

Avoiding Nitrate and Prussic Acid Toxicity in the Fall

For most livestock producers, fall usually is a time of bringing the cows in from the range and gearing up for winter chores. But as the weather cools and the first frosts arrive, you should be alert to potential forage toxicity. Often this is the last thing on your mind, because fall usually brings increased regrowth and valuable feed before the snow falls. But there are also hidden dangers that can come from nitrate poisoning and prussic acid toxicity.

Nitrate poisoning

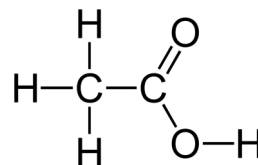
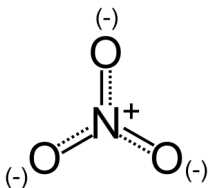
Plants take up nitrogen in the form of nitrates. They quickly convert the nitrogen into amino acids and protein, which then goes to build the rest of the plant. However, when a plant experiences drought, frost, or any other stressful event, their normal metabolism is disrupted. Plants that are designed to take up lots of nitrogen, like small grains and many weed species, will have a large quantity of nitrates in their system without a means to process them into proteins. This is why all the old timers know it better as “Oat Hay Poisoning”, because small grains that are cut for hay are usually the most susceptible to accumulate nitrates under these conditions. Nitrate poisoning is when an animal eats these nitrate heavy plants and the nitrates accumulate in the animal’s bloodstream, causing weakness, heavy breathing, and occasionally death of the animal. These symptoms happen quickly, and an animal can go from healthy to dead within an hour or two. Treatment from a vet is effective if it is caught early, but it is better to prevent than treat.

Do not over fertilize with nitrogen or manure, especially in the fall. Delay cutting or grazing for 7-10 days after a stress event such as drought or frost. If cutting for hay, raise your cutter bar to about 6-8 inches off the ground. This will avoid the heaviest concentrations of nitrates in the lower base of the plants. If you suspect your hay may be high in nitrates, please call the local extension office and we can do a quick test to see if you have nitrates present in your forage.

Prussic Acid Toxicity

Prussic acid is an entirely different compound from nitrates, but the two are often confused. Prussic acid only forms in certain warm season grasses, such as Sorghum, Sudan grass, and Johnson grass. These compounds don’t form until after a frost, in which the cells rupture and release compounds that then form into prussic acid. This is usually an issue through the months of September and October for growers who grow warm season annual forages, or for pastures where there is a heavy Johnson grass infestation. To prevent prussic acid accumulation, make sure to harvest your crop before a hard frost. If you are unfortunate enough to have your warm season grasses get hit by frost, you will need to wait 2 weeks before harvesting that crop forage use.

Nitrate poisoning and prussic acid are rare events that most farmers never need to deal with. However, if you have any kind of concern feel free to contact University of Idaho Extension for more information.



Jefferson County Extension
210 Courthouse House Way,
Ste.180 Annex Building
208-745-6685
jefferson@uidaho.edu
Monday to Friday 9:00-5:00
Lunch from 1:00-2:00

TURKEY TALK & PREP

Are you gearing up to host a holiday meal? If you are planning to serve turkey as your main dish, be aware that the pickin' may be slim this season.

The "Highly Pathogenic Avian Influenza" (HPAI) is contagious among flocks and has diminished the poultry population intended to be on the shelves in time for the holidays. In past years, an average of 245 million turkeys were raised each year from 2016 to 2019, but those numbers have been in steady decline since. In 2025 alone, turkey production has fallen to 195 million in the US, partly because of HPAI. While production is lower, the price per pound has increased slightly to \$1.32 per pound (94 cents per pound in 2024). "The price increase is a natural response to lower production with HPAI pressures combined with steady demand." ([Turkey Farmers Brace for Uptick in HPAI | Market Intel | American Farm Bureau Federation](#))

What should you expect as you are preparing the menu for your event? Get a guest headcount early on. An average adult may consume up to 1 1/4 lbs. of turkey at a thanksgiving meal. Taste of Home recommends you multiply the number of guests by 1.25, then round up to the nearest whole number to know how big of a bird to purchase and prepare. ([How Much Turkey Per Person Should You Make? Follow This Chart](#)) If you know you'll be short on time but have the room, it may be more effective to purchase two smaller turkeys, instead of one large one. This is a great option to provide more than two drumsticks as well!

Avoid foodborne illness by understanding safe handling of turkey before and after cooking:

- *Maintain a clean work area;* wash your hands before and after. It's good practice to also sanitize your work station and equipment before and after dealing with raw meats. Be safe, don't cross-contaminate.
- *Never thaw your turkey on the counter.* Thaw in the refrigerator in a pan that can catch the thawing juices. If thawing in the sink, change the cold water every 30 minutes.
- *Cook to an internal temperature of 165°F,* and check with a meat thermometer in the thickest part of the breast, the innermost part of the thigh, and the innermost part of the wing. Pop-up timers aren't always reliable.
- *After the meat is served, refrigerate that carved bird!* It will cool faster after it's cut and minimize the risk of food poisoning if you can reduce the amount of time it's in the danger zone. Aim to cool and refrigerate within 2 hours of removing it from it's heat source.

You are always welcome to call our office if you have turkey food safety questions. In case you're prepping late at night or when we are not around, you can check out these USDA resources: [Your Safe Thanksgiving Guide](#) | [Food Safety and Inspection Service](#) , [Turkey Day Myths](#) | [USDA](#) , [Turkey Basics: Safe Cooking](#) | [Food Safety and Inspection Service](#)



Master Food Safety Advisor Program

Registration Now Open!!

**Classes will be held every
Wednesday in February & March,
from 9-3pm**



To register, call our office
at (208) 745-6685,
scan the QR code,
or click the link here:

<https://forms.office.com/r/xCgyULbdLt>

Capture the Flavor: Herbs & Spices

*Join us in learning how to use herbs and
spices in a variety of cuisines, maintaining
product freshness and meal ideas.*

**Friday November 14th, 2025
Jefferson County Extension Office
Annex, Upstairs Kitchen**



To register, call our office
at (208) 745-6685,
scan the QR code,
or click the link here:

<https://forms.office.com/>

Fitness Made Simple

Join us on Zoom, for free!!



Every Thursday, 10-11am
Zoom Meeting ID:
851 4309 8244
Password: 693155

*Deanna Poulsen
Jefferson County
FCS Extension Educator*



4-H News

Holiday Day Camp

Thanksgiving craft, Christmas Tree and Winter Wreath

November 7, 10-12, \$5.00, Mud Lake, ALC building

November 24, 9-12, \$5.00, Rigby, 4H office

Holiday Cloverbud Day Camp

Cloverbuds - November 24, 9-12, Rigby 4H Office

MUST CALL THE 4-H OFFICE TO GET SIGNED –UP!

Limited space.

All youth must be paid and registered on 4h.zsuite.org to participate.

2026 New Year Start up

Can you believe that our 2025 4H year is coming to a close?! The new 4H year starts October 1. If you want to avoid registration deadlines in the spring start working on your 2026 registration.

Check out our Facebook Page

Know Your Government

Registration opens for KYG 2026 in ZSuite on December 1, 2025. Members MUST be actively enrolled in ZSuite and enrolled in the Know Your Government Project.

If you have any questions, contact Mike Knutz at mknutz@uidaho.edu



Stay Updated!

NEW NBC UNIVERSAL “WICKED” PARTNERSHIP ACTIVATION KICKS OFF DURING NATIONAL 4-H WEEK

4-H has been selected by NBC Universal as the non-profit partner for the next **Wicked** movie - **Wicked: For Good** - in theaters November 21.

Our understanding is that the movie focuses on the pathways of the two witches, including their careers, and that NBC Universal saw strong alignment with **Beyond Ready**.

Our partnership activation, the **4-H For Good Challenge**, launches on October 9th and runs through November 21. Participating is easy:

1. **Do something good** in your community, big or small!
2. **Snap a photo or video** of your good deed or share a short story about what you did.
3. **Post it on social media** using the hashtag **#4HForGood** and tag **@4H** and your local 4-H account.
4. **Challenge 4 friends** to join in by tagging them in your post and inviting them to do something good too!

Check out the **4-H For Good** toolkit, available on Canva and 4h.org, for more Challenge resources



