock farming. But new farmers may panic when they first realize their animal has worms, feeling they may have somehow neglected their animals. The goal should be to manage or minimize the parasites, but not eradicate them. It is important to stimulate the animal's immune response, but not overwhelm it. Producers should feel comfortable having a few worms on farm, but not so many as to harm animal welfare.

This article aims to explain the basic biology of some common gastrointestinal nematode parasites and outline a number of strategies to manage them, as well as dispel some myths of the commonly touted products that fail to control worms.

Life cycle and biology of nematode parasites

Gastrointestinal nematode parasites have a direct life cycle where parasite eggs are shed in the feces

and distributed over the pasture. The first stage larvae develop inside the egg and hatch out within 48 hours, before developing to the second and then third infective stage (also known as L3).

The third stage infective larvae migrate out of the feces to soil and grass surfaces, where they are ingested by grazing animals. The larvae travel to the stomach or intestine where they penetrate the gut wall. Mature larvae then emerge from the gut wall and colonize the lumen of the stomach or intestine where they mature and reproduce to generate eggs. Adult worms can produce thousands of eggs per day, and can lead to significant health impacts or even death of the infected animal.

Dewormer resistance

Dewormer resistance—sometimes to all classes of dewormer—is highly prevalent in the U.S. and in many countries around the world.

Dewormer resistance occurs when parasitic

“Research shows that *Sericea lespedeza* can reduce the blood sucking and egg laying ability of barber pole worm”

worms in a population survive drug treatment and is a permanent genetic mutation. The more resistant the worms, the less effective the dewormer will be. If farms are fortunate enough to have worms that are still susceptible to dewormers, these valuable tools should be used only selectively—and not on the entire flock—to keep a pool of worms unexposed to the dewormer. Sustainable tools are described below which can be used to complement a deworming program and, in some cases, may even replace the need for dewormers.

Copper oxide wire particles

Copper oxide wire particles or COWP (sold as Copasure® or Ultracruz®) are small particles of copper oxide delivered in a gelatin bolus (right) to alleviate copper deficiency in small ruminants. Research has shown that COWP are relatively effective against barber pole worm, although less effective against other intestinal parasites. When COWP is combined with either albendazole (such as Valbazen®) or levamisole (such as Prohibit®), efficacy against barber pole worm and intestinal worms greatly improves. A study conducted in Arkansas, which tends to have copper-deficient soils, showed that up to four low dose treatments could be used on lambs in one summer with liver copper levels remaining safe. Nevertheless, caution should be taken when administering any copper product to sheep (and maybe goats) as they can easily succumb to copper toxicity. COWP for parasite control should only be used in small doses (0.5–1g in sheep and goats less than one year of age; 1–2 g in older animals) and used as needed. It is important to ensure that only copper oxide is used and **not** the more readily absorbed copper sulphate, which could lead to copper toxicity.

Nematode trapping fungi

Nematode-trapping fungi, also known as predatory fungi, have potential as a biological control agent. The fungi trap and destroy developing parasitic larvae in feces by creating trapping structures, which prevent larvae from migrating out of the fecal mass and onto forage, resulting in fewer larvae available to infect grazing ruminants. *Duddingtonia flagrans* is the fungal species available in the U.S. and must be fed to livestock to be effective. Spores survive passage through



the digestive tract of ruminants and, after the animal defecates, germinate and grow in the feces to form the sticky, sophisticated loops that trap the developing parasitic larvae.

Daily feeding requires an intensive management system to ensure each animal can consume an adequate amount of the feed/spore mixture. To achieve adequate control of larvae in the feces, the spores must be fed for a period of 60 to 120 days, usually starting at the beginning of the grazing season (especially weanlings) and to dams during the peri-parturient period. Feeding studies with several livestock species (including small ruminants) have shown high reduction of larvae in feces and on pasture.

Two formulations of *D. flagrans* are available: BioWorma® and Livamol® with BioWorma®. For one 100 lb animal it costs about \$0.60/day to feed Livamol® or \$0.21/day to feed BioWorma® (requires dilution in a premix). New products are under development. For more information visit wormx.info/wormtrappingfungus.

Genetics

Due to years of selection while grazing grass, sheep are generally more resistant to parasites than goats, whereas goats evolved to browse trees and shrubs away from infective parasites. Sheep that were developed in warm, humid climates adapted to heavier parasite infection through an immune response to resist infection or become resilient. Resistant breeds include the St Croix, Barbados Blackbelly, Florida Cracker, Florida Native and Gulf Coast Native. The Katahdin is a composite breed that can be resistant, resilient or susceptible, depending on breeding objectives of their originating flock. While no specific goat breed is known to be resistant to parasites, Spanish and Kiko are often more resistant or resilient than Boer. In general, dairy goats are considered susceptible to parasites, due to selection for productive traits rather than survival.

Feeding, pastures and forages

Providing a wide variety of high quality forages and forage types should minimize pasture infection of nematode parasites. Short grasses allow the greatest infection potential, whereas more complex physical structures on the plant—or an elevated height of browse, trees and

shrubs—are least infective.

Some plants have secondary compounds that naturally protect the plant from drought, excess water, pests and grazing; these compounds can also have bioactivity against some nematode parasites when consumed. Research shows that *Sericea lespedeza*, a legume forage rich in condensed tannins, can reduce the blood sucking and egg laying ability of barber pole worm, although not necessarily kill the worms. Grazing *Sericea lespedeza*-rich forage or providing dried hay or pellets can be one tool to reduce the infection intensity. Birdsfoot trefoil and sainfoin are other condensed tannin rich plants to aid in control of internal parasites.

It goes without saying that overgrazing should be avoided, as this can quickly lead to parasite problems, both from overdispersion of parasites and reduced nutrition to the animal.

Questionable alternatives

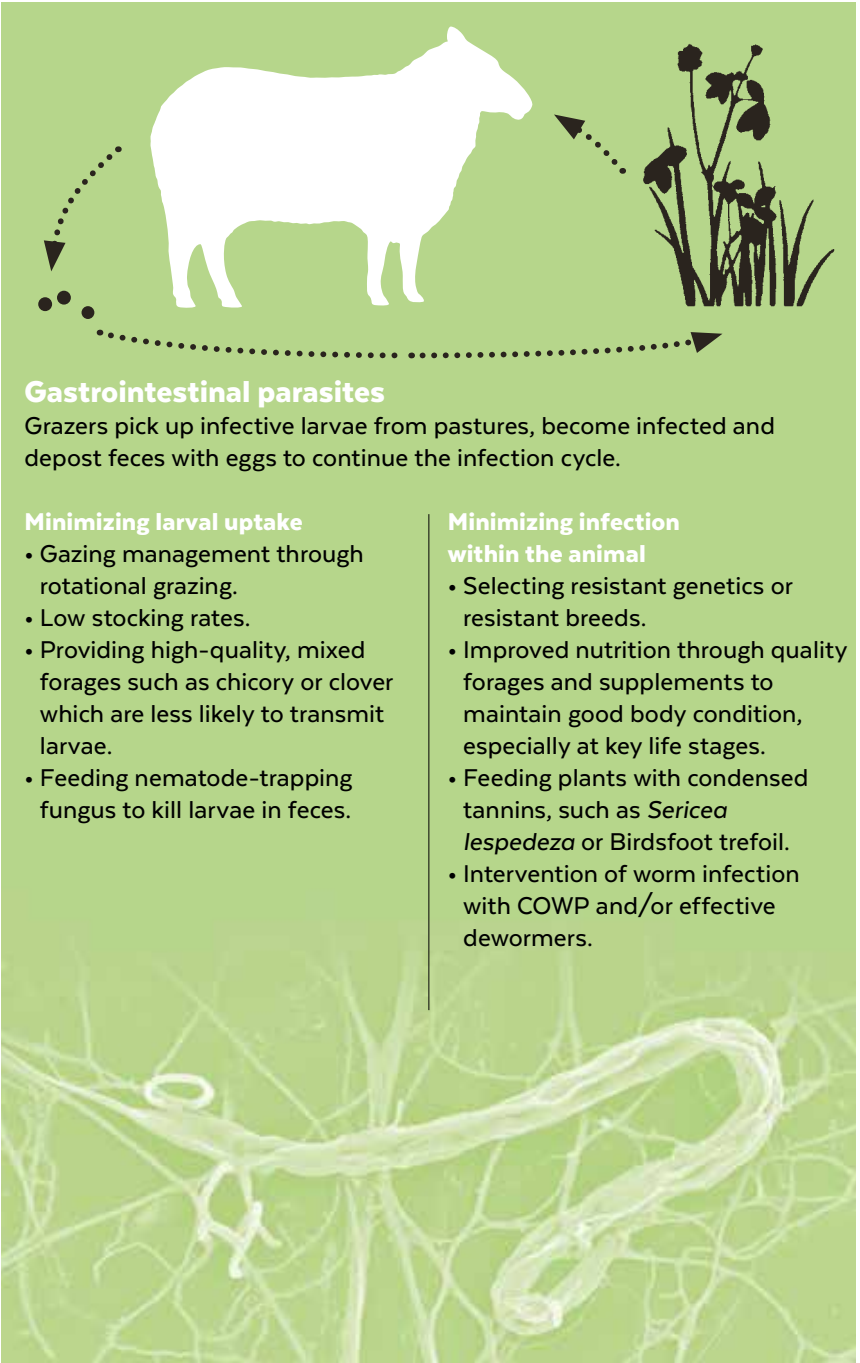
Some farmers swear by the use of diatomaceous earth (DE) for parasite control. When DE is ingested by livestock, the microscopic shards are thought to use mechanical movements within the gut to cause injury to the outer cuticle of nematodes and ultimately lead to dehydration and death of the adult parasites. However, research literature is almost void of studies on DE against livestock parasites, and our own trials found little evidence of any reduction in fecal egg counts after feeding 2% of diet as DE for seven days.

Similarly, there is little scientific evidence of any effect of common herbal products, garlic, papaya, pumpkin seeds or ginger on the reduction of fecal egg counts or worms—or an improvement in anemia in small ruminants. It may be that continuous use of some products is necessary, or precise formulations or genetic material. Nevertheless, we believe that it is best to rely on more tried and true methods for parasite control.

None of the above strategies should be relied upon alone, but rather applied in an integrated fashion. Good pasture management (including rotational grazing and quality forages) combined with resistant livestock breeds should yield sustainable worm control. The goal, as always, is to minimize uptake of infective larvae from pastures, minimize infection and selectively treat for worms, where necessary.



JOAN BURKE



Gastrointestinal parasites
Grazers pick up infective larvae from pastures, become infected and deposit feces with eggs to continue the infection cycle.

- | | |
|--|---|
| Minimizing larval uptake <ul style="list-style-type: none">• Grazing management through rotational grazing.• Low stocking rates.• Providing high-quality, mixed forages such as chicory or clover which are less likely to transmit larvae.• Feeding nematode-trapping fungus to kill larvae in feces. | Minimizing infection within the animal <ul style="list-style-type: none">• Selecting resistant genetics or resistant breeds.• Improved nutrition through quality forages and supplements to maintain good body condition, especially at key life stages.• Feeding plants with condensed tannins, such as <i>Sericea lespedeza</i> or Birdsfoot trefoil.• Intervention of worm infection with COWP and/or effective dewormers. |
|--|---|

Dr. Joan M. Burke is a Research Animal Scientist with the USDA, Agricultural Research Service, Dale Bumpers Small Farms Research Center in Booneville, Arkansas. The 2,200-acre research center manages Certified Animal Welfare Approved by AGW sheep breeding and feeder stock. For more information visit ars.usda.gov/southeast-area/booneville-ar/dale-bumpers-small-farms-research-center



THE IMMUNE SYSTEM

Jen Gravely Burton explores the body's complex systems that protect animal health

ALPHOTOGRAPHIC

"The immune system." When captured in these three words it sounds simple, almost straightforward—a single entity or, at the very least, a tightly coordinated set. Is it that simple?

Not at all. Coordinated? Well, yes and no. To begin to sort it out, let's meet a few of the key players.

Natural killers

A wide variety of white blood cells emerge from stem cells in the bone marrow. Natural killer (NK) cells need help identifying diseased cells in the body. But once those cells are marked as containing virus or cancer DNA, NK cells punch holes in their outer membranes, killing diseased cells before they can do more harm.

Such a deadly force requires some regulation and thymic—or "T" cells—are up to the task. In a developing animal's thymus, T cells are tested to make sure they can differentiate between normal cells and a foreign invader. T cells that would cause harm to the animal's normal tissues, and those that fail to strongly oppose foreign proteins, are killed before they leave the thymus. Some of the survivors will become T 'helper' cells, stimulating or suppressing other immune cells (including NK cells) to modulate immune activity. Others will become cytotoxic T cells, themselves armed to destroy virus-infected or tumor-ridden cells. NK and T cells are the main type of cell found in lymphatic system and are known as lymphocytes.

Inflammatory or granular cells are also armed with chemical weapons but are more mobile than most lymphocytes. While the NK and T lymphocytes tend to work on-site, granular cells circulate in the bloodstream until body tissues send a signal for help. When called, these inflammatory cells move through vessel walls into tissue, where they discharge their chemical contents. The ensuing reactions release free radicals, causing oxidative damage to disinfect wounds and kill invaders. The fluid and debris they leave behind is called pus.

Immune response

Other myelocytes take an even more systemic approach. Monocytes, macrophages and dendritic cells assume dual roles. At large in the tissues, these immune cells engulf and digest foreign or damaged material—from slivers, to microbes, to cancer cells. They attack and neutralize invaders, clean-up damage and transport materials for recycling or disposal. In addition to this "phagocyte" role, many are antigen-presenting cells (APCs). APCs transport materials to organized immune tissues like lymph nodes. In these immune control centers, APCs present foreign material to other cells so that a targeted, specific immune response can develop.

BVD-PI

When a calf is infected with Bovine Viral Diarrhea (BVD) in utero before the thymus develops, the thymus cannot differentiate this virus from the calf's normal cells. T cells that strongly oppose the BVD virus are killed. Without those T cells, the animal will remain "persistently infected" (BVD-PI) for life, shedding virus continuously.

ANTIOXIDANTS

Where inflammation is present, antioxidants can help reduce collateral damage and neutralize debris so that it can be transported away from the site. Both of these effects reduce swelling and facilitate healing.

Antibodies

What about antibodies? Antibodies are not immune cells, but rather proteins produced by "B" immune cells. When faced with a foreign material or "antigen", B lymphocytes (with help from APC and helper cells) produce antibodies (also known as immunoglobulins) that can bind those materials. This binding interrupts pathogen activity, makes invaders an easier target for other immune cells, and helps other systems transport these materials out of body.

The very specific antibodies that characterize our most effective immune response take 2–3 weeks to manufacture, then wane as infection subsides. After their job is done, some antibody-producing B cells transform into long-lived memory cells. If they ever see their target pathogen again, they will ensure a much faster immune response next time—so fast that in many cases you'll never know the animal was infected. Memory cells are the reason individuals who recently recovered from a disease won't be re-infected by their herd-mates. Lasting a few months to 50 years or more, this "immune memory" is also the end product of vaccines.

Newborns and colostrum

Newborns arrive with fully functional NK, T and inflammatory cells. But they lack the more coordinated APCs and B cells, so they cannot make antibodies. In most species, the highly specific antibodies that emerge 2–3 weeks after infection or vaccination are the only type that can be transferred in colostrum, so it is important to time late-pregnancy vaccinations correctly—usually about a month before delivery.

Veterinarians recommend that you avoid moving the dam in the last month of pregnancy for the same reason. Colostrum will protect offspring against the pathogens mom was exposed to a month before delivery, but will not protect against pathogens she first encountered just a couple weeks before delivery.

Maternal antibodies protect the young animal until it is able to mount its own B cell response. Once the animal is able to produce immunoglobulins vaccines can be effective. However, vaccines cannot work in the presence of antibodies. Some vaccines are given multiple times to young animals to ensure protection as soon as possible after maternal antibodies wane.

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

CHICKEN ON GRASS

The nutritional contribution of pasture to poultry diets is highly variable and—generally—very small

Pastured chickens will obtain a certain amount of nutrients from the pasture, as well as insects and other small invertebrates, and from small seeds, fruits and berries. Although there is little consensus about exactly how important each of these sources of nutrition is, scientists agree that the potential contribution of pasture (grass, insects and worms) is highly variable and generally very small. From a welfare and productivity perspective, it is therefore vital for pastured poultry farmers to supply a well-balanced ration as the primary source of nutrition for their birds.

Nutritional benefits of pasture

Pasture consumption is influenced by a number of factors, including the amount of time spent outdoors, foraging behavior, plant species, stage of growth, palatability and nutritional content of the plants, and the nutritional needs of the birds. Breed may also be important, as research shows that slow-growing breeds adapted to outdoor conditions will generally utilize forage more effectively.

The nutritional quality of pasture is related at least in part to the plant species composition. Pastures used by many free-range poultry flocks will have been established for use by cattle or sheep and may therefore contain species that are not ideal for poultry production. If poultry consume largely grass, the nutritional value derived is likely to be relatively poor. While it would provide some energy and fiber, the protein contribution would be low at less than 5% of the total requirement. However, birds that are allowed

to freely range will also consume a higher proportion of insects and seeds than those that have limited access to forage or a small ranging area. Research shows that pasture intake promotes growth by improving the consumption of the grain-based feed, even though the intake of forage dry matter may be low.

Additional forages

Providing chickens with additional forages to supplement their diet (and enhance the range) can have positive welfare impacts. Feeding pea and maize silages or loose vegetables, for example, significantly reduced mortality, feather pecking (including severe pecking) and improved plumage quality of layers. Providing straw as forage and feed in mash form has also been shown to reduce feather pecking.

Nutritional deficiencies

Many nutritional deficiencies in poultry show similar symptoms, such as reduced growth, poor feathering and weakness, so it can be difficult to determine the precise deficiency. Diet analysis, examination of the management system and necropsy may be necessary for accurate diagnosis. Some nutritional deficiencies are temporary and reversible upon diet correction.

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

KEY DIET CATEGORIES

Major nutrients
water; energy; protein; essential amino acids (especially lysine and methionine); essential fatty acids

Major minerals
calcium; potassium; phosphorus; magnesium; sodium; chloride

Trace elements
include: iodine; selenium; iron; zinc; copper; manganese

Vitamins
A, D, E, K and B12; folic acid; thiamin; riboflavin; niacin; pantothenic acid; pyridoxine; biotin; choline

MINE SUAREZ

Certification news

DESKTOP AUDITS

Tim Holmes explains the emergency protocols for AGW audits

Following the COVID-19 outbreak, AGW rapidly suspended all travel and on-site facility audits. In order to ensure the continuation of the certification process and maintain integrity of all AGW programs and certified businesses, we have introduced new temporary protocols and procedures for remote or ‘desktop’ auditing.

Desktop audits allow us to audit facilities without physically visiting a farm or business. They encompass all areas of a standard audit, including an examination of management plans, records (including input and output records to assess input-output balance) and an assessment of any other relevant information pertinent to meeting the objective of the audit. The ‘physical’ on-site visit is replaced with an interview with the facility contact over the phone or by video conference.

Pre-audit preparation

As your certification renewal date approaches (and once you have paid your fee), an auditor will contact you to arrange and schedule your desktop audit. We can do it by phone or (preferably) video conferencing such as Skype, WhatsApp or Face Time. Video conferencing software often allows screen sharing, which can be a useful option to verify evidence.

Once agreed, we’ll send you an email with full instructions, a Self-Assessment Form and a copy of your previous audit and compliance report (if applicable). It is important to go through this carefully. You’ll need to note any changes to your business on the Self-Assessment Form. We’ll also ask for copies of management plans and farm management records, as well as any specific information the auditor wishes to see. This might include photos of livestock, housing, feed labels, ingredients and other relevant documentation or evidence. Keep copies of all this information as you’ll need it during the audit to answer any questions raised.

You will need to complete the Self-Assessment Form and send it back to the auditor promptly, along with all requested plans, records and other information. This enables the auditor to prepare for the audit day. Please return the assessment form promptly to avoid unnecessary delays.

On the day

On the day of the audit the auditor will contact you at the arranged time and explain the plan for the desktop audit. It is important to choose a quiet location where you will not be interrupted and where conversations cannot be overheard to ensure confidentiality. If you intend to use video software please choose a neutral background wall and remove any visible personal information.

The auditor will start by going through the relevant compliance report questions, referring to the reference material you have provided, so please make sure you have the information available.

If for any reason we are unable to complete the audit in one sitting, your auditor will schedule a second appointment.

We’ll do our best to make sure the desktop audit is as painless as possible and appreciate your cooperation at this difficult time. Please allow up to five weeks to receive your completed audit and compliance report.

New facilities or species

New facilities or existing facilities with a new species will require an on-site visit to certify. We are currently evaluating travel restriction and the viral status of different areas. Once it is deemed safe to travel we will restart on-site audits and new facilities and facilities adding species will receive priority status.

If you have any question about desktop auditing, please get in touch. We would be happy to discuss the process with you.

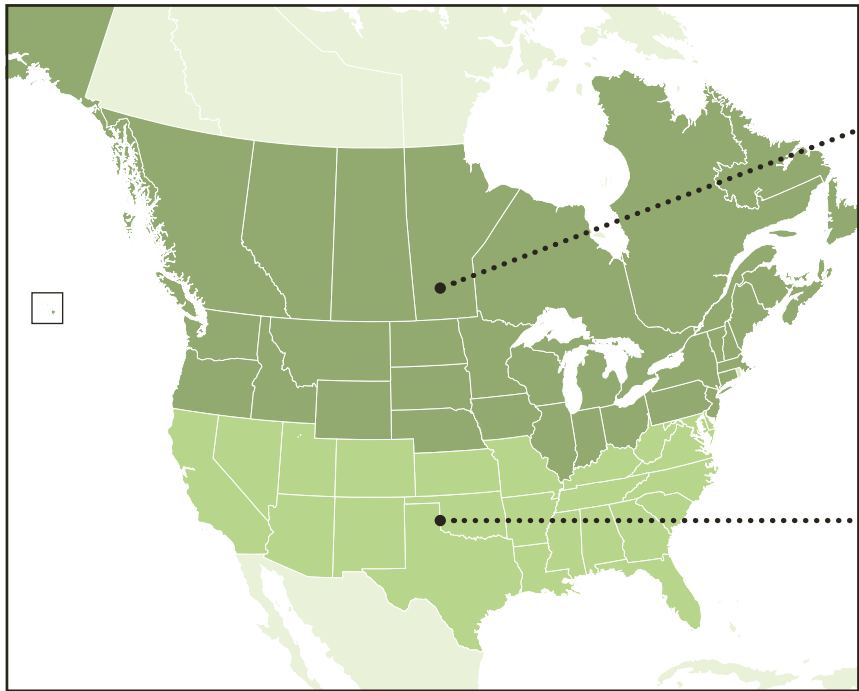
Tim Holmes is Director of Compliance with A Greener World

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Sustainable Farming will be moving to subscription-only in paper format. To ensure everyone can continue enjoying the magazine while being smart with our resources, we're launching a new subscription option in 2021.

AGW-certified farmers and ranchers will still receive a complementary paper copy as a benefit of certification. All other subscriptions will transition to our free digital format. If you (like many) would prefer a paper copy, you can subscribe for \$36/year. Thank you for making this valuable magazine possible.

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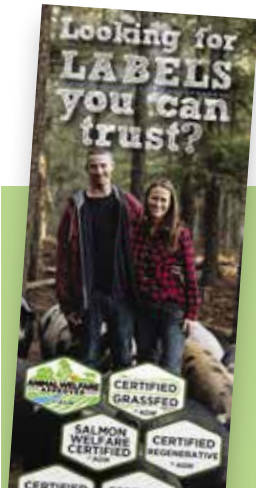
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- Ideal for farmers' markets/displays
- 18" x 24" with corner grommets
- Full color imprint
- Hard-wearing 18 oz vinyl

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Meet the farmer

LAZY WAYS



Margot Heard with her daughter Elizabeth Heard Clarke and grandson Hugh McGregor Clarke

Margot Heard raises Certified Animal Welfare Approved by AGW cattle at Lazy A Ranch in Austin County, Texas. She manages British White and Akaushi cattle on two properties totalling approximately 500 acres, selling high-quality grassfed beef through an online store. Educational activities sit at the very heart of the ranch.

How did you get into farming?

My father was a farmer and designed the first feedlot in Texas in the 1950s. As a child my favorite place was the ranch. After living and working in Houston for many years, my husband and I wanted a place in the country for our family. We eventually bought the Lazy A Ranch in 2008 and started with the 22 Santa Gertrudis cows on the ranch and their Star Five calves. I knew grassfed beef was better for health and began to research it. I found information about Certified Animal Welfare Approved on the internet and knew it was the right fit.

Describe a typical day

I get up early and read my emails, check my investment sites and maybe watch business news. After breakfast I check the activities of the day and our chickens, cattle and livestock guardian dogs. We have a ranch manager who manages the cattle. If we need to work cattle we do that in the morning.

During the day I get calls from meat customers or Saint Nicholas School in Houston, where I am headmistress and co-founder. After lunch I catch up on news and work on paperwork. In the evening we have a final check on the cattle and do more chores. After that we sit by the fire or sit outside

by the pool to talk, depending on the season. Then we have supper, relax or take care of any unfinished business.

Who are your customers?

People who are looking to buy high-quality, high-welfare sustainable meat on the internet.

Sustainable farming principles: why do they matter?

They provide transparency in food production and access to buyers. The land must be managed in a holistic manner to restore and maintain it. Practices should be profitable, environmentally sound and provide service to communities.

What's the benefit of being certified by AGW?

It provides verification of what we claim. Anyone can use the terms 'grassfed' or 'natural' and not be authentic.

What are your plans for the future?

We want to add leased or purchased acreage to increase our meat business volume. We've struggled to find dependable markets—except our website sales. This year we began working with Barn2Door which is designed to help farmers sell online.

What keeps you awake at night?

Ideas I am working on. Keeping up with the paperwork for all my projects can be frustrating!

If I were President I would ...

Break the meat packer monopoly and encourage diversity along the supply chain for meat. We do not have a fair market for the producer.



COURTESY LAZY A RANCH (x2)

AT A GLANCE

Farm: Lazy A Ranch
Certification/date: 2009

Size: 500 acres

Soil type: Mostly dark clay soil with some sandy soil

Altitude: 100 ft

Annual rainfall: 40 inches

Enterprises: 300 head of British White and Akaushi cattle, selling AGW-certified beef online.

lazyatexas.com



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NELSON AND MARY JAMES, Dogwood Farm, North Carolina

COVER PHOTO: BISERKA STOJANOVIC

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