

# FIELD & FEEDLOT

IOWA STATE UNIVERSITY EXTENSION AND OUTREACH—NORTHWEST REGION

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## BUILDING A #STRONGIOWA

## Ideas to Reduce Farm Stress in 2019

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### Websites for your Reference:

#### Ag Decision Maker

[www.extension.iastate.edu/agdm/](http://www.extension.iastate.edu/agdm/)

#### Iowa Beef Center

[www.iowabeefcenter.org/](http://www.iowabeefcenter.org/)

#### Manure Management

[www.agronext.iastate.edu/immag/](http://www.agronext.iastate.edu/immag/)

#### Iowa Pork Center

[www.ipic.iastate.edu/](http://www.ipic.iastate.edu/)

#### ISU Extension and Outreach Dairy Team

[www.extension.iastate.edu/dairyteam](http://www.extension.iastate.edu/dairyteam)



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Uncontrollable factors, such as unpredictable weather, untimely equipment breakdowns, and the dairy market, cause stress for farm families. This stress is a physical response to perceived threats to the family’s wellbeing. Since our brains do not recognize the difference between psychological and physical threats, our bodies compound the results of fatigue, injuries, breakdowns or a milk check that doesn’t cover all the bills.

While we all react differently to stress, some common symptoms of chronic stress include changes in a person’s sleep patterns, fluctuation in a person’s weight, fatigue, restlessness, and physical health conditions such as headaches, ulcers, or high blood pressure. Maybe more important is how stress effects our relationships at work and with our family. The popular press is full of suggestions to decrease stress: exercise, reduce caffeine and alcohol intake, get enough sleep, etc. However, there are several things we can do in our enterprise management that can also help to change perspective and put some control back into the hands of the dairyman or other livestock producer.

First, if you don’t have an advisory group, create one. The obvious members are your veterinary, nutritionist, banker and key managers and family members who are involved with the operation. I’ve also seen the family’s pastor, peers in the local community and Extension specialists included. Regular monthly meetings give each member the opportunity for input and identifying emerging issues. Trust is key. Each has to understand the confidentiality of the discussion and know their opinion is valued. The real value is then acting on the suggestions as a group.

Second, create and use a farm plan. The most important word in the previous sentence is “use.” It is not just a way to prevent expenditures, but includes evaluating production practices, marketing and risk management. While many producers don’t use a risk management tool, they are available. The new Farm Bill’s Dairy Margin Coverage Program permits participation in both DMC and Livestock Gross Margin for Dairy (LGM). In addition, the new Dairy Revenue Protection (D-RP) can be used with DMC. The DMC program is vastly improved from the old MPP under the 2014 Farm Bill and when combined with LGM coverage, should be considered by every dairyman, no matter how many cows they milk.

Third, be proactive. 2019 forecast seems to be more of the same barring changes in exports and domestic consumption. Start talking early to your banker, feed mill and equipment dealer, before you’ve missed payments. Most of the time they would rather make an arrangement than lose money calling an account.

Finally, every farm needs to have an exit strategy - setting a point where the owners no longer accept equity loss and will exit the industry or reallocate resources to another enterprise. I know that the easiest route is to do nothing and hope things resolve themselves. Unfortunately, that hardly ever works. Remember, there is life after the cows leave the barn. You have resources, so consider how else they can be used. Can you raise heifers, finish dairy steers or convert to a cow/calf operation? Sometimes bringing others into the conversation can help you think of something that you may never have considered on your own. If someone asks if you are okay, don’t be offended; they are asking because they are concerned. However, you might need professional help. Professional help can include your family physician or health care provider, a mental health professional or a support group. The most devastating outcomes result from doing nothing.

### New Herbicide Technology



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Roundup Ready revolutionized weed control in soybean production when it was introduced in 1996. The Roundup Ready system provided effective low cost weed control without any threat of crop injury or herbicide carryover. The luster came off the Roundup Ready system when common waterhemp and other weeds developed resistance to Roundup in the early 2010s. Waterhemp developed resistance to Pursuit herbicide in much the same way in the early 90s, and farmers and applicators had to add a group 14 herbicide, like Flexstar, Ultra Blazer or Cobra for effective management of waterhemp. These group 14 herbicides controlled waterhemp but re-introduced crop injury in the form of leaf burn to soybean weed control.

Recent developments in weed control include dicamba tolerant soybean varieties, 2,4-D tolerant soybean varieties and an increase in the use of Liberty tolerant soybean varieties.

Liberty Link tolerant soybean varieties are nothing new. They were developed in the mid 90s, but never achieved the market presence that Roundup Ready varieties achieved. Liberty Link soybean varieties have become more popular recently and have achieved close to 50 percent market share in states like Missouri and Arkansas. Market share in Iowa is less than that, but has increased the last several years.

Liberty has the advantage of low impact from spray drift. Also, at least so far, weeds have not developed resistance to this herbicide site of action. However, Liberty is not a silver bullet for weed control. Since it requires relatively small weed height, good spray coverage and moderate weather conditions are necessary for good weed control performance.

New Liberty Link varieties have been introduced. For example, Liberty Link GT 27 offers herbicide resistance to Liberty, glyphosate and isoxaflutole. Isoxaflutole is a soil-applied herbicide and is the same active ingredient as in Balance Pro. However, the isoxaflutole herbicide for this application to soybean with this trait is not currently labeled for use.

Dicamba soybean varieties were developed in the 2000s and arrived on the market in 2017. This new technology provided good weed control performance. However, that weed control performance was tempered by some widespread off target movement of dicamba which damaged non-dicamba tolerant varieties and some horticultural crops in other areas.

Enlist soybean varieties recently became more relevant to Iowa soybean growers. Grain from Enlist soybeans recently received export approval to China. The Enlist soybean trait provides tolerance to 2,4-D herbicides. There is a new formulation of 2,4-D for this application and is referred to as choline 2,4-D.

The development of these new soybean herbicide traits will benefit farmers and applicators who are challenged to effectively manage weeds in the soybean crop.

### Comparing “Apples to Oranges” in Livestock Production



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Last week I had the opportunity to learn from Frank Mitloehner, Ph.D., during an online seminar. He is a Professor and Air Quality Specialist in the Department of Animal Science at the University of California, Davis. His presentation offered insight regarding livestock’s contribution to greenhouse gas (GHG). Especially helpful was his explanation of how GHG gas numbers are estimated and reported. He invited us to follow him on twitter (@GHGGuru).

Mitloehner pointed out that direct global emissions from livestock is about 5 percent of total emissions, but direct and indirect (including everything, the whole system, related to eating beef) was 14.5 percent according to the Intergovernmental Panel on Climate Change. Some groups use the direct and indirect livestock GHG emission estimate of 14.5 percent of total GHG emissions and claim that livestock production has more GHG emissions than transportation. However, direct emission for global livestock is about 5 percent compared to direct transportation which is 14 percent. Comparing direct emission of transportation with whole system (direct and indirect) emission from livestock is unfair. This is an “apples to oranges” comparison.

Next, Dr. Mitloehner explained that Methane (CH<sub>4</sub>) has a much higher (28 to 1 ratio) Global Warming Potential than Carbon Dioxide (CO<sub>2</sub>), which makes livestock section numbers higher as methane producers. If you want to make the livestock industry look like a contributor to GHG, just use the emissions number; however, methane is rapidly removed from the atmosphere with a chemical reaction. Carbon Dioxide stays in the atmosphere for a much longer time. Total emissions of methane average 558 million tons (188 from ag and waste sector) per year, but 548 million tons are annually removed into the soil (33 tons) and by chemical reaction in the atmosphere (515 million tons). The net result is an average annual growth rate of 10, not 558. Because CO<sub>2</sub> stays in the atmosphere a long time, a reduction in methane emissions would lead to a faster reduction in GHG. Therefore, some look to methane reduction for quicker GHG reduction, even though methane’s net contribution to GHG is low.

## Comparing “Apples to Apples” Rather than “Apples to Oranges”

*(continued from previous page)* The last thing critics of livestock production fail to recognize is efficiency of production. Efficiency is key to reducing greenhouse gases. If we decrease the number of animals required to produce a pound of final product, the result is lower use of resources (less GHG) per pound produced. For example, in 1950, there were 25 million dairy cows in United States and only 9 million today, while milk production increased by 60 percent resulting in a much lower carbon footprint (2/3 smaller) compared to 70 years ago.

Unlike the U.S., most of the world’s dairy cow efficiency is poor, requiring many more cows to produce the same amount of milk. Feeding more cows requires more feed and inputs, thus increasing GHG. The same U.S. efficiency is also in other livestock industries such as beef and pork. For example, U.S. beef produces the same output with 50 million less animals compared to 1970, and the pounds of pork per breeding animal has more than doubled in the same time period.

When accounting for efficiency, the US livestock industry is a low GHG emitter compared to less efficient livestock production in other parts of the world. Global GHG emission is a different thing than U.S. GHG emission from livestock production. Dr. Mitloehner makes the point that when we talk about the livestock industry contribution to GHG, we should use U.S. and not global numbers for a more accurate assessment of U.S. livestock industry GHG. Higher production efficiency will reduce GHG emissions per unit of product.

When using an “apples to apples” comparison, the fact that methane breaks down in the atmosphere and the efficiency of U.S. livestock production showcases that the actual impact of the U.S. livestock industry on GHG is much lower than commonly reported in popular press.

## Time to Sow Flower Seeds Indoors for Spring Blooms



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What’s better than doing a little planting in the middle of winter? My garden calendar reminds me that it is time to start geranium seeds indoors as well as seeds of petunias and impatiens. Starting flowers indoors gives you a jump on enjoying beautiful blooms by spring. Geraniums are not difficult to start from seed but the seedlings are rather slow growing. It takes about 13-15 weeks after sowing for plants to flower, so start them by mid to late February. Petunias and impatiens should be started indoors 10 to 12 weeks before you plan to transplant them outdoors, which is after the average last spring frost.

When you start plants from seed, it’s recommended that you use a soilless mix that is porous and free of insects and disease. Commercial seed-starting mixes are nice because they are sterile, which helps guard against problems such as soil-borne fungi that can cause damping off. Containers used for starting seeds should be clean and have drainage holes in the bottom. If your container has been previously used, it should be washed in soapy water and then disinfected by dipping in a solution containing one part chlorine bleach and nine parts water.

When planting the seeds, gently press them into the medium and lightly cover except when sowing petunia seeds. Petunia seeds require light for germination. They should not be covered with additional material.

Once the seeds are planted, keep the medium moist but don’t let it become soggy. To help prevent the newly planted seeds from drying out, cover the container with plastic wrap. Seeds do best when the seed-starting medium is kept warm so during germination place seeds in a warm area but avoid setting the container in direct sunlight as this may “cook” the seeds. You can also place the container on a heat mat to keep the growing medium warm. With proper temperature and moisture, the seeds should sprout in 7-10 days.

When seedlings emerge, remove the plastic cover. Seedlings need about 12-14 hours of light each day. If they receive insufficient light, seedlings become tall and spindly or “leggy.” Light can be artificial or natural or a combination of both. Maintain the height of the lights about 4-6 inches above the seedlings as they grow.

Remember to check the seedlings often to see if they need water. Water when the surface of the growing medium is dry to the touch. Thin the seedlings or transplant them into individual pots when the first true leaves appear. If the growing medium does not contain a fertilizer, you can apply a diluted solution of water-soluble fertilizer (about 1/4 the recommended rate) once every 2 weeks after the first sprouts appear.

For more information on: Starting geraniums, see <https://store.extension.iastate.edu/product/5726>; Starting petunias, see <https://store.extension.iastate.edu/product/5720>; Starting impatiens, see <https://hortnews.extension.iastate.edu/1996/2-9-1996/imp.html>; Damping off, see <https://extension.umn.edu/solve-problem/how-prevent-seedling-damping>; Starting garden transplants at home, see <https://store.extension.iastate.edu/product/4183>.