

PUBLIC AFFAIRS REPORT
for
KFPX-TV
Newton, Iowa
for
SECOND QUARTER,
ENDING: JUNE 30, 2016

In accordance with Section 73.3526(e)(11)(i) of the Federal Communications Commission's rules, the following, in the opinion of KFPX-TV, are the problems and needs of the community for the period noted above. They are not necessarily listed in order of importance. Each is identified by significant public affairs and/or public service programming in response to these needs.

Issues:

1. Agriculture
2. Economics
3. Organic, healthy, local and culturally diverse cooking
4. Micronutrients
5. Herbicides
6. Cation Exchange Capacity
7. Weed & Insect Control/Crop Scouting
8. Irrigation
9. Foliar Feeding
10. Lift Stations

A detailed summary of each program's content, including guests, affiliations and date of broadcast is included in this report.

"AgPhD" is a one-half hour community affairs program covering current agricultural topics in the State of Iowa, featuring Darren Hefty and Brian Hefty.

"Living Well" is a one hour community affairs program that is dedicated to active lifestyles, wellness & helpful information that leads to a more empowered life. The featured shows in "Living Well" are "Fresh With Anna Olson" and "Loving Spoonfuls."

KFPX-TV, NEWTON, IOWA
PUBLIC AFFAIRS REPORT
SECOND QUARTER, 2016

Program: Ag PhD Episode #936
Air Date: Tuesday, April 5, 2016 5:00am
Topic/Title: Soil pH Levels
Duration: 30 minutes
Style/Type: Magazine Format
Source: Ag PhD Productions/Alex George
Issue(s) Addressed: Agriculture/Economics
Host(s): Darren and Brian Hefty

Applying Lime in low soil pH due to excess hydrogen is in essence applying an antacid. Calcium carbonate is used to increase soil pH. It builds calcium and improves drainage to remove hydrogen. Magnesium can also increase pH. Ideal lime has fine particles.

Alfalfa production has fertility requirements. Soil must be above 6.5. Potassium and phosphorus has to be replaced and it does not move down through soil. It is important use less fertilizer and to move the nutrients down in the soil. Often alfalfa fields are near hog farms for the manure. Boron has to be watched because it can be toxic. It should be applied in low doses only. Build up soil pre-plant rather than spoon feed as you go. Do weed control before stand. Rarely is there weeds to deal with due to coverage. To get green leaflets all the way down stem, use a fungicide. Spray insecticide if seeing bugs.

Seed treatment for corn is Quickroots which is a biological of bacteria and fungi for more root growth and hairs. Increased yields by 8 bushels on trial. It is recommended to run trials. Mark planter splitters to compare and compare results on different soil types.

Weed of the Week is Puncturevine. It is burrs that stick on animals and can puncture tires. For pre-emerge in wheat and corn, use Sharpen. For post-emerge in wheat and corn, use Status or Roundup. In soybeans, use Valor or Teflan pre-emerge and Roundup for post-emerge.

Program: Ag PhD Episode #937
Air Date: Tuesday, April 5, 2016 5:30am
Topic/Title: Micronutrients
Duration: 30 minutes
Style/Type: Magazine Format
Source: Ag PhD Productions/Robert Rasmussen
Issue(s) Addressed: Agriculture/Economics
Host(s): Darren and Brian Hefty

Micronutrients are called Micro because they are used in small quantities, not because they are unimportant to plants. The most important nutrients are Zinc, Iron, Manganese, Copper and Barium. Get the soil ready first, then the micronutrients are so important to the plants. It is key to have overall balance of nutrients in your soil. You can download apps that help you figure out how much to use. You also have to soil test to find out if you have micronutrients in your manure. Test your soil, and test your manure. Spring soil sampling is a must.

Variable planting costs are due to current equipment becoming standardized, and set up for variable population planting. Analyze cost and potential return on investment.

Join us for AgPhD Field Day, coming up on July 28th.

Weed of the Week is Wild Oats. Today there are so many options for Wild Oats. One Wild Oat plant equals 10 Foxtail plants in terms of yield loss. For Wild Oats in corn, apply a pre-emerge herbicide and Roundup post-emerge. For soybeans, use Treflan, Sonalan or Prowl. Wild Oats in wheat is a struggle, so use a Pre-Pare Herbicide and there will be less to kill post-emerge.

Program: Ag PhD Episode #937
Air Date: Thursday, April 7, 2016 5:00am
Topic/Title: Micronutrients
Duration: 30 minutes
Style/Type: Magazine Format
Source: Ag PhD Productions/Robert Rasmussen
Issue(s) Addressed: Agriculture/Economics
Host(s): Darren and Brian Hefty

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Program: Ag PhD Episode #938
Air Date: Thursday, April 7, 2016 5:30am
Topic/Title: Managing herbicide carryover and root rot resolution in pulse crops
Duration: 30 minutes
Style/Type: Magazine Format
Source: Ag PhD Productions/Robert Rasmussen
Issue(s) Addressed: Agriculture/Economics
Host(s): Darren and Brian Hefty

Herbicide carryover in Northern colder areas and managing it the next season. Example is pigweed with Treflan pre-emerge. Using full rate can cause carryover. Herbicides have rotational restrictions. If herbicide says wait six months but it has been dry and then cold, it is recommended to wait nine months for herbicide to be depleted. Root rot in pulse crops usually occurs in poor drainage areas or in compaction layers. Soil testing is recommended. Micronutrients need to be balanced to prevent disease. Seed treatment with fungicide and insecticide is helpful. Plus, tillage and rotating crops are options to resolve root rot.

Weed of the Week is Woolly Cupgrass. It is a warm season grass so pre-emerge does not work well. Post-emerge Liberty and Roundup work great.

Program: Ag PhD Episode #937
Air Date: Tuesday, April 12, 2016 5:00am
Topic/Title: Micronutrients
Duration: 30 minutes
Style/Type: Magazine Format
Source: Ag PhD Productions/Robert Rasmussen
Issue(s) Addressed: Agriculture/Economics
Host(s): Darren and Brian Hefty

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Program: Ag PhD Episode #938
Air Date: Tuesday, April 12, 2016 5:30am
Topic/Title: Managing herbicide carryover and root rot resolution in pulse crops
Duration: 30 minutes
Style/Type: Magazine Format
Source: Ag PhD Productions/Robert Rasmussen
Issue(s) Addressed: Agriculture/Economics
Host(s): Darren and Brian Hefty

Herbicide carryover in Northern colder areas and managing it the next season. Example is pigweed with Treflan pre-emerge. Using full rate can cause carryover. Herbicides have rotational restrictions. If herbicide says wait six months but it has been dry and then cold, it is recommended to wait nine months for herbicide to be depleted. Root rot in pulse crops usually occurs in poor drainage areas or in compaction layers. Soil testing is recommended. Micronutrients need to be balanced to prevent disease. Seed treatment with fungicide and insecticide is helpful. Plus, tillage and rotating crops are options to resolve root rot.

Weed of the Week is Woolly Cupgrass. It is a warm season grass so pre-emerge does not work well. Post-emerge Liberty and Roundup work great.

Program: Ag PhD Episode #938
Air Date: Thursday, April 14, 2016 5:00am
Topic/Title: Managing herbicide carryover and root rot resolution in pulse crops
Duration: 30 minutes
Style/Type: Magazine Format
Source: Ag PhD Productions/Robert Rasmussen
Issue(s) Addressed: Agriculture/Economics
Host(s): Darren and Brian Hefty

Herbicide carryover in Northern colder areas and managing it the next season. Example is pigweed with Treflan pre-emerge. Using full rate can cause carryover. Herbicides have rotational restrictions. If herbicide says wait six months but it has been dry and then cold, it is recommended to wait nine months for herbicide to be depleted. Root rot in pulse crops usually occurs in poor drainage areas or in compaction layers. Soil testing is recommended. Micronutrients need to be balanced to prevent disease. Seed treatment with fungicide and insecticide is helpful. Plus, tillage and rotating crops are options to resolve root rot. Weed of the Week is Woolly Cupgrass. It is a warm season grass so pre-emerge does not work well. Post-emerge Liberty and Roundup work great.

Program: Ag PhD Episode #939
Air Date: Thursday, April 14, 2016 5:30am
Topic/Title: Determining economic threshold for insects, how to get more profit out of corn, and what to use and what to cut in soybean seed treatment
Duration: 30 minutes
Style/Type: Magazine Format
Source: Ag PhD Productions/Robert Rasmussen
Issue(s) Addressed: Agriculture/Economics
Host(s): Darren and Brian Hefty

Economic threshold for insects is determined by answering how many bugs it takes to effect yield. Factors to consider are cost of spray and value of grain. Insects are not evenly dispersed so it is important to scout for bugs and average population. Spot spraying can work on insects like grasshoppers that migrate from fields to crops. Overall look of crop also needs to be considered if selling a crop based on appearance. Therefore, it is a judgment call to spray earlier even if threshold has not been met yet.

The heavier the soil is and more moisture it has, the more stuff you can throw in furrow to increase the return on investment for in-furrow corn treatments. Avoid over application of 10-34-0. Higher rate is okay in 2x2 and 4x4. Over application can cause high salt index. 30 in row should have no more than 5 pounds of salt per acre. For cold soil concerns when using pop-up fertilizer include insecticide and fungicide. Fungicide does not mix well with fertilizer and insecticide, so a second system is needed. Otherwise, wait until warmer weather and not apply all these. However, expect not as much return.

Soybean seed treatments need to consider what fungicide works well in cooler climate, biologicals and inoculants. Legume crops need nitrogen and must always use inoculants. Insecticides can be cut if no bugs.

Week of the Week is Waterhemp. It is Roundup resistant. For soybeans use 3-Pre approach of Yellow (Prowl, Treflan, Sonalan), Metribuzin, and PPO (Authority or Valor). For corn use pre-emerge Verdict and post-emerge Status. For wheat use pre-emerge Sharpen and post-emerge Huskie.

Program: Ag PhD Episode #938
Air Date: Tuesday, April 19, 2016 5:00am
Topic/Title: Managing herbicide carryover and root rot resolution in pulse crops
Duration: 30 minutes
Style/Type: Magazine Format
Source: Ag PhD Productions/Robert Rasmussen
Issue(s) Addressed: Agriculture/Economics
Host(s): Darren and Brian Hefty

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Air Date: Tuesday, April 19, 2016 5:30am
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Issue(s) Addressed: Agriculture/Economics
Host(s): Darren and Brian Hefty

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Program: Ag PhD Episode #939
Air Date: Thursday, April 21, 2016 5:00am
Topic/Title: Determining economic threshold for insects, how to get more profit out of corn, and what to use and what to cut in soybean seed treatment
Duration: 30 minutes
Style/Type: Magazine Format
Source: Ag PhD Productions/Robert Rasmussen
Issue(s) Addressed: Agriculture/Economics
Host(s): Darren and Brian Hefty

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Program: Ag PhD Episode #940
Air Date: Thursday, April 21, 2016 5:30am
Topic/Title: Cost of farming, compaction issues and cleaning spray tanks
Duration: 30 minutes
Style/Type: Magazine Format
Source: Ag PhD Productions/Robert Rasmussen
Issue(s) Addressed: Agriculture/Economics
Host(s): Darren and Brian Hefty

Fair rent is determined by cost of production (include farmer's salary) minus projected gross of harvest. If it were done in shares, landlord pays 50 percent of expenses and reaps 50 of profit. Farmers reinvest so they don't make a lot of money but they are good for the economy.

Ruts are created during harvest and cause compaction issues the next year. Freeze-thaw effect does resolve ruts, but not twelve inches down. Tillage and drainage helps, as does planting cover crops with deep roots. Adding calcium to make the ground porous is beneficial too.

New traits lead to using Dicamba and 2-4-Ds in middle of season and it is okay to use on fields but not on crops. Roundup is the best stuff to clean out tanks. It is best to clean immediately after using Dicamba. Residual may not harm resistant seeds, but after repeat sprays, it could curled leaves.

Weed of the Week is Hemp Dogbane. It is a perennial weed with deep root system. Roundup as a burndown is best when night time temperature is above 50 degrees. Do not do tillage or use too much water.

Program: Living Well Episode #409
Air Date: Tuesday, April 26, 2016 5:00am
Topic/Title: Fresh With Anna Olson and Loving Spoonfuls
Duration: 58:30 minutes
Style/Type: Human Interest
Source: ION Life
Issue(s) Addressed: Organic, healthy, local and culturally diverse cooking
Host(s): Anna Olson and David Gale
Guests: Carry Katherine-musician and Anna's Olson's niece
Don-drummer
Rudolpha Hood- Grandmother

This inspirational series takes viewers inside Anna's world – a chef who truly lives food around the clock. Learn how you too can become inspired by fresh foods in your area, and watch as her enthusiasm motivates you to try new culinary creations of your own. In this episode Anna organizes a fundraising concert featuring the music of her niece Carry-Katherine who is a recording artist. Before heading over to the event, Anna prepares finger foods for a family visit while her niece warms up for the performance with her drummer. The menu centers around a rotisserie chicken served with four different sauces and bases along with potato mushroom bruschetta.

This delightful cooking series is devoted to characters, cultures and food. Each week, host David Gale visits a different grandmother to cook, laugh and learn about her life. In this episode David visits the home of Rudolpha Hood who is from the Island of Nevis. Rudolpha shares stories of the past while preparing Johnny Cakes and codfish with David.

Program: Ag PhD Episode #940
Air Date: Thursday, April 28, 2016 5:00am
Topic/Title: Cost of farming, compaction issues and cleaning spray tanks
Duration: 30 minutes
Style/Type: Magazine Format
Source: Ag PhD Productions/Robert Rasmussen
Issue(s) Addressed: Agriculture/Economics
Host(s): Darren and Brian Hefty

Fair rent is determined by cost of production (include farmer's salary) minus projected gross of harvest. If it were done in shares, landlord pays 50 percent of expenses and reaps 50 of profit. Farmers reinvest so they don't make a lot of money but they are good for the economy.

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New traits lead to using Dicamba and 2-4-Ds in middle of season and it is okay to use on fields but not on crops. Roundup is the best stuff to clean out tanks. It is best to clean immediately after using Dicamba. Residual may not harm resistant seeds, but after repeat sprays, it could curled leaves.

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Program: Ag PhD Episode #941
Air Date: Thursday, April 28, 2016 5:30am
Topic/Title: Herbicides, Roundup Ready 2 Xtend soybeans, and micronutrients
Duration: 30 minutes
Style/Type: Magazine Format
Source: Ag PhD Productions/Robert Rasmussen
Issue(s) Addressed: Agriculture/Economics
Host(s): Darren and Brian Hefty

Herbicides half-life is number of days it takes to break down herbicide. If heavy soil, it may tie up herbicide for longer than loose soil. Carryover is considered by half-life and sensitivity of crop that is being planted. Few products last longer than a year.

Roundup Ready 2 Xtend soybeans got labelled. Still cannot use Dicamba over the top, but can spray around soybeans now. Three pre-emerge is still the way to go for weed control. Post emerge can be used to help out Roundup burndown.

Micronutrients of zinc, iron, boron, copper and manganese need to be checked through soil testing. Zone and grid sampling is necessary because what is found as low in one area may not be the case in another. Silage and manure spreading is beneficial. Plant tissue analysis is important too. Find out what the fields need and do big applications of fertilizer in Spring and Fall.

Weed of the Week is Jerusalem artichoke. It looks like a Sunflower but has tubers. Round up as burndown works really well. In pasture crops, 2-4-D can be used.

Program: Living Well Episode #410
Air Date: Tuesday, May 3, 2016 5:00am
Topic/Title: Fresh With Anna Olson and Loving Spoonfuls
Duration: 58:30 minutes
Style/Type: Human Interest
Source: ION Life
Issue(s) Addressed: Organic, healthy, local and culturally diverse cooking
Host(s): Anna Olson and David Gale
Guests: Mike & Tina Papp-Anna's Friends
Zorka Jovancevic -Grandmother

This inspirational series takes viewers inside Anna's world – a chef who truly lives food around the clock. Learn how you too can become inspired by fresh foods in your area, and watch as her enthusiasm motivates you to try new culinary creations of your own. In this episode Anna cooks a summer supper as a thank you to her friends Mike and Tina for giving her leftover vegetables from their garden. Anna incorporates the vegetables into her menu and makes Super Burgers, chili sauce, pickled green tomatoes and tiramisu pudding.

This delightful cooking series is devoted to characters, cultures and food. Each week, host David Gale visits a different grandmother to cook, laugh and learn about her life. In this episode David visits the home of Zorka Jovancevic from Yugoslavia. Zorka shares stories with David, while making cabbage rolls, noodles and poppy seed cake.

Program: Ag PhD Episode #941
Air Date: Thursday, May 5, 2016 5:00am
Topic/Title: Herbicides, Roundup Ready 2 Xtend soybeans, and micronutrients
Duration: 30 minutes
Style/Type: Magazine Format
Source: Ag PhD Productions/Robert Rasmussen
Issue(s) Addressed: Agriculture/Economics
Host(s): Darren and Brian Hefty

Herbicides half-life is number of days it takes to break down herbicide. If heavy soil, it may tie up herbicide for longer than loose soil. Carryover is considered by half-life and sensitivity of crop that is being planted. Few products last longer than a year.

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Weed of the Week is Jerusalem artichoke. It looks like a Sunflower but has tubers. Round up as burndown works really well. In pasture crops, 2-4-D can be used.

Program: Ag PhD Episode #942
Air Date: Thursday, May 5, 2016 5:30am
Topic/Title: Cation Exchange Capacity, sudden death syndrome and wheat broadleaf herbicides
Duration: 30 minutes
Style/Type: Magazine Format
Source: Ag PhD Productions/Robert Rasmussen
Issue(s) Addressed: Agriculture/Economics
Host(s): Darren and Brian Hefty

Cation Exchange Capacity is how much nutrients soil can hold. CEC measures organic matter, type of clay, and amount of clay in the soil to make nitrogen recommendations. The equation $CEC \times 10 = \text{nitrogen pounds to apply}$. Sudden death syndrome in soybeans more prevalent in beans that are planted early in cold, wet soil. However, waiting to plant also causes loss of yield. Drainage issues can be a problem as well. Plant tolerant soybeans and have a broad variety of soybeans. Also, look at seed treatments with systematode and Fortix and Preemptor fungicide. Ilero and Clariva Complete helps with sudden death.

Weed of the Week is Prostrate Vervain. Drought does not kill it. It likes sandy places. Use Status for corn. Use Liberty or Roundup for soybeans and Huskie for wheat. Spray outside edges of field. Cover crops help. In field, use 2-4-D or Dicamba.

Program: Living Well Episode #411
Air Date: Tuesday, May 10, 2016 5:00am
Topic/Title: Fresh With Anna Olson and Loving Spoonfuls
Duration: 58:30 minutes
Style/Type: Human Interest
Source: ION Life
Issue(s) Addressed: Organic, healthy, local and culturally diverse cooking
Host(s): Anna Olson and David Gale
Guests: Hyun-Joo Cho

This inspirational series takes viewers inside Anna's world – a chef who truly lives food around the clock. Learn how you too can become inspired by fresh foods in your area, and watch as her enthusiasm motivates you to try new culinary creations of your own. Anna has been asked to judge a pie baking contest for the town's local food festival, and this episode of Fresh is all about pie inspired recipes! Anna stops by the Williams Apple Orchard to pick ingredients for her Country Apple Pie. Next she creates a Potato Bisque with bacon and cheddar and her specialty, Anna's Tourtiere. Anna delivers her meal to her fellow judges before the pie tasting begins!

This delightful cooking series is devoted to characters, cultures and food. Each week, host David Gale visits a different grandmother to cook, laugh and learn about her life. Hyun-Joo Cho practices spiritual self-healing through her cooking. Cold vegetarian salads and some warm apple wontons are for dinner.

Program: Ag PhD Episode #942
Air Date: Thursday, May 12, 2016 5:00am
Topic/Title: Cation exchange capacity, sudden death syndrome and wheat broadleaf herbicides
Duration: 30 minutes
Style/Type: Magazine Format
Source: Ag PhD Productions/Robert Rasmussen
Issue(s) Addressed: Agriculture/Economics
Host(s): Darren and Brian Hefty

Cation Exchange Capacity is how much nutrients soil can hold. CEC measures organic matter, type of clay, and amount of clay in the soil to make nitrogen recommendations. The equation $CEC \times 10 = \text{nitrogen pounds to apply}$. Sudden death syndrome in soybeans more prevalent in beans that are planted early in cold, wet soil. However, waiting to plant also causes loss of yield. Drainage issues can be a problem as well. Plant tolerant soybeans and have a broad variety of soybeans. Also, look at seed treatments with systematode and Fortix and Preemptor fungicide. Ilero and Clariva Complete helps with sudden death. Weed of the Week is Prostate Vervain. Drought does not kill it. It likes sandy places. Use Status for corn. Use Liberty or Roundup for soybeans and Huskie for wheat. Spray outside edges of field. Cover crops help. In field, use 2-4-D or Dicamba.

Program: Ag PhD Episode #943
Air Date: Thursday, May 12, 2016 5:30am
Topic/Title: What is a GMO? Corn post-emerge broadleaf herbicides and pasture spraying
Duration: 30 minutes
Style/Type: Magazine Format
Source: Ag PhD Productions/Robert Rasmussen
Issue(s) Addressed: Agriculture/Economics
Host(s): Darren and Brian Hefty

Genetically Modified Organisms and biotechnology have never killed anyone. Examples include corn as we know it used to be grass with kernels of corn on it. Plus, biotechnology packs nutrients in rice, benefitting populations that have very little to eat.

Roundup resistant weed control in corn is best treated with one of two strategies. Status with a little Dicamba for optimum safety, but spray early before getting too far into growth stages. Or, post-emerge HPPD herbicides for optimum safety. There is a drift concern with crops surrounding corn.

There are four products that work well for weed control in pastures. Use in good weather for best results. 2-4-D and Dicamba are good for burndown but doesn't get to roots. Soybeans are resistant, so no drift worries. Tordon and Milestone works well on thistle and gets roots. Do not use Tordon near trees or fish. Tordon lasts a long time and can take up to a decade to leave soil.

Weed of the Week is Arkansas Wild Rose. It is a pretty flower. Tordon will kill it and in crop use Roundup.

Program: Living Well Episode #412
Air Date: Tuesday, May 17, 2016 5:00am
Topic/Title: Fresh With Anna Olson and Loving Spoonfuls
Duration: 58:30 minutes
Style/Type: Human Interest
Source: ION Life
Issue(s) Addressed: Organic, healthy, local and culturally diverse cooking
Host(s): Anna Olson and David Gale
Guests: Regine Frankel

This inspirational series takes viewers inside Anna's world – a chef who truly lives food around the clock. Learn how you too can become inspired by fresh foods in your area, and watch as her enthusiasm motivates you to try new culinary creations of your own.

For the past eight years Anna has participated in the Eat to the Beat breast cancer fundraiser event. This event is all about healthy foods like Anna's Blueberry Muffins, and elegant hors d'oeuvres like Turkey and Trimming Pinwheels, and Squash and Cheddar Soufflés. See Anna in her full chef whites as this stunning event unfolds.

This delightful cooking series is devoted to characters, cultures and food. Each week, host David Gale visits a different grandmother to cook, laugh and learn about her life.

Regine Frankel tells riveting tales of surviving World War 2 as a Jew in France and sharing his recipe for vegetarian meatballs.

Program: Ag PhD Episode #943
Air Date: Thursday, May 19, 2016 5:00am
Topic/Title: What is a GMO? Corn post-emerge broadleaf herbicides and pasture spraying
Duration: 30 minutes
Style/Type: Magazine Format
Source: Ag PhD Productions/Robert Rasmussen
Issue(s) Addressed: Agriculture/Economics
Host(s): Darren and Brian Hefty

Genetically Modified Organisms and biotechnology have never killed anyone. Examples include corn as we know it used to be grass with kernels of corn on it. Plus, biotechnology packs nutrients in rice, benefitting populations that have very little to eat.

Roundup resistant weed control in corn is best treated with one of two strategies. Start with a little Dicamba for optimum safety, but spray early before getting too far into growth stages. Or, post-emerge HPPD herbicides for optimum safety. There is a drift concern with crops surrounding corn.

There are four products that work well for weed control in pastures. Use in good weather for best results. 2-4-D and Dicamba are good for burndown but doesn't get to roots. Soybeans are resistant, so no drift worries. Tordon and Milestone works well on thistle and gets roots. Do not use Tordon near trees or fish. Tordon lasts a long time and can take up to a decade to leave soil.

Weed of the Week is Arkansas Wild Rose. It is a pretty flower. Tordon will kill it and in crop use Roundup.

Program: Ag PhD Episode #944
Air Date: Thursday, May 19, 2016 5:30am
Topic/Title: Grass waterways, tissue sampling, controlling cutworms and other early season insects
Duration: 30 minutes
Style/Type: Magazine Format
Source: Ag PhD Productions/Robert Rasmussen
Issue(s) Addressed: Agriculture/Economics
Host(s): Darren and Brian Hefty

Grass waterways stops erosion and has no profit for the farmer, but costs farmer to maintain and control weeds. It is difficult to preserve waterway. Tiling is helpful.

Scouting for cutworms and early season insects needs to be done at the different times of day to see all the bugs in field. For cutworms, check as soon as corn sprouts. Soybeans have leaf beetle that can spread disease and Alfalfa has a worm larvae that is harmful. Spray outside four rows to create a barrier around crop. Use a fungicide and herbicide.

Plant tissue analysis to determine high and low of nutrients. Sample same field at same time of day over a period of 8-12 weeks. Sample its worst spot and its best spot. Plot nutrient trends with rainfall events.

Weed of the Week is Meadow Anemone. It is an invasive wild flower. It spreads quickly. It is a perennial. Need to get to the roots to kill it. Use highest level of Roundup over several applications. Dicamba works best and 2-4-D.

Program: Living Well Episode #413
Air Date: Tuesday, May 24, 2016 5:00am
Topic/Title: Fresh With Anna Olson and Loving Spoonfuls
Duration: 58:30 minutes
Style/Type: Human Interest
Source: ION Life
Issue(s) Addressed: Organic, healthy, local and culturally diverse cooking
Host(s): Anna Olson and David Gale
Guests: Andrew Vegetato-Italian Ice Cream
April Horncastle-Pastry Chef/Bride To Be
Heidi Kuhner-Swiss Grandmother

This inspirational series takes viewers inside Anna's world – a chef who truly lives food around the clock. Learn how you too can become inspired by fresh foods in your area, and watch as her enthusiasm motivates you to try new culinary creations of your own. In this episode Anna throws a wedding shower lunch for her pastry chef April. Anna makes Beet and Buttermilk Soup, Luncheon Sandwich Torte and an Ice Cream Layer Cake.

This delightful cooking series is devoted to characters, cultures and food. Each week, host David Gale visits a different grandmother to cook, laugh and learn about her life. In this episode David visits the home of Swiss grandmother Heidi Kuhner, where he learns how to make Cheese Fondue, Linzer Torte and a Mushroom Souffle.

Program: Ag PhD Episode #944
Air Date: Thursday, May 26, 2016 5:00am
Topic/Title: Grass waterways, tissue sampling, controlling cutworms and other early season insects
Duration: 30 minutes
Style/Type: Magazine Format
Source: Ag PhD Productions/Robert Rasmussen
Issue(s) Addressed: Agriculture/Economics
Host(s): Darren and Brian Hefty

Grass waterways stops erosion and has no profit for the farmer, but costs farmer to maintain and control weeds. It is difficult to preserve waterway. Tiling is helpful.

Scouting for cutworms and early season insects needs to be done at the different times of day to see all the bugs in field. For cutworms, check as soon as corn sprouts. Soybeans have leaf beetle that can spread disease and Alfalfa has a worm larvae that is harmful. Spray outside four rows to create a barrier around crop. Use a fungicide and herbicide.

Plant tissue analysis to determine high and low of nutrients. Sample same field at same time of day over a period of 8-12 weeks. Sample its worst spot and its best spot. Plot nutrient trends with rainfall events.

Weed of the Week is Meadow Anemone. It is an invasive wild flower. It spreads quickly. It is a perennial. Need to get to the roots to kill it. Use highest level of Roundup over several applications. Dicamba works best and 2-4-D.

Program: Ag PhD Episode #945
Air Date: Thursday, May 26, 2016 5:30am
Topic/Title: Streambars in wheat, soybean post-emerge broadleaf herbicides, V6 corn fungicides
Duration: 30 minutes
Style/Type: Magazine Format
Source: Ag PhD Productions/Robert Rasmussen
Issue(s) Addressed: Agriculture/Economics
Host(s): Darren and Brian Hefty

Early use of fungicide on V6 corn produces more yield. Watch in the Fall as to where to put it. Disease resistance is not an issue. It is about plant health and to protect leaf growth to the ear.

Tank mix partners for weed control. Broadleaf tank mix like Roundup or insecticide with fungicide helps with weed control. They may need more than two passes to keep drift from happening.

Streambars in wheat is to apply liquid fertilizer like nitrogen during crop season. Streambars help prevent leaf burn. Nitrogen put on later increases protein levels and makes wheat more valuable. Streambars don't work on all plants. They only work on cereal crops.

Weed of the Week is Marsh Aster. It is pretty flower, but it is a perennial weed and can take over a pasture. Dicamba works well. Improve drainage.

Roundup resistant weeds need tank mix. For soybean post-emerge broadleaf control, use tank mix Roundup with Flexstar on Water Hemp or Palmer Pigweed. Also, use a good pre-emerge herbicide. Use Harass for Lambquarters. Products only work on one or two weeds so start with worst problem. Be sure to scout fields.

Program: Living Well Episode #414
Air Date: Tuesday, May 31, 2016 5:00am
Topic/Title: Fresh With Anna Olson and Loving Spoonfuls
Duration: 58:30 minutes
Style/Type: Human Interest
Source: ION Life
Issue(s) Addressed: Organic, healthy, local and culturally diverse cooking
Host(s): Anna Olson and David Gale
Guests: David Irish-David Irish's Farm
Evelyn Koop-Grandmother

This inspirational series takes viewers inside Anna's world – a chef who truly lives food around the clock. Learn how you too can become inspired by fresh foods in your area, and watch as her enthusiasm motivates you to try new culinary creations of your own. In this episode Anna delivers a working lunch for a meeting in progress at a local college. She puts together a scrumptious vegetarian menu including Vegetable Salad Rolls with a Cashew Cream, Honey Yogurt Cheesecake with Fresh Mango and a Roasted Garlic Vegetable Tart.

This delightful cooking series is devoted to characters, cultures and food. Each week, host David Gale visits a different grandmother to cook, laugh and learn about her life. In this episode David visits the home of Estonian Grandmother Evelyn Koop, who introduced rhythmic dancing to the Olympics. Evelyn shows David how to make Rollmops and Rosolje.

Program: Ag PhD Episode #945
Air Date: Thursday, June 2, 2016 5:00am
Topic/Title: Streambars in wheat, soybean post-emerge broadleaf herbicides, V6 corn fungicides
Duration: 30 minutes
Style/Type: Magazine Format
Source: Ag PhD Productions/Robert Rasmussen
Issue(s) Addressed: Agriculture/Economics
Host(s): Darren and Brian Hefty

Early use of fungicide on V6 corn produces more yield. Watch in the Fall as to where to put it. Disease resistance is not an issue. It is about plant health and to protect leaf growth to the ear.

Tank mix partners for weed control. Broadleaf tank mix like Roundup or insecticide with fungicide helps with weed control. They may need more than two passes to keep drift from happening.

Streambars in wheat is to apply liquid fertilizer like nitrogen during crop season. Streambars help prevent leaf burn. Nitrogen put on later increases protein levels and makes wheat more valuable. Streambars don't work on all plants. They only work on cereal crops.

Weed of the Week is Marsh Aster. It is pretty flower, but it is a perennial weed and can take over a pasture. Dicamba works well. Improve drainage.

Roundup resistant weeds need tank mix. For soybean post-emerge broadleaf control, use tank mix Roundup with Flexstar on Water Hemp or Palmer Pigweed. Also, use a good pre-emerge herbicide. Use Harass for Lambquarters. Products only work on one or two weeds so start with worst problem. Be sure to scout fields.

Program: Ag PhD Episode #946
Air Date: Thursday, June 2, 2016 5:30am
Topic/Title: Corn root systems, soybean in-crop residuals, wheat flag leaf fungicides
Duration: 30 minutes
Style/Type: Magazine Format
Source: Ag PhD Productions/Robert Rasmussen
Issue(s) Addressed: Agriculture/Economics
Host(s): Darren and Brian Hefty

Corn root systems should have a planting depth of more than an inch and a half. Radical roots are seminal out of seed and nodal roots grow above seed and need to be below soil. Nodal roots bring in water and nutrients. Brace roots are above ground and offer stability. If root mass is left intact with no tillage, it provides organic matter.

Soybean residual control in crop, a pre-emerge herbicide is most recommended. Post-emerge can cause injury or burn. Use Group 15 if longer growing season such as in the South.

Flagleaf wheat fungicides has three timings. There are herbicide timings, heading timings, flagleaf timings. Flagleaf timing has best yield gain but is the least farmers do. It protects leaf foliage from disease. Flagleaf is responsible for 80 percent of yield. At heading timing, there is restriction on what fungicides can be used. Flat fan nozzles for small droplets and get coverage of entire leaf.

Weed of the Week is Buckbrush. It is a pasture and non-cropland weed. It is a perennial. Tordon gets into the root but 2-4-D has no residual.

Program: Living Well Episode #415
Air Date: Tuesday, June 7, 2016 5:00am
Topic/Title: Fresh With Anna Olson and Loving Spoonfuls
Duration: 58:30 minutes
Style/Type: Human Interest
Source: ION Life
Issue(s) Addressed: Organic, healthy, local and culturally diverse cooking
Host(s): Anna Olson and David Gale
Guests: Luzia Nunes

This inspirational series takes viewers inside Anna's world – a chef who truly lives food around the clock. Learn how you too can become inspired by fresh foods in your area, and watch as her enthusiasm motivates you to try new culinary creations of your own.

Anna's friend Susan is having an important birthday and is looking forward to an elegant dinner with a few of her close friends. Anna starts by preparing a Slow Roasted Prime Rib with a rich mushroom jus (brandy). She then heads to her friend Cheryl's farm gate stand to get fresh ingredients for a Warm Squash and Ricotta Salad. She finishes the meal with a Honey Walnut Torte – a classic Viennese birthday cake.

This delightful cooking series is devoted to characters, cultures and food. Each week, host David Gale visits a different grandmother to cook, laugh and learn about her life.

Luzia Nunes left her home in the Azores to teach David how to cook authentic Portuguese-style fish stew and reveals why she's called "Crazy Luzia".

Program: Ag PhD Episode #946
Air Date: Thursday, June 9, 2016 5:00am
Topic/Title: Corn root systems, soybean in-crop residuals, wheat flag leaf fungicides
Duration: 30 minutes
Style/Type: Magazine Format
Source: Ag PhD Productions/Robert Rasmussen
Issue(s) Addressed: Agriculture/Economics
Host(s): Darren and Brian Hefty

Corn root systems should have a planting depth of more than an inch and a half. Radical roots are seminal out of seed and nodal roots grow above seed and need to be below soil. Nodal roots bring in water and nutrients. Brace roots are above ground and offer stability. If root mass is left intact with no tillage, it provides organic matter.

Soybean residual control in crop, a pre-emerge herbicide is most recommended. Post-emerge can cause injury or burn. Use Group 15 if longer growing season such as in the South.

Flagleaf wheat fungicides has three timings. There are herbicide timings, heading timings, flagleaf timings. Flagleaf timing has best yield gain but is the least farmers do. It protects leaf foliage from disease. Flagleaf is responsible for 80 percent of yield. At heading timing, there is restriction on what fungicides can be used. Flat fan nozzles for small droplets and get coverage of entire leaf.

Weed of the Week is Buckbrush. It is a pasture and non-cropland weed. It is a perennial. Tordon gets into the root but 2-4-D has no residual.

Program: Ag PhD Episode #947
Air Date: Thursday, June 9, 2016 5:30am
Topic/Title: Ag PhD Field Day, increasing protein in wheat, sidedress applications
Duration: 30 minutes
Style/Type: Magazine Format
Source: Ag PhD Productions/Robert Rasmussen
Issue(s) Addressed: Agriculture/Economics
Host(s): Darren and Brian Hefty

AgPhD Field Day is a one day only event July 28. It showcases products for chemistries on crops and new traits on the Hefty farm. People can demo new technologies and equipment. Top farmers who are yield champs of soybean, corn wheat will be speakers.

Protein in wheat can be increased with nitrogen. Put it on later in season. Make sure sulfur is plentiful too. Also, the warmth earlier in Spring last year had organic matter mineralization which made for more protein. Test more in season and streambar nitrogen late in season. The rule is 20-30 pounds nitrogen for every one percent of organic matter throughout growing season.

Sidedress application and Cation Exchange Capacity determines how much nitrogen soil can hold. CEC comes standard on most soil tests. It is important to understand soil and not overdo nitrogen. Too much nitrogen and lime has to be put out to balance pH. This leads to unnecessary costs.

Weed of the Week is Black Medic. It is a clover-like weed with flowers. Tordon can be used in pasture. 2-4-D can be used on lawn three times a year.

Program: Living Well Episode #416
Air Date: Tuesday, June 14, 2016 5:00am
Topic/Title: Fresh With Anna Olson and Loving Spoonfuls
Duration: 58:30 minutes
Style/Type: Human Interest
Source: ION Life
Issue(s) Addressed: Organic, healthy, local and culturally diverse cooking
Host(s): Anna Olson and David Gale
Guests: Andrea Vincent

This inspirational series takes viewers inside Anna's world – a chef who truly lives food around the clock. Learn how you too can become inspired by fresh foods in your area, and watch as her enthusiasm motivates you to try new culinary creations of your own.

Anna's parents are visiting and she's preparing a traditional Sunday Supper. In order to make a wholesome, hardy meal, she pairs a Whole Roasted Pork Loin in a mustard marmalade glaze with Roasted Root Vegetables in a warm vinaigrette. For desert, Anna heads to Whitty Farm to get fresh pears for her Spiced Chocolate Pear Tart.

This delightful cooking series is devoted to characters, cultures and food. Each week, host David Gale visits a different grandmother to cook, laugh and learn about her life.

Hungarian grandmother Andrea Vincent tells heart-wrenching tales of life and love while making Sour Cherry Soup and a Wine Cream.

Program: Ag PhD Episode #947
Air Date: Thursday, June 16, 2016 5:00am
Topic/Title: Ag PhD Field Day, increasing protein in wheat, sidedress applications
Duration: 30 minutes
Style/Type: Magazine Format
Source: Ag PhD Productions/ Robert Rasmussen
Issue(s) Addressed: Agriculture/Economics
Host(s): Darren and Brian Hefty

AgPhD Field Day is a one day only event July 28. It showcases products for chemistries on crops and new traits on the Hefty farm. People can demo new technologies and equipment. Top farmers who are yield champs of soybean, corn wheat will be speakers.

Protein in wheat can be increased with nitrogen. Put it on later in season. Make sure sulfur is plentiful too. Also, the warmth earlier in Spring last year had organic matter mineralization which made for more protein. Test more in season and streambar nitrogen late in season. The rule is 20-30 pounds nitrogen for every one percent of organic matter throughout growing season.

Sidedress application and Cation Exchange Capacity determines how much nitrogen soil can hold. CEC comes standard on most soil tests. It is important to understand soil and not overdo nitrogen. Too much nitrogen and lime has to be put out to balance pH. This leads to unnecessary costs.

Weed of the Week is Black Medic. It is a clover-like weed with flowers. Tordon can be used in pasture. 2-4-D can be used on lawn three times a year.

Program: Ag PhD Episode #948
Air Date: Thursday, June 16, 2016 5:30am
Topic/Title: Scouting crops, seed maturities, tissue analysis
Duration: 30 minutes
Style/Type: Magazine Format
Source: Ag PhD Productions/Alex George
Issue(s) Addressed: Agriculture/Economics
Host(s): Darren and Brian Hefty

Scouting is the most important thing to do for identifying crop injuries and for late season application in wheat. Different maturities in seed planted in corn—day length corn is early 95 days or late 105 days to harvest. Corn is a grass plant. Longer season has more moisture, humidity, disease pressure. There is heat and dry down and in between 3 leaf and tassel a lot can happen. Soybeans is a broadleaf plant and day length determines reproduction. After that is when maturity happens. Frost date in Fall is a consideration. Decide maturity based on area. Longer days gives some forgiveness for bad weather. Early maturity is ready for harvest before frost.

Scouting for bugs all season. Heading timing treatments in wheat—insecticide, fungicide, nutrients, herbicides. Trying to make seed, root system needs to be good. Start with soil test and then plant tissue analysis. Tissue test can be deceiving if rain is just needed. Disease protection for once head is out requires caution as to what fungicide to use and it has to be applied prior to signs of disease. Nutrient deficiencies, chemical injuries and other crop issues lead to unhealthy plants. Nutrients and drainage can help. Plant tissue analysis helps determine issues too. Lack of nitrogen shows at lowest part of plant and goes from tip of leaf to inside stem. If it is a lack of potassium, it shows on the outside ledges of leaf.

Weed of the Week is Crabgrass. Drive works on lawn and comes up around the time as lilac blooms. In soybeans and corn crops use Roundup. In wheat use Prepare and Axel.

Program: Living Well Episode #417
Air Date: Tuesday, June 21, 2016 5:00am
Topic/Title: Fresh With Anna Olson and Loving Spoonfuls
Duration: 58:30 minutes
Style/Type: Human Interest
Source: ION Life
Issue(s) Addressed: Organic, healthy, local and culturally diverse cooking
Host(s): Anna Olson and David Gale
Guests: Ann Bering-White Meadows Maple Syrup Farm
Winifred Field-Grandmother
Janet-Winifred's Daughter

This inspirational series takes viewers inside Anna's world – a chef who truly lives food around the clock. Learn how you too can become inspired by fresh foods in your area, and watch as her enthusiasm motivates you to try new culinary creations of your own. Anna prepares a special meal that both adults and children can enjoy for her guests who have kids. She makes Sweet Onion Dip with Veggies, Three Cheese Pasta Bake, Maple Garlic Roasted Chicken and Very Vanilla Cupcakes that everyone can decorate themselves. Anna also visits White Meadows Maple Syrup Farm

This delightful cooking series is devoted to characters, cultures and food. Each week, host David Gale visits a different grandmother to cook, laugh and learn about her life. In this episode David visits the home of British Grandmother Winifred Field who is from London, England and a decorated war hero. While Winifred talks about her life in England and Canada, they make Classic Steak and Kidney Pie and Poor Man's Trifle. Winifred's daughter Janet also gives them a hand in the kitchen.

Program: Ag PhD Episode #948
Air Date: Thursday, June 23, 2016 5:00am
Topic/Title: Scouting crops, seed maturities, tissue analysis
Duration: 30 minutes
Style/Type: Magazine Format
Source: Ag PhD Productions/Alex George
Issue(s) Addressed: Agriculture/Economics
Host(s): Darren and Brian Hefty

Scouting is the most important thing to do for identifying crop injuries and for late season application in wheat. Different maturities in seed planted in corn—day length corn is early 95 days or late 105 days to harvest. Corn is a grass plant. Longer season has more moisture, humidity, disease pressure. There is heat and dry down and in between 3 leaf and tassel a lot can happen. Soybeans is a broadleaf plant and day length determines reproduction. After that is when maturity happens. Frost date in Fall is a consideration. Decide maturity based on area. Longer days gives some forgiveness for bad weather. Early maturity is ready for harvest before frost. Scouting for bugs all season. Heading timing treatments in wheat—insecticide, fungicide, nutrients, herbicides. Trying to make seed, root system needs to be good. Start with soil test and then plant tissue analysis. Tissue test can be deceiving if rain is just needed. Disease protection for once head is out requires caution as to what fungicide to use and it has to be applied prior to signs of disease. Nutrient deficiencies, chemical injuries and other crop issues lead to unhealthy plants. Nutrients and drainage can help. Plant tissue analysis helps determine issues too. Lack of nitrogen shows at lowest part of plant and goes from tip of leaf to inside stem. If it is a lack of potassium, it shows on the outside ledges of leaf. Weed of the Week is Crabgrass. Drive works on lawn and comes up around the time as lilac blooms. In soybeans and corn crops use Roundup. In wheat use Prepare and Axel.

Program: Ag PhD Episode #949
Air Date: Thursday, June 23, 2016 5:30am
Topic/Title: Temperature Inversions, Foliar Feeding, Irrigation
Duration: 30 minutes
Style/Type: Magazine Format
Source: Ag PhD Productions/Alex George
Issue(s) Addressed: Agriculture/Economics
Host(s): Darren and Brian Hefty

Temperature inversions can cause spraying issues. It usually happens in the morning when warmer air sits on top of cooler air. Nothing moves above the warm air. Need two to 10 mile an hour winds to mix the air and inversion goes away.

One question asked a lot is if Foliar Feeding crops pays off. Foliar Feeding is applying nutrients to crops. Some nutrients need to go through leaf tissue and some need to go through root system. Foliar Feeding is better when moisture is available. Leaf will be open to receive. However, biggest problems should be fixed according to soil test because fertilizing the soil is the most economical way to go.

Water quality is vital to irrigating crops. Treat, drill new well if needed because salt can build up due to poor water quality. Put tile underneath irrigation system to help drain off salt and for oversaturation. Determining when to water and when not, has some trial and error to it.

Weed of the Week is Absinth Wormwood. It is a tough perennial weed along roadside mostly but can be found in pasture due to overgrazing or drought. Fertility helps generate good growth which will choke out weeds. Also, rotate grazing pastures. Tordon 2-4-D works best but has a long residual so crop must be kept grass for a decade before broadleaf crop can be planted.

Program: Living Well Episode #418
Air Date: Tuesday, June 28, 2016 5:00am
Topic/Title: Fresh With Anna Olson and Loving Spoonfuls
Duration: 58:30 minutes
Style/Type: Human Interest
Source: ION Life
Issue(s) Addressed: Organic, healthy, local and culturally diverse cooking
Host(s): Anna Olson and David Gale
Guests: Charles Baker-Stratus Winery
Maria-Angelica Enriquez- Grandmother
Gabriela-Maria-Angelica's Daughter

This inspirational series takes viewers inside Anna's world – a chef who truly lives food around the clock. Learn how you too can become inspired by fresh foods in your area, and watch as her enthusiasm motivates you to try new culinary creations of your own. Anna hosts a wine maker's dinner at a friend's winery. She builds a menu around particular wines using flavors that will go well with red wines. Anna makes Rosemary Roasted Rack Of Lamb, Date and Pistachio Salsa, Three Onion Couscous, Parsnips Bakes With Moroccan Spices and Baked Figs with Honey and Yogurt.

This delightful cooking series is devoted to characters, cultures and food. Each week, host David Gale visits a different grandmother to cook, laugh and learn about her life. In this episode David visits the home of Chilean Grandmother Maria-Angelica Enriquez. They make Seafood Soup and Corn Pie. Gabriela-Maria's daughter gives them a hand. While they are cooking they talk about Gabriela-Maria's life in Chile and Canada.

Program: Ag PhD Episode #949
Air Date: Thursday, June 30, 2016 5:00am
Topic/Title: Temperature Inversions, Foliar Feeding, Irrigation
Duration: 30 minutes
Style/Type: Magazine Format
Source: Ag PhD Productions/Alex George
Issue(s) Addressed: Agriculture/Economics
Host(s): Darren and Brian Hefty

Temperature inversions can cause spraying issues. It usually happens in the morning when warmer air sits on top of cooler air. Nothing moves above the warm air. Need two to 10 mile an hour winds to mix the air and inversion goes away.

One question asked a lot is if Foliar Feeding crops pays off. Foliar Feeding is applying nutrients to crops. Some nutrients need to go through leaf tissue and some need to go through root system. Foliar Feeding is better when moisture is available. Leaf will be open to receive. However, biggest problems should be fixed according to soil test because fertilizing the soil is the most economical way to go.

Water quality is vital to irrigating crops. Treat, drill new well if needed because salt can build up due to poor water quality. Put tile underneath irrigation system to help drain off salt and for oversaturation. Determining when to water and when not, has some trial and error to it.

Weed of the Week is Absinth Wormwood. It is a tough perennial weed along roadside mostly but can be found in pasture due to overgrazing or drought. Fertility helps generate good growth which will choke out weeds. Also, rotate grazing pastures. Tordon 2-4-D works best but has a long residual so crop must be kept grass for a decade before broadleaf crop can be planted.

Program: Ag PhD Episode #950
Air Date: Thursday, June 30, 2016 5:30am
Topic/Title: Lift stations, soybean aphids, leachable nutrients
Duration: 30 minutes
Style/Type: Magazine Format
Source: Ag PhD Productions/Alex George
Issue(s) Addressed: Agriculture/Economics
Host(s): Darren and Brian Hefty

Lift stations are field sump pumps. Water comes in from tile lines then lift station pumps it out of ground and into drainage ditches. This is good for flat lying areas where water has nowhere to go. Farmers can also just use gravity by creating slope to have tile drain into ditch. Lift stations cost \$10-\$15 a year to power verses a \$300 loss in yield.

Soybean aphids were first reported in the United States in 2004. Temperature is key to reproduction. They like warmth. Rain will wash them off, but it won't stop reproduction. They are piercing, sucking insects that cause injury and makes plants vulnerable to disease. The stage of plant growth determines risk. Later in growth cycle, the less damage from aphids. When scouting and count is 5-10 aphids per plant then crop should have insecticide application.

Rain moves leachable nutrients out of root zone. Pull nitrate test to check for nitrogen loss. A large percent of nitrogen is pulled up late in season. Sulfur and boron are also important to check. Soil testing and plant tissue analysis also need done to determine 20-30 pounds of nitrogen to every one percent of organic matter.

Weed of the Week is Field Sandbur. It is a grass plant with a wintergreen color that looks a lot like foxtail. It is important to dig up grass plants and look at the seed to verify what it is. Field Sandbur will have a burr on root. Having good crop canopy is the best way to prevent Field Sandbur. If it is in corn field, use Eradicane. In soybean field, use Roundup and Liberty. In wheat field, use Prepare and Axiel.