SUSTAINABLE FARMING AWA NEWSLETTER

WRONG TARGET WHY A BROAD MEAT TAX MISSES THE POINT

PLUS NEW AGW MERCHANDISE SAFETY ON THE FARM SLAUGHTER PLANTS NEEDED



THE ECHO CHAMBER



As part of my job, I am often invited to conferen<u>ces about food</u> and farming. While I am honored to represent the thousands of farmers and ranchers who we work with, and to put forward our views on

sustainable food production, the lack of diversity at these events—and their growing disconnect with wider society-concerns me.

As a delegate at a recent food conference, the gulf between the food movement and most Americans was plain to see. The very people who need our nutritious food the most-in other words, those who have little choice about their diets—were nowhere to be seen. (It hardly helps when tickets for these events cost more than the monthly food budget of an average U.S. family.)

Similarly, there were no 'real' farmers or ranchers. Yes, I saw the usual smattering of farmers who can afford to buy a ticket and take three days out from their farm to attend this kind of event. But how representative are they? Yes, we heard from a well-known 'visionary farmer' about their diversified farm and how they feed their local community (and, of course, their latest book). But while I recognize the important role of the direct sale model, try telling the average farmer that building a farm store or setting up at a farmers' market is the answer to all their problems!

Even if they wanted to, very few farms have sufficient customers on their doorsteps or the additional skillsets, investment, infrastructure, or extra time or staff so vital for success. That's before we even consider whether such models can feed our cities.

The point I am (rather bluntly) making is that many of these "fix food and farming" events are far too removed from the average North American's life experience. As a result, the average consumer or farmer—arguably those with the most skin in the game—is absent from most of these important conversations. It's not an intentional decision, I am sure, but the food movement risks elitism almost by default.

We must find ways to involve consumers and farmers to hear their stories and understand their challenges and needs before we propose any blueprint for future farming and food systems. Failure to do so now will inevitably result in our own failure, and that is something we cannot allow.

Finally, a gentle reminder to replace any old AWA logos on your packaging, website or social media with the new AWA logo by June 30, 2017. If you need any assistance please get in touch.

India further

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A Greener World PO Box 115 Terrebonne OR 97760

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DIETARY RISKS

Experts warn of the health risks of a diet without animal protein in very young children

Young children who follow an animal protein-free diet without medical and dietary advice can risk a number of nutrient deficiencies, including vitamin B12, calcium, zinc and high quality protein—with potentially devastating health effects.

Experts at the 50th Annual Meeting of the European Society of Pediatric Gastroenterology, Hepatology and Nutrition (ESPGHAN) gathered in May in Prague, Czech Republic, warned that research shows children who follow animal proteinfree diets are generally leaner and smaller than those who consume meat or have vegetarian diets. While such diets can be perfectly healthy, parents who pursue animal protein-free diets for their child were advised to follow medical and dietary advice to ensure their infants receive adequate nutrition.

"It is difficult to ensure a healthy and balanced vegan diet in young infants, and parents should understand the serious consequences of failing to follow advice regarding supplementation of the diet," advised Mary Fewtrell, professor of pediatric nutrition at University College London and chair of ESPGHAN's Nutrition Committee.

The biggest risk to children who do not eat animal protein is vitamin B12 deficiency, Professor Fewtrel warned. Foods derived from animals have been shown to be "the only reliable source of vitamin B12" and a deficiency "can result in hematological and neurological disorders, causing irreversible damage in young," she said.

IN THE NEWS....

GRASSFED RESEARCH

The Michigan State University (MSU) Extension is publishing findings of a five-year study into grassfed beef production. The research follows a joint project between MSU and JNelson Farms in Midland, MI, and their six-year transition from a cash crop farming operation to low input rotational, grassfed beef. The full research findings will be presented at MSU Agriculture Innovation Day on August 24, 2017, at the Lake City Research Center, MI. For more information, visit canr.msu.edu/lakecity

FACE TO FACEBOOK

AGW has set up a new Facebook group for certified producers and those interested in certification, in response to requests from farrmers and ranchers. "This is a space to meet other farmers and ranchers, forge new ventures and share knowledge on what has worked—or not!" says Emily Moose, AGW's Director of Communications and Outreach. "We hope it helps our farmers and ranchers make useful connections." To join, enter 'A Greener World Farmers and Ranchers' in the Facebook search box.

BLU-KOTE BAN

Blu-Kote is now banned for use on all food producing animals. The topical antiseptic spray is labeled for use on non-food producing animals only; however, until recently the Food and Drug Administration (FDA) allowed its use on farmed livestock because the risk of residues in meat, milk or eggs was considered low. FDA has now taken a firmer stance after recalls of imported seafood products contaminated with gentian violet—the main ingredient in Blu-Kote. The ban on using Blu-Kote in farmed livestock is effective immediately.



Professor Myriam Van Winckel, head of pediatric gastroenterology at the University Hospital Ghent, Belgium, also spoke at the conference: "The more restricted the diet of the child, the greater the risk of deficiency-and this is by far highest in vegan children. Vegan mothers who breastfeed also need to be aware that their children can develop vitamin B12 deficiency between 2 and 12 months because of the lack of reserves in their body at birth, even if the mother is not showing any signs of deficiency herself."

Infants on animal protein-free diets are also at risk of protein and calcium malnutrition, a situation made worse because parents can be misled by milk supplements. Rice milk, almond milk and soy milk are often presented as suitable substitutes for milk, but ESPGHAN experts said they should be labelled as 'drinks,' because the nutritional value is not comparable to milk. Maintaining healthy levels of calcium is important for ensuring lifelong normal bone density.

Varied lacto (ovo) vegetarian and semi-vegetarian diets are generally safe, the ESPGHAN nutrition committee advise: "Although long term follow-up studies are scarce, they do not show a detrimental effect of vegetarian diets in children but instead point to beneficial health outcomes compared to omnivore diets, such as favorable lipid profile, antioxidant status, dietary fiber intake, as well as tendencies towards a lower risk of being overweight."

NEW BROCHURE

AGW's new consumer brochure is now available to certified farmers and ranchers. Part of the growing range of new AGW promotional merchandise, the tri-folded consumer brochure explains AGW's third-party certifications using easy-to-understand information and eye-catching images, and is designed to show customers the true value of your certification-whether it's Animal Welfare Approved, Certified Grassfed by AGW or Certified Non-GMO by AGW. Available to AWA farmers and ranchers only. To order, see page 18.



IN THE NEWS...

AGW CONVENES MEETING OF TOP SCIENTISTS

A select group of multidisciplinary scientists from across the world gathered to discuss issues surrounding the role of pasture-based livestock production and sustainable diets at a special meeting hosted by AGW in early May.

The two-day Climate Change Retreat, held in Bristol, UK, sought to reach an agreed consensus around the published science on issues such as carbon sequestration and pasture-based livestock production, and sustainable diets, as well as to identify gaps in knowledge or areas that urgently require further clarification. The event involved scientists from 10 countries, working in areas such as soil science, climate change, ecosystems ecology and food nutrition.

"As an organization intimately involved in the debate about sustainable food production-and frequently called upon to comment in the media and advise advocate groups about the positive role of livestock-we want to ensure our activities are guided by the best available science," said Andrew Gunther, AGW's Executive Director.

"Our objective at the Climate Change Retreat was simply to facilitate a private and candid dialogue between a professionally and globally diverse group of scientists, and to record their discussions. Moving forward, the outcomes of the event will influence our work and the work of other organizations involved in sustainable food production."

RESEARCHING CONSUMER CONCERNS

New research ranks consumer concerns when buying beef, chicken, milk, and eggs-and it is good news for AGW certifications.

Published in the Agriculture and Human Values journal, the University of Illinois (UI) study surveyed consumers about the importance of common on-farm practices in their purchasing decisions when buying beef, chicken, milk and eggs. According to the findings, the top three attributes overall were "no growth hormones," "non-GMO" and "humanely raised," although the researchers noted differences in importance based on product type. Other highly ranked practices included "no routine antibiotics," "free-range or cage-free," and "grassfed." Surprisingly, "organic" was ranked as among the least important.

The research also highlights continued consumer confusion about the meaning of many food label claims. "The biggest surprise in the study is that 'no growth hormones' is the number one concern consumers have across the board on all of these products," says Brenna Ellison, UI food economist and lead researcher. "It's odd because growth hormones are already prohibited for poultry products, for example. Ultimately, it means consumers are spending unnecessary time looking for labels that reflect this particular attribute."

AGW's Executive Director, Andrew Gunther welcomed the findings: "The research highlights again that AGW's family of trusted certifications position farmers and food manufacturers as market leaders in delivering real transparency."



2016 IN REVIEW

AGW's 2016 in Review report is now available.

The 20-page document outlines the major activities of AGW and its staff in 2016, as well as the key successes of more than 1,500 sustainable farmers and ranchers, 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



(L to R) Meeting the Grazin' team: Paul Rowley (line cook), Andrew Chiappinelli (owner/head chef), Natalie Nicholson (server), Bill Clinton, Susan Gibson (owner), Hillary Clinton, Ashlee Babcock (server)

CLINTON FAMILY DINES AT GRAZIN'

Former President Bill Clinton and former Secretary of State and presidential candidate Hillary Clinton recently visited the Grazin' Diner in Hudson, NY.

As reported in *The Register Star*, the Clintons stopped with their daughter, Chelsea, and family for lunch at Grazin' Diner-the first restaurant in North America to serve meat, eggs and dairy products sourced exclusively from local AWA farms. The Clintons' visit came as a complete surprise, says head chef and Grazin' owner,

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AWA FARMERS COOK WITH BROOKS

Two AWA farms were featured on AR Public Television's Cook with Brooks cooking show.

Host Chef Steven Brooks (left) visited Will and Waltina Hanna of Hanna Family Ranch (AWA pigs and Certified Grassfed by AGW sheep) in Bentonville and Sean and Carol Bansley at Bansley's Berkshire Ridge (AWA pigs) in Harrison to learn about different pig breeds-including the Large Black and Berkshire—and the sustainable,

pasture and range-based operations on both farms. Brooks used AWA pork from Hanna Family Ranch to cook a not-to-miss pork tenderloin recipe in front of the camera.

The Arkansas Educational Television Network/ PBS show is dedicated to telling the whole story of food in Arkansas-where it's from, how to make it and who shares it. Visit **cookwithbrooks.com**/ episode-9

TEMPLE GRANDIN ENTERS HALL OF FAME

Dr. Temple Grandin has been added to the National Women's Hall of Fame. She joins nine other women to be honored at the Hall's biennial induction ceremony in September.

Diagnosed at age two with Autism Spectrum Disorder, Grandin (right) went on to apply insights gained from her experience to conceptualize equipment that reduced animal stress during the livestock handling process. Consulting

Andrew 'Chip' Chiappinelli: "I was honored to cook for them and they ordered a big variety, including 'The Bob', 'The Susie', a veggie burger, a couple regular burgers and a grilled cheese and hot dog for the toddler-a perfect mix of everything." Chelsea Clinton and her husband, Marc Mezvinsky, have been to the restaurant before, and Grazin' Angus Acres farm in Ghent, NY, provided AWA meat for their wedding in 2010.

Visit grazinburger.com

Red Apron Burger Bar in Dupont Circle, Washington, D.C., is featured in the Washington Post for its unique offering of sustainably and locally sourced ground beef-including AWA ancient White Park beef from Leaping Waters Farm (AWA beef cattle, pigs) in Shawsville, VA.

Nathan Anda is chef and partner behind Red Apron Butcher-the first butcher shop in the U.S. to source 100 percent AWA hogs for its butcher shops in the D.C. area. "Our customers appreciate the steps we've taken to ensure that they're getting the best, and they can taste the difference," he says.

GRASSFED DAIRY AWARDS

Pure Éire Dairy in Othello, WA, won three awards -including Best in Class-for their **Certified Grassfed** by AGW cow's milk yogurts at the recent U.S. Championship **Cheese Contest** in Wisconsin.

"We couldn't be prouder to bring home three awards and are honored to showcase our **Certified Grassfed** by AGW dairy products on a national stage," says Jill Smith of Pure Éire Dairy.

The event is the largest technical cheese, butter and yogurt competition in the U.S. Winners are selected by a team of technical judges from over 2,300 entries from 33 states.



internationally on autism, animal behavior and handling, her masterly designs for livestock handling systems transformed the industry and are used worldwide today.

Grandin is a prolific author, having published 12 books and several hundred publications on topics ranging from livestock handling, temperament and fertility through to environmental enrichment and animal safety.



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Emily Moose offers tips on making the most of your farm certification



Our new guide offers guidance on using your certification effectively

Emily Moose is AGW's Director of Communication and Outreach. Contact her at emily@ agreenerworld.org

Farming is already hard work, but you've managed to make it even harder: you've chosen to produce for a market that is often dependent on reaching educated, urban consumers with disposable income, and is subject to competition from an array of misleading labels and slick marketing campaigns from multinational agribusiness. It won't be easy, but it can be more effective. Here are a few tips to help you.

Consumer expectation

According to a 2016 survey by Consumer Reports, 79 percent of people believe that a 'humane' label claim should mean the animal went outside-and a whopping 88 percent believe that claim should be verified. As you probably know, neither of these is the case with most 'humane' labeled products. That means you are one of the very few producers in the market that is meeting consumer expectations-so let them know it!

Your Animal Welfare Approved certification (or Certified Grassfed by AGW, or Certified Non-GMO by AGW certification) shows that you go the extra mile to ensure sustainability and transparency -and that you're proud of your farm. It also demonstrates your commitment to environmental stewardship, responsible use of antibiotics, no added hormones or animal by-products, and high-welfare, pasture-based management. While there is unfortunately a lot of negativity around agriculture, you can share some good news. And the social scientists tell us that is what people want to hear: actionable, positive information that allows consumers to be part of the solution.

Make the most of it!

A Greener World has just launched a new free guide, Make the Most of your Certification, to share ideas and guidance on using your certification effectively. Available through your regional Farmer and Market Outreach Coordinator (see below), this guide is for everyone in the program-not just direct marketers. If you're part of a producer group, a wholesaler, or even just selling breeding stock, everyone can better utilize their certification. The guide offers a range of tips, but the single most important and impactful one is to use the logo!

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YOU'VE EARNED IT ...

After all, isn't that why you got certified in the first place? Receiving your hard-earned certificate is just the beginning.

We get thousands of inquiries every year from people looking for Animal Welfare Approved, Certified Grassfed and Certified Non-GMO products. But we're also getting more inquiries about whether a given farm is really certified, because people didn't see the logo on their product. While we're always happy to confirm if a farm is certified, asking customers to be detectives can cost you sales.

Use the new logo

With the launch of the new Animal Welfare Approved logo last January—and the upcoming June 30 deadline to cease using the old logonow is the perfect time to update your product labels, website, social media accounts, brochures and any other marketing materials, and make sure your certifications are loud and proud. In anticipation of this transition, we have trained two new labeling coordinators who are standing by to help with our free label design service. Take a look at the label gallery on our website for some great ideas from other certified farms and ranches, and let us help you design one of your own.

Over to you

We've done our part-now it's your turn. We offer a range of marketing support and materials alongside our certification services, but it's up to you to make the most of them and take the message to your customers-whether a shopper at a farmers' market, a rep at a national distributor, a meat buyer at a regional grocery store or an online customer three states away. Each relationship presents an opportunity to show your customers why your product is the best that money can buy. Let your AGW certifications do the talking for you!

For more information about our servicesincluding free label design-contact your regional Farmer and Market Outreach Coordinator. Visit animalwelfareapproved.us/about/contact or call 800-373-8806



TAXING MEAT

Simon Fairlie looks at different ways of taxing meat, and concludes that the best way to reduce meat consumption to sustainable levels is to stop using fossil fuels

Meat should be taxed to help save the planet, proclaimed newspaper headlines just before the start of the United Nations Climate Change Conference in late 2015. They were referring to a report published by the mother of all think tanks, Chatham House, called *Changing Climate Changing Diets: Pathways to Lower Meat Consumption.*

In fact, the Chatham House report devotes barely half a page out of 70 to meat taxes—this was just what much of the media latched on to. Mostly the report is about prospects for persuading the public to reduce meat consumption: it is rich in the jargon of modern propaganda techniques, embracing concepts such as "choice architecture" and "nudge strategy." The report's recommendation that "the issue is complex but the message must be simple" is one that has been followed by propagandists throughout history. A simple message about a complex matter is likely to be a wrong message, and this is the case as regards greenhouse gas (GHG) emissions attributable to meat.

There is a growing body of research into the impact of meat taxes, much of it coming from Sweden where the concept has made some political headway. Until now, nearly all analysts foresee a flat tax on meat, presumably because it is a message which is simple. There are, however, other ways of taxing meat and it is illuminating to compare them.

Rationing

Taxes on consumer goods are regressive—that is to say they hurt the poor more than the rich. Rationing would be a much fairer way of reducing meat consumption to sustainable levels. It was the method used during World War II, when there was a shortage. It would also benefit vegans and vegetarians who could either sell their ration or withhold it for ethical reasons.

However, there is no shortage of meat today, and the reasons for reducing meat consumption cannot be reduced to an incontestable "simple message." Introducing meat rationing would be highly unpopular and provoke a massive black market. Meat rationing might one day become appropriate if meat production declined for other reasons.

Flat tax on meat

Slapping a straight federally imposed tax on meat, similar to that on alcohol and tobacco, seems to be what most meat tax advocates have in mind. However, usually they distinguish between different species of animal, with the level of tax calibrated according to their supposed environmental impact. For example, leading Swedish meat tax analysts propose a 28 percent tax on beef, a 26 percent tax on pork and a 40 percent tax on poultry—figures which reflect the average level of emissions of greenhouse gases, nitrogen and phosphates.

The main problem with this approach is that there are far greater differences between the emissions of different management systems than there are between different species of animal. For instance, nitrogen and phosphates are not always pollutants: on the contrary, they are essential for food production; they are only pollutants when there is too much of them in one place. This occurs when there is an excessive amount of livestock in one place—what the FAO's Livestock's Long Shadow terms "nutrient loading" as a result of "the urbanization of livestock"--and because of an overall surplus of manure due to the manufacture of artificial fertilizers from fossil fuels. If artificials didn't exist, farmers would be desperate for every scrap of animal manure they could get hold of. A cow fed on organic feed whose manure is used to fertilize grain or vegetable production is therefore performing a service, whereas a cow fed on artificially fertilized maize and rye grass, whose slurry is spread on pasture in excessive quantities and leaches away into watercourses, is causing problems. To tax them both at the same rate is perverse.

There are many other similar examples. A pig fed on food wastes and crop residues has a tiny

fraction of the environmental impact of a pig fed on soy and grains. Beef animals born of dairy cows have far lower emissions than those born into beef cow-calf herds: the dairy cross calf is a by-product of the milk industry, whereas for every pure bred beef calf, a mother cow has to be maintained for a year without producing anything other than her single calf.

Not only does it make no sense to tax different management systems at the same rate, it is likely to make standards of livestock management worse. If the cost of meat goes up, many consumers are likely to seek out the cheapest meat they can find. And the cheapest meat (of any given cut) is often that which has been reared using the least sustainable method.

State sales tax

Imposing a selective state sales tax on meat would be a flat tax under another name, except it could allow for flexibility in how it was imposed in one respect. States could chose to exempt small farmers selling meat direct to the consumer at the farm gate or at farmers' markets-but could still levy a tax on grocery stores.

Selective sales tax on meat could therefore give a welcome boost to small scale, low-input livestock farmers, to farmers' markets and to other forms of local distribution. Insofar as these small farmers are more ecologically benign (as they may well be in respect of inputs of fertilizer and pesticide, and manure accumulation) this will carry some environmental benefits.

On the other hand, the industrial sector which is subject to selective sales taxes would be facing the same perverse incentives as under a flat tax, and so might shift towards supplying cheaper, less well farmed meat from bigger, more industrial farms, and perhaps with more of it imported. We might



Animal waste stored in liquid form in open air lagoons is a key source of nitrous oxide



Synthetic nitrogen fertilizers require natural gas as a feedstock and oil-dependent distribution

witness an increased divergence between a sales tax-exempt local food sector and the industrial food sector, with poor rural consumers having better access to high quality fresh meat than poor urban consumers. It could also lead to veganism and vegetarianism being more widespread in cities than in the countryside—a trend that is already discernible.

The problem with this model is that it is hugely complicated. Exemptions will be hard to implement and monitor. In addition, to have an impact there would need to be consistency across different states in terms of the level and application of tax, and states that currently have no sales tax are likely to be very resistant to its introduction.

Feed tax

It would be almost impossible to devise a system that could successfully determine different levels of tax for different meat products according to the level of environmental impact caused by their manufacture. Any methodology would be too complex and too contentious. However, one way to target certain extravagant management systems would be to impose a tax on livestock feedgrains.

This would favor farmers feeding livestock on grass, crop residues and food waste, and disadvantage pig and poultry factory farms. It would also result in increased sowing of clover, lucerne and other legumes, which would have a benign affect upon the quality of soils. However, a tax on feed grains is unlikely to have much significant effect on the price or consumption of meat-the price of grain doubled after the 2008 economic crisis without any massive effect upon meat prices.

Plus, a precise definition of what constitutes feedgrains is elusive. Should spoiled and substandard grain, which is only fit for animal consumption, be taxed? What about soy protein and other

In short, fossil fuels are the root of the problem. Focusing on livestock emissions is



feedcakes that are a co-product of vegetable oil production? Why not maize silage, which is in some ways more problematic than feeding grain to animals? And what about the feedgrain buffer -the 110 pounds or so of grain per person that it is necessary to grow in the best year to ensure that there is enough food for everyone in the worst year? Do we really want to be taxing that?

Artificial fertilizers

Artificial fertilizers are problematic not only because they deplete the soil of organic matter and are currently dependent upon fossil fuels for their manufacture, but also because their ready availability creates a surplus of organic fertility (i.e. manure) which causes pollution and GHG emissions.

An effective fossil fuel tax (see below) would rectify these problems. However, in its absence, artificial fertilizers benefit from financial advantages over organic manures, which although not tax-based, have a similar effect. These advantages derive from the fact that the burden of distinguishing between organic agriculture and chemical agriculture falls entirely upon the organic sector who have to pay for the considerable cost of certification and labelling.

Since the excess fertility problem is due to a superabundance of artificial fertilizers, it follows that it is the farmers who use these chemicals who should be held responsible for their licensing and labelling, rather than organic farmers who don't use them. If non-organic food for sale in supermarkets carried labels saying "grown with the use of chemical fertilizers", or pesticides or GMO seed, and organically produced food was regarded as the norm, there would be a shift in patterns of consumption that would lead to a reduction in the use of artificial fertilizers and better manure management.



Spreading manure: benign organic fertility or threat to the climate?



The application of artificial fertilizer results in significant nitrous oxide emissions from soils

Carbon tax

Meat would be caught by wide-ranging carbon taxes, should these ever be implemented. A tax on all GHG emissions would require the almost impossible task of reaching agreement on how great the emissions from livestock and meat actually are. Some analysts have settled on figures such as \$1.03 per pound, which mostly appear to be based on the FAO's contentious figure of 14.5 percent (see next page). If such a figure was agreed upon for beef, pork, poultry and so on, the tax would act exactly as the flat rate described above with all its perversities.

Fossil fuel tax

Advocates of a meat tax argue that such a tax won't do the job because it only targets the 75 percent of global warming due to fossil fuels, while the 25 percent due to agriculture and land use change remains untaxed.

The Swedish Food and Environment Network takes the argument further by looking at what we could be doing with agricultural land instead:

Today grasslands and embankments are cultivated to feed cattle throughout Sweden, but these areas could be used for creating biogas and fertilizers. This means we have the opportunity to produce a lot of bio-energy if we reduce pure reliance upon animals. This could be vital in making Sweden less dependent upon fossil fuels in the long run.

A ratcheted annual increase in tax on oil and other fossil fuels, including dyed diesel, would be simpler to apply since there would be no need to assess the emissions of different kinds of meat. To achieve climate targets, we have to stop using fossil fuels, so a fiscal measure of some kind (with compensatory measures for poor countries) is necessary anyway.

Artificial fertilizers are problematic: not only because they deplete the soil of organic matter and are dependent on fossil fuels for their manufacture, but also because their availability creates surplus organic fertility



They no doubt have in mind a 2011 University of Gothenburg research paper, which estimated that a flat tax of 60 euros per tonne (around \$73/ton) of CO₂ equivalent on meat and dairy would reduce Europe's agricultural emissions by just 7 percent; but if the land made available were used for bioenergy production, the decrease in emissions could be six times greater.

However, it is precisely this ability to convert grazing land to biomass production which suggests that if you have an effective fossil fuel tax you may not need a meat tax at all. If bioenergy really is vital in making us less dependent upon fossil fuels, then as taxes on fossil fuels increase, energy will become more expensive and there will be increasing market pressure for former grazing land to be used for woodland, coppice and other bioenergy crops, which will result in a reduction of ruminant grazing anyway Meanwhile, as fossil fuel scarcity makes artificial fertilizers more expensive, there is also likely to be a reduction in the amount of grain available for animal feed. An effective reduction in the use of fossil fuels would therefore result in a decline in livestock numbers and meat consumption.

On the other hand, if artificial fertilizers become scarce and expensive, there will be a greater need for organic fertility to grow food, and the best source for this is grass and legumes, not the woody and fibrous crops that supply energy most efficiently. Grass in outlying areas can be harvested, digested and transported to arable land free of charge by ruminants, who also have the added bonus of providing meat.

Which of these two requirements, biomass for heat or fertility for food, will be the more pressing in a world without fossil fuels? One can only guess that it will be a bit of both. Putting aside other matters which might need to be regulated (such as the power of corporations and wealthy people to act outside the public interest, the safeguarding of biodiversity and so on), the best way to decide how much of our non-arable land should be devoted to energy and trees and how much to fertility and ruminants might be to leave it to the market.

People and communities will decide with their wallet which one they need most. Taxing one to favor the other would alter the balance and perhaps give a wrong answer.

If a meat tax does gain acceptance, then it is important to ensure that it favors forms of agricultural and livestock management compatible with a low carbon society



Conclusion

To reduce GHG emissions to a sustainable level, there has to be a tax or some other mechanism that reduces fossil fuel consumption to a tiny fraction of present levels. It is likely that as this happens, the diminished availability of artificial fertilizers and competition for grazing land from energy crops will lead to a reduction in livestock numbers without any need for a targeted meat tax.

There is, however, an argument that it will take some time to reduce fossil fuel emissions to negligible proportions, and in the interim we can achieve considerable reductions in emissions by reducing meat consumption. This argument is reinforced by the fact that reductions in methane emissions have a more immediate effect on GHG emissions, whereas the effect of reductions in CO₂ are more long term.

There is some strength in this argument, but there is also the danger that focusing on the relatively small proportion of emissions attributable to meat because it is "low hanging fruit" will eclipse the more fundamental matter of dealing with the 70 percent attributable to fossil fuels. That seems

Livestock emissions: 14.5 percent hot air

In 2006, United Nations Food and Agriculture Organization (FAO) issued a press release, publicizing its Livestock's Long Shadow report, that stated, "Which causes more greenhouse gas emissions, rearing cattle or driving cars. Surprise! The livestock sector generates more greenhouse gases than transport."

While the FAO has now reduced the percentage of all man-made global warming caused by livestock from 18 percent to 14.5 percent, this lower figure is still used to suggest that the global livestock industry generates more greenhouse gases (GHG) than all cars, planes, trains and ships combined.

Uncertainty

Before we examine emissions from livestock, it is worth noting that this comparison with livestock and transport includes only "tailpipe emissions", i.e. fuel. All other emissions generated by the transport sector—those relating to the manufacture of vehicles, building of roads, service stations, harbors and airports, methane released through oil extraction and so on (not to mention the wars fought to secure the oil)-are accounted for under different sectors.

It is incontestable that burgeoning numbers of cattle and other livestock have a serious

environmental impact; but there is no reliable scientific basis for the FAO's figure of 14.5 percent of GHG emissions cited by many respected organizations without question. Estimates of the contributions of different sectors to global warming remain uncertain, particularly in respect of methane, the principal gas emitted by livestock.

The FAO's 14.5 percent is also misleading because it includes the amount of methane and nitrous oxide emissions currently being emitted by livestock, but does not consider potential emissions of these gases from alternative land uses if we dispensed with domestic livestock. In the case of methane, there could be replacement emissions from increased numbers of wild animals, termites, rice paddies, wetlands and grass fires (though a widespread program of biomass crops might limit this rebound effect). In the case of nitrous oxide, there would be replacement emissions from the green manure or artificial fertilizers necessary to grow the extra grains and vegetables needed to replace the meat and dairy foregone.

Comparing apples and oranges

A further problem inherent in any attempt to equate livestock emissions with transport emissions is that methane emissions from livestock and carbon dioxide (CO₂) emissions

from fossil fuels are not directly comparable. The Intergovernmental Panel on Climate Change (IPCC) overcomes this difficulty by imposing a mathematical relationship—currently 1 gram of methane equals 25 grams of CO₂-but this is an artificial concept based on an arbitrarily chosen discount rate. Methane is a sort of temporarily turbo-charged version of CO2. It has higher global warming potential, but once in the atmosphere it degrades back into CO₂ much faster than CO₂ disappears from the atmosphere, so the higher you rate methane against CO₂, the more you value the short term. Moreover, methane emissions from livestock and CO₂ from fossil fuels are qualitatively different because they come from different places. Fossil fuel carbon is released from reserves of hydrocarbons locked under the earth's crust for millions of years, and is therefore adding to the total pool of carbon circulating within the earth's atmosphere and biosphere. The larger this pool of carbon, the more raw material there is that can potentially be turned into methane. Livestock methane emissions are only temporarily extracted from this pool and do not add to it, just as the CO₂ that livestock exhale does not add to it.

Fossil fuel extraction also causes methane emissions. When this methane degrades into CO₂ it represents a net addition of carbon into

the pool. Fossil-fuel derived methane therefore has a greater and a more permanent impact, weight for weight, than methane generated by livestock, which doesn't cause a net increase in carbon.

Approximately the same amounts of methane are released into the atmosphere by livestock and by fossil fuel extraction every year-estimates for both lie around 25–35 percent of all human-sourced methane emissions. By happy coincidence, IPCC calculates a reduction of less than 30 percent in methane emissions would stabilize atmospheric methane levels within two decades. To stabilize methane concentrations we can either stop using fossil fuels or stop keeping livestock.

to be the intent behind the "cows cause more emissions than cars" rhetoric. If a meat tax does gain acceptance as a preliminary to an effective mechanism to reduce fossil fuel consumption, then it is important to ensure that it favors forms of agricultural and livestock management compatible with a low carbon society. An intensive system, which produces fewer methane emissions because of its reliance on artificial fertilizers and feed grains, is not going to be of great help if, in a low carbon future, artificial fertilizers and energy become scarce, while methane ceases to be a major problem.

If a robust fossil fuel tax is not immediately achievable, then we need to look more closely at the fiscal mechanisms examined above and implement at least one-if not a combination-of these suggestions. A licensing system that placed the burden of certification and labeling upon chemical farmers rather than those sustainably producing food will also take us in the right direction. But ultimately we need to stop using fossil fuels, and when we do livestock numbers will decline and stabilize at a sustainable level of their own accord.



Simon Fairlie is the author of Meat: A Benign Extravagance. A version of this article first appeared in The Land magazinethelandmagazine. org.uk

Thirty percent

There is no question which we should focus on. It would be more reliable to eliminate the methane emissions caused by fossil fuel extraction since this methane would stay safely underground. We must stop using fossil fuels anyway because they cause about 70 percent of all GHG emissions. And when we do stop using fossil fuels, livestock numbers will almost certainly go down of their own accord (see main article). In short, fossil fuels are the root of the problem: Focusing attention on livestock emissions is at best a short-term measure, and more likely to be an unhelpful diversion.



Livestock's Long Shadow: The UN has admitted its 2006 report exaggerated the impact of eating meat on climate change

FARMING CAN BE DANGEROUS WORK

James Carrabba looks at the major causes of injuries on farms-and how to prevent them



Farming is not just a job: it is a way of life that most people involved truly love. Unfortunately, there are many associated dangers ...

According to the U.S. Bureau of Labor Statistics, in 2016, agriculture had a fatality rate of 25.6 deaths per 100,000 workers-more than 7.5 times the rate for all industries, and far exceeding other industries considered hazardous like mining. There are many unique aspects about agriculture that have led to these alarming statistics. Farm families and workers are exposed to a host of mechanical and environmental hazards every day that increase the risk of injury or death.

Tractor related incidents

Approximately half to a third of all farmer fatalities are tractor-related incidents. Tractor rollovers are the single most common type of tractor fatality. Some tractors have a safety feature called ROPS (rollover protective structures) that will protect the tractor operator in the event of a tractor rollover, limiting the rollover and creating a safe area around the operator's seat.

ROPS are 99 percent effective if the operator wears the seatbelt. But while all tractors manufactured after 1985 come equipped with a ROPS and seatbelts, current research reveals that approximately 40 percent of the tractors in the U.S. are still not equipped with ROPS. Hundreds of lives could be saved each year if farmers had ROPS-equipped tractors and wore seatbelts when operating them. The National ROPS Rebate Program helps farmers install these life-saving devices by providing a 70 percent rebate toward the cost of the ROPS kit, shipping and installation.

Farm machinery

Just about every type of farm uses large, heavy machinery. Common types of machinery-related incidents include runovers, struck-by and crushing incidents, power-take-off (PTO) entanglements, other machinery entanglements and roadway collisions. Farm machinery incidents (other than tractor related) account for another third of farm work fatalities.

When working with farm machinery, always pay attention to the task. Keep young children and other bystanders out of the area where machinery is being used. Always shut off the machinery and wait until it comes to a complete stop before performing any maintenance or repairs. If you have to work under any raised equipment, make sure it is properly locked out or blocked up with appropriate jackstands.

Motor vehicle crashes

Road travel with farm machinery presents a serious occupational hazard for agricultural workers. The busy spring planting and fall harvest

seasons are especially dangerous as farmers move tractors and equipment to fields. Thousands of roadway incidents occur each year between agricultural machinery and other motor vehicles. Agricultural equipment tends to be large and moves slowly, usually less than 25 mph. A hazard exists when fast moving traffic quickly approaches slow moving agricultural machinery. Proper lighting of machinery and use of Slow Moving Vehicle emblems help to reduce these hazards.

Children

There is no other industry where families live right in the middle of a busy, 24-7 workplace. And there is no other industry where young children often perform work with large equipment or live around large animals and other dangerous environments. According to the National Children's Center for Rural and Agricultural Health and Safety, a child dies in an agricultural-related incident every three days, while 33 children are injured in agriculture related incidents every day. The leading sources of fatalities among youth on farms were machinery (25 percent), motor vehicles including ATV's (17 percent) and drowning (16 percent). For youth working on farms, tractors are the leading source of fatalities.

DID YOU KNOW THAT EVERY THREE DAYS. A CHILD DIES IN AN AGRICULTURAL-**RELATED INCIDENT?**

For information and safety resources, such as personal protective equipment, retrofit PTO shields and SMV emblems for sale, visit the NYCAMH website, nycamh.com, or call 800-343-7527

For more information about the National ROPS Rebate Program, visit **ROPSr4u.com** or call 1-877-767-7748

The U.S. Agricultural Safety and Health Centers (10 regional centers) host a YouTube channel with over 90 videos covering personal protective equipment, needlestick prevention, livestock safety, tractor and machinery safety, and more. Visit youtube.com/USagCenters or call 800-232-4636

The U.S. Department of Labor website offers plenty of advice and resources on farm safety and health. Visit osha.gov/dsg/topics/ agriculturaloperations/hazards_controls.html

In Canada, the Canadian Agricultural Safety Association website is a very useful resource. Visit at casa-acsa.ca or call 877-452-2272

Look out for National Farm Safety and Health Week 2017, September 17-23.

Federal safety and health regulations are not always enforced on farm owners and their immediate family members, or on small farms (10 or less employees) because of special enforcement exemptions granted to agriculture. Therefore, it is up to each small farm to make sure it provides a safe work environment for all family members and workers.

Planning for safety

As the old saying goes, an ounce of prevention is worth a pound of cure. Potential hazards on farms could include older tractors without ROPS and seatbelts, missing or damaged PTO shielding or missing shielding on other types of rotating machinery, unprotected drop-offs or fall hazards. Take the time to work safely on your farm, encourage all of your family members and any workers to follow safe work routines. Conduct a safety audit of your farm to identify any potential hazards. Some organizations, such as the NYCAMH, can offer on-farm safety surveys and on-farm safety training at no cost to farms. A number of farm safety audit tools are also available on the internet. Your regional Agricultural Safety and Health Center may be able to provide further advice and support (see box).

James Carrabba is Safety Agricultural Safety Specialist at the New York Center for Agricultural Medicine and Health (NYCAMH)

Elderly farmers

Unlike all other industries, there is no real retirement age in farming. Farmers generally work for as long as they are physically able. In fact, the average age of U.S. farmers is close to 60 years old. While this strong work ethic is commendable, older farmers also experience higher injury rates. Senior farmers may have to take medications, work with physical disabilities or have poorer evesight and slower reflexes. All of these factors contribute to older farmers having a higher risk for work-related injuries.

Health and safety on small farms

Other hazards

Weather, terrain and atmospheric conditions all present daily risks to farmers. Farmers often work long hours in all types of weather and terrain conditions. Floods, droughts and other severe weather cause significant impacts to farms. Many farmers find it necessary to work at a full or part-time job off the farm, which can further lead to fatigue. Large animals, such as bulls, cows or horses have caused many injuries and fatalities, and learning how to work around large animals safely is essential.



A dump truck crosses traffic in an attempt to pass a tractor



Most PTO accidents occur when clothing becomes entangled



A bright safety triangle mounted on the back alerts other road users



A demonstration of the rollover protective structures (ROPS)

Opening the doors of your slaughter plant for an AWA review is critical to your success, says Charlie Hester

Some slaughter plant owners wrongly assume AWA is some kind of 'animal rights' group



Applying to A Greener World's Animal Welfare Approved (AWA) program is normally a straightforward decision for farmers and ranchers. After reading the AWA standards, most are excited about the opportunity to prove to customers their commitment to high-welfare management. However, slaughter plant owners can have the opposite reaction. From experience, we know some plant owners wrongly assume AWA is some kind of 'animal rights' group who want to record the killing of lovable animals for their next social media campaign. Of course, nothing could be further from the truth. But this misconception can be a major stumbling block for farmers and ranchers who want to use the AWA logo.

Get your plant onboard

If you are thinking of joining AWA it is absolutely essential to get your slaughter plant involved as early as possible-ideally before you even apply. AWA is a birth-to-slaughter certification and getting your chosen slaughter plant to allow an AWA review is critical to your farm certification and your ability to market meat using the AWA logo. Since you already have a positive relationship with your plant, we highly recommend the initial request to participate comes directly from you, rather than AWA.

The plant owner's perspective

Like our farm certification, AWA's thirdparty slaughter review is completely free to participating slaughter plants. As a result, some farmers assume their plant will throw open their doors, welcoming the opportunity to set them apart from the competition.

But most slaughter plants already undergo intense inspection, often involving substantial paperwork. Many already feel they are over regulated-and with some justification. As well as the usual challenges encountered by any business, plants are faced with Food Safety Audits, Hazardous Critical Control Point (HACCP) documentation, state environmental and employment laws, daily operational and meat inspection by the USDA or state programs, not to mention public and media scrutiny. As a result, many owners won't necessarily want another inspection or recognize the added benefit of being an AWA plant-especially if they already have misconceptions about the AWA program! So how do you persuade or encourage your slaughter plant to agree to an AWA review?

What's in it for me? Most plant owners rightly want to know what's in it for them-other than earning or keeping your business! First, the AWA review process can save plants money by improving operational performance. Remember: AWA's Slaughter Plant Specialist (SPS) team has reviewed hundreds of plants since 2006. Our SPS team has observed countless common sense solutions to improved animal handling and movement, and one helpful suggestion could save the plant many labor hours. If it takes five extra minutes to load an animal due to balking, and the SPS can help improve movement with just 12 animals per day, that already equates to eliminating 60 minutes of balking per day. With three employees on the killfloor, that's three labor hours' per day saved simply by improving animal movement.

Second, the AWA slaughter plant review shows existing-and potential-customers the plant is committed to animal welfare. This is particularly important when it comes to the general public. Most consumers have no knowledge of the USDA or state program regarding animal welfare. Displaying the trusted AWA credentials clearly communicates the plant's commitment to high-welfare handling and slaughter.

Finally, as the AWA program continues to grow, more and more farmers will actively seek participating plants so they can use the AWA logo on their meat products.

More than USDA: Slaughter plant owners will often say, "I am already USDA Inspected and the inspector is in my plant every day. Why do I need someone else looking around?" While USDA is to be commended on recent progress towards higher welfare handling at slaughter, USDA inspection standards are generally geared more toward preventing the next *E.coli* outbreak and whether the plant is complying with basic food safety regulations than maximizing animal welfare at slaughter and improving meat quality.

Meat quality and stress: Farmers and ranchers expend a huge amount of time, talent, effort and, most importantly, money to produce a consistently high-quality product. Yet all this can be adversely affected during the last day -or even hours-of the animals' life by activities at the slaughter plant. Animal welfare at slaughter cannot be ignored, as it directly affects product quality, as well as consumer perception of the end product. Aside from the obvious risks of bruising from poor handling or poor design/maintenance at the plant, numerous studies have shown unnecessary stress immediately before slaughter will adversely affect meat quality. There are several scientific reasons, including the formation of ATP (adenosine triopate) or muscle glycogen levels related to stress.

As an independent third-party reviewer, the SPS can provide valuable insight on animal movement and can identify possible cause and effect of animal welfare on meat quality, offering practical solutions to cut down on animal stress at unloading, holding, movement and stunning to help maintain meat quality.

AWA CERTIFICATION AND YOUR **SLAUGHTER** PLANT

Explain that you need the plant to undergo a basic review to sell your products using the AWA logo

Talk about AWA and help dispel any myths that AWA is an 'animal rights' group. Highlight our industry expertise and experience

Give them AWA's Slaughter Guidelines for Red Meat/Poultry. See animalwelfare approved.us/ standards/ list-of-standards

Plant owners can also call AWA for an informal chat at 800-373-8806



Explain that the AWA review is free and confidential, and could improve operational performance -and profits

Complete confidentiality: The AWA program is completely independent and impartial. Everything we do is confidential. We accept no money from the industry or government, and have no links whatsoever to any animal rights organizations. The outcome of the slaughter plant review is shared with the plant management only. AWA staff will work behind the scenes with the plant owner to find a resolution to any animal welfarerelated issue.

AWA has real expertise: To get the job, every SPS must have many years' experience in slaughter operations, as well as familiarity with farming and ranching. Once in position, every SPS receives world-class training in animal behavior and welfare at slaughter, with annual updates. Every SPS is also internationally recognized and certified as an Animal Welfare Officer and Poultry Welfare Officer.

What happens during the review?

What should a slaughter plant expect during the review? For a well-run plant, the review will simply confirm that best practice handling, stunning and slaughter is taking place, examining holding pens, alleyways, stunbox and stunning procedures. The process generally takes a couple of hours, depending on the number of animals and species, with a short meeting afterwards to discuss the SPS findings. Plant owners can review the AWA standards online or call the office to arrange an informal and confidential chat with our SPS team.

It makes sense for farmers and ranchers to get involved and talk to the slaughter plant about the AWA review as early as possible. Let's partner together!

Charlie Hester is Slaughter Plant Specialist with Animal Welfare Approved

A GREENER WORLD

From advice on how to apply, to professional labeling design services and technical support, we're here to help

AGW is proud to offer a new range of low cost branded promotional materials to help raise awareness of your certification and better communicate the wider benefits of your farming practices. Every purchase also supports our work to educate and inform consumers-and helps keep your certifications affordable!

Find more promotional materials and place your orders at animal welfareapproved.us/ merchandise

Or call 541-526-1119



HYDRO FLASK® \$35

- Stainless steel water bottle
- The world's premier company for insulated products
- Holds 18 oz keeps liquids cold for 24 hours/hot for 6 hours
- Food-grade nontoxic BPA-free plastic with limited lifetime warranty
- Shipping fee \$4 first class with USPS



COTTON APRON \$25

• Perfect for farmers' market or the kitchen • 8 oz organic cotton/ recycled polyester • Two front pockets

- Adjustable neckline • Cotton-webbing ties • Available in black
- or stone • Shipping fee \$3.50 first class with USPS



JUTE TOTE BAG \$12

- Made from environmentally
- responsible jute • 141/2" x 143/4" x 51/2"
- Available in black or green ink
- Shipping fee \$3 first class with USPS

CERTIFIED GRASSFED

BY AGW STICKER

Certified Grassfed

by AGW producers



COTTON BANDANA \$10

- High quality cotton 22" x 22"
- Off-white fabric with dark green imprint • Shipping fee \$2
- first class with USPS



CONSUMER **BROCHURES** \$5

- Explains the benefits of certification
- Ideal for farmers' markets, farm stores and other events
- 50 brochures per pack
- Shipping fee \$2 a pack first class with USPS

Only available to **Certified Animal** Welfare Approved producers



LADIES BLING HAT \$17

- Organic cotton twill • Self fabric closure with brass slider and hidden tuck in
- Available in stone colored fabric with light blue rhinestones; or dark green fabric
- with clear rhinestones Shipping fee \$4 first class with USPS



METAL SIGN \$12

- 10" x 15" rectangle
- Embossed imprint on white aluminum
- Ideal for farm gate
- or barn • Shipping fee \$3 first class with USPS

Only available to **Certified Animal** Welfare Approved producers

Services

Need advice?

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

Marketing support

Let our label design team create a high impact, professional food label—at no charge! We also offer a variety of low cost marketing materials to farmers, ranchers and food businesses-including quality metal signs, food labels, vinyl banners (good for farmers' market stalls), point-of-sale brochures and more!

Is your farm profile up to date?

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

Got some news? Share it!

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

Online directory

Our searchable online directory is the single most popular area on our website, helping thousands of visitors find suppliers of Animal Welfare Approved, Certified Grassfed by AGW and Certified Non-GMO by AGW products every year.

Sign up for monthly e-news

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

For more information about our services—including free label design-visit animalwelfareapproved.us or call 800-373-8806



Only available to **Certified Animal** Welfare Approved producers

ANIMAL WELFARE

stickers

APPROVED STICKER









Programs

Animal Welfare Approved

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

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

Certified Grassfed by AGW

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

Certified Grassfed by AGW is an optional, additional accreditation for farmers and ranchers who are meeting AWA standards, and enables businesses to clearly differentiate themselves in the marketplace.

Certified Non-GMO by AGW

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

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

PIGS IN SPACE

What are the key considerations when looking to integrate pigs into a crop rotation?

Raising pigs outdoors on pasture or range offers a great opportunity to integrate the operation within a crop rotation on diversified farms or within an agro-sylvo-pastoral system. However, site selection is important—not only to minimize potential environmental impacts, but also for pig health and welfare.

Overstocking with pigs for long periods on the same area can cause environmental problems associated with nitrate leaching and soil erosion. Integrating the operation into a cropping system can help alleviate problems, particularly where pigs are mobile and the stocking rate is appropriate to land type and potential manure produced. The site and paddock rotation should be frequent enough to prevent total destruction of ground cover and excessive contamination of soil with pathogens. Ideally, outdoor pigs should be followed as soon as possible by grass pasture mix or other suitable crops to ensure soil protection and structure is restored. This also allows the following crop to rapidly utilize residual nitrogen, minimizing nitrate leaching. Typical annual nutrient loadings from outdoor pig units are about 350 pounds/acre

nitrogen and about 180 pounds/acre phosphate.

While the main concerns about site selection are probably environmental, it is important to consider any potential associated health and welfare impacts. Pigs kept outdoors tend to have a relatively high health status as long as they are kept at low stocking density (so reducing disease challenges). When integrating pigs within a crop rotation, adequate access to clean ground (for example, ground that has been rested for at least four years) within the crop rotation system is recommended to minimize disease risks. Lameness can be a problem on some stony soils, especially flinty soils or thin soils over rock where damage to legs and feet can become infected. While windy sites are not necessarily inappropriate, remember that piglets are particularly susceptible to chilling and hypothermia from wet bedding, increasing their susceptibility to disease.

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

KEY POINTS

Mild winters and moderate rainfall (>30 inches) will avoid exposure, stress and poor underfoot condition

Choose light, freedraining soils, free of sharp stones

Sloping ground for farrowing risks piglet death from nest gravitation

Hut entrances must point away from prevailing winds

A water supply is vital for drinking water and wallows

Wallows and shade are essential to avoid heat stress

Pigs must have daily roughage, fresh or dried fodder or silage, and access to growing green food on the range



AWA's standards constantly evolve to reflect current science and farming reality, says Tim Holmes Since 2006, the AWA standards have been written and developed by scientists, farmers and farm animal welfare experts from around the globe. Every year, the standards are reviewed and updated by the Standards Board.

How does it work?

Throughout the year, we collate and examine any new science regarding the different species AWA certifies to ensure the standards reflect scientific consensus on best practice. The Standards Board also looks at any suggestions received during the year regarding possible changes, as well as any Applications for Standard Amendment or Modification forms submitted. (Anyone associated with the program can submit a suggestion or Standard Amendment form during the year.) Finally we also examine our auditing process and review how standards were scored throughout the year to identify any trends or possible problems on the ground. This also lets us know if we need to clarify any standards to ensure the intent and meaning is clear for farmers and ranchers in the program.

Farmer consultation

Once this initial review process is complete, farmers or groups who have been accepted into the program are notified of the possible changes, and details are uploaded on the website with a timeframe for reasonable consultation. The Board then looks at that feedback and changes may be made based upon it. The final updated standards are then made available on the website.

Standards Updates: Examples

Last year's review process resulted in some new standards, as well as clarifications to many others. The previous standard 1.0.6 used to specify competence when dealing with specific tasks like castration, for example. However, the updated standard now requires competence for *all* tasks:

All those working with animals must be competent to carry out the tasks required of them. Note: This standard applies to contract and temporary workers as well as full time employees and family members. Similarly, standard 5.0.9 currently recommends that:

All plans for animal management should be reviewed at least annually or whenever changes to farm management practices occur, whichever is most frequent.

While this standard is recommended, it will likely become required within the next year or two, based on feedback and evidence given in this latest standards review process.

A good example of how the review process helps to clear up any confusion is the new note in standard 2.1.5:

Embryo transfer and knowingly using the semen or progeny of animals produced by embryo transfer is prohibited. Note: The prohibition on use of embryo transfer extends to a single generation. In other words, if the sire or dam of an animal was produced by embryo transfer then that animal cannot be bought into an AWA herd or flock. New farms with existing livestock produced by embryo transfer should contact the AWA office for further advice.

The addition of this new note makes it clear what the program is looking for—and how far back when determining compliance with this standard.

Get in touch

These are only a few examples of the different changes that have been incorporated into the 2017 standards. The program is constantly evolving and we encourage you to read the 2017 standards on the website for the species you have certified. If you are interested in certification and have any questions, please get in touch. We are here to help.

The 2017 AWA standards are available at animalwelfareapproved.us/standards

Tim Holmes is Director of Compliance with A Greener World

Meet the farmer

DIVERSITY RULES

Greg, Laurie, Bradley and Lisha Newhall, with their business partners and longtime friends, Gary and Nancy Jones, raise AWA beef cattle, pigs, turkeys, ducks for eggs, chickens for meat and eggs, and Certified Grassfed by AGW meat sheep and meat goats-making Windy N Ranch in Ellensburg, WA, the first farm in the AWA program approved for eight separate livestock species!

Bradley, tell us about your family's farm ...

My dad and mom, Greg and Laurie, bought Windy N Ranch back in 2004 as a retirement venture with business partners and longtime friends, Gary and Nancy Jones. First it was beeves to help "mow" and fertilize the grass, then a few laying hens ... As the animals came and business picked up, my Dad realized he needed more help. So he asked if my wife, Lisha, and I would like to make a go of ranching. We jumped at the chance to get out of the city and start a new life.

Why did you choose AWA?

After researching various ranching practices, we realized we had an obligation to respect the animals and environment that provided so much for us, our families and our customers. We sought AWA certification to assure our discerning customers they really are buying meat and eggs from animals raised naturally and humanely.

Sustainable farming principles: why do they matter?

We believe that factory farming takes an incredibly devastating toll on the land, the quality of air and the animals. Sustainability for us means staying diverse and utilizing our animals' natural grazing patterns to help renew the soil and pasture year after year.

What's the main benefit of being AWA?

Food labeling in the commercial meat industry has gotten very disingenuous, and people are becoming more aware. AWA is a label they can trust. It also keeps us ranchers accountable and helps us stay in the know with the most up-todate methods for raising and dispatching our animals in the most humane way possible.

How can the market for sustainable products be improved?

Our AWA certification is one of our best selling points, but only after we explain what it means and what's involved. Educating consumers through programs, workshops and general dialogue would dramatically improve the market. Most people simply don't understand the consequences of unsustainable practices. We find that explaining these concepts to people who are open to learning turns potential buyers into long time customers.

What do you love most about what you do?

Fresh air, being my own boss and that, at the end of the day, I feel good about what I'm doing and what I'm providing for my family.

Who or what is your biggest inspiration?

My Dad. He still pushes harder than anybody I know, even beyond the age at which most people wish to retire. I wouldn't be doing this if not for him, so I am forever grateful that he brought this opportunity to me.

What is the most important lesson life has taught you?

Just because somebody hasn't done it before doesn't mean you shouldn't do it. You can always come up with a better way to do something.



AT A GLANCE

Farm: Windy N Ranch, Ellensburg, WA Certification/date: AWA 2011 Size: 800 acres Soil type: rocky loam Altitude: 2,000 ft **Annual rainfall** 9 inches Enterprises: AWA Wagyu, Kobe and Angus beeves; Berkshire pigs; Texel/Coopworth lambs; Boer goats; Freedom Ranger meat chickens; Barred Rock/ Black Star Laying Hens: Cayuga laying ducks; Narragansett turkeys

Find out more at windynranch.com or find them on Facebook

(Lto R): Bradley (holding Amelia), Lisha (and Lenora in front). Laurie and Greg







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"AWA certification is expanding the market opportunities available to us by putting our eggs a step above the competition, helping us get into bigger and higher-end restaurants." TYLER GORDON, Gordon Family Farms, Indiana



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