

Jody G. Holthaus
District Extension Agent
Livestock and Natural Resources

Hated Grunt Job #1

With the recent snow and cold weather, one of the grunt jobs on the farm is removing bale wrap or twine. Many times you will see clumps of the used wrap on the sides of the road, or in the cow lot, in some instances cows will eat it. If only someone would invent an edible version, that could just be fed to the cows.

Three PhD students have invented an edible bale wrap to reduce farm waste. The patent-pending BioNet biopolymer was developed specifically for farms to wrap hay and silage.

It is the brainchild of three Imperial College London PhD students: Nick Aristidou, Will Joyce and Stelios Chatzimichail. The trio came up with the idea after Mr. Joyce, who grew up on a farm in Rutland, noticed his parent's beef herd was creating a lot of wrapping waste.

One cow even died after eating the wrapping. "We've eaten it and my colleague has fed it to his cattle," says Mr. Aristidou. "But we will need to do some official testing."

With their invention, they have reached the finals of the Imperial College London Venture Catalyst Challenge (VCC), and could win some funding.

Next, they're looking into lacing the plastic with nutrients or probiotics. Researchers will then test the plastic for its nutritional quality and whether it is safe to eat. They believe the material could be available to farmers in three to five years, with on-farm tests being carried out in the next 24 months.

"That [commercialization] is the dream," says Mr. Aristidou. "The end goal is to get every livestock farmer using it. "The product is there, it is just a case of scale and funding.

"The next stage is to really refine the product to market requirements by speaking to farmers and finding out what they want dosed into it. Then we'll look at large-scale production.

"We can tailor what goes into the plastic for different animals – we could make one for equine animals, one for sheep, one for cattle," he says.

If large-scale production is secured, they are confident they will be able to produce an affordable product for farmers.

"It's just being able to secure the raw material at a low price," says Mr. Aristidou.

"Initially, we should be able to sell it a similar price to current plastic wrap, but at a low margin. But as more people want it we can produce it at a larger scale and it could easily become more affordable."

Thank goodness for brainy college students! This annoyance may be changed in a few years!

David G. Hallauer
District Extension Agent
Crops & Soils/Horticulture

Planting Selection Resources

There's snow on the ground. More snow is on the way. Wind speeds are increasing. That's the weather report as I write this column. It is winter after all... Nothing is going to get planted this week, but that doesn't mean it's not a good time to do a little forward planning.

I've mentioned our Recommended Vegetable Varieties publication before. It's a great resource for gardeners wanting to check out the better performing vegetable varieties we have available to us. Available in any of our District Offices, it can also be downloaded online at: <https://www.bookstore.ksre.ksu.edu/pubs/141.pdf> . Want a consistent performer – it will have it.

If you want to try some of the newer flowers and vegetables being tested, but would like at least a little bit of security that it will perform well, try some of the All-America Selection Winners for 2019. All-America Selections tests and introduces new flowers and vegetables each year that have done well in trials across North America. You can look at nationwide selections or sort by region (we're in the Heartland region). A quick look this morning showed six different flower/ornamental plant winners and ten different vegetable winners that might be worth a try. You can check out the list at <https://all-americanselections.org/product-category/year/2019/> .

Interested in some more 'local' recommendations? If your focus is conservation trees (windbreaks/woodlots/Christmas trees/etc...), check out the Kansas Forest Service Conservation Tree Program at: https://www.kansasforests.org/conservation_trees/soil.html . Here, you can search for recommended plantings by both use and soil type. Want a windbreak selection? The site breaks windbreak offerings in to evergreen and deciduous species. Cross reference the selections by soil type with a second selector tool to get the right tree in the right space.

Ornamental/landscape selections are a little tougher. There are so many different species and varieties available that it can really be confusing. Start by choosing a respected and trusted nursery, then ask lots of questions.

You can also reference work from places like the John C. Pair Horticulture Center. One of the projects they've worked on over the last 20 years has been an evaluation of sugar maple species. What they've found is an isolated population more drought tolerant, better adapted to high pH soils and more resistant to leaf scorch and tatter than the norm. Want proof? Their 2003 evaluation saw three weeks of August temperatures in the triple digits with no rain for 30 days prior. While all other sugar maples were severely scorched, these caddo maples showed no scorch symptomology – with readings indicating they were barely stressed. Its impressive research that has resulted in two selections for consumers: Autumn Splendor and John Pair. If you are in the market for a sugar maple, consider these before making a final decision.

No need to fret over a little freezing rain/blowing snow/sub-zero wind chills – you can't change them anyway. Instead, spend a little time making selections for your 2019 plantings – and beyond.

Cindy Williams
Meadowlark Extension District
Food, Nutrition, Health and Safety

Be the MVP of Your Super Bowl Party!

The big game is almost here and it's time for a party! And where there's a party, there's food! Be the MVP of your party with these food safety tips:

Clean: Prepare for the win!

- *Start by washing your hands with warm soapy water for 20 seconds.
- *Wash and sanitize all dishware and utensils.

Separate: Your best defense!

- *Keep raw meat and poultry away from ready-to-eat foods.
- *Use a clean utensil for each dish.
- *Use a clean plate when going for second helpings of food.

Cook: A game winner!

- *Use a food thermometer to check for doneness.
- *All poultry—165F
- *Burgers and sliders—160F
- *Soup and reheated foods—165F

Chill: Don't let the clock expire!

- *Keep hot foods hot and cold foods cold.
- *Put out food in batches.
- *Follow the 2-hour rule.

Is It Safe to Home Can Ham or Other Cured Meat?

There are no science-based instructions to home can cured, brined or corned meats. Here is some information from Clemson University Extension.

“The texture of some cured, brined and corned meats is firmer than that of fresh meats; thus, heat penetration into the cured, brined or corned products might be more difficult. That would mean the process time would need to be longer and using the process for fresh meats would result in a potentially unsafe product. Curing can make meat drier than fresh meat or can leave it with a higher salt level, then covering liquid could be absorbed into the flesh and penetration of heat into the meat would be much more difficult. Again, using the process for fresh meats would result in potentially unsafe product.

On the other hand, adding salt, nitrite, nitrate and/or antimicrobial agents like nisin makes *Clostridium botulinum* more susceptible to heat and the required process time for some cured meats could be shorter. If so, using the fresh meat process would result in an overcooked product. Research on each product would be needed to determine a safe canning process.”

January 18, 2019

Nancy C. Nelson
Meadowlark Extension District
Family Life

No News from Nancy.