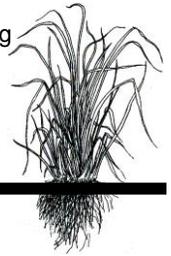




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PENNSYLVANIA FORAGE and GRASSLAND NEWS

Volume 26, No. 2, Spring 2016

Supporting Members of PFGC

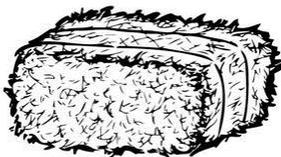
Many businesses support the PFGC through their membership and involvement in many of the PFGC sponsored activities. Our supporting members for 2016 are listed below.

AgChoice Farm Credit	Agri Analysis, Inc
Ampac Seed Co.	Barenbrug, USA
Chemgro Seeds	Delmhorst Inst. Co. Dow
AgroSciences	Dupont Pioneer
Ernst Conservation Seeds	Farmshine Publications
Fulton Bank-AG	Kings Agriseeds
Lancaster Farming	New Holland N.A., Inc.
Northampton County Seeds	Rohrer Seeds
Seedway, Inc.	Timac, USA, Inc
W-L Research	

Thank You for 25 Years of Service, Dr. Marvin Hall

The PFGC officers, board, and members would like to extend a sincere appreciation to Dr. Marvin Hall, Professor of Forage Management at Penn State University for 25 years of dedicated service to the Pennsylvania Forage and Grassland Council. As the Executive Vice President, Dr. Hall dedicated his time and energy to the PFGC, ensuring its success in the years to come. Thank you, Marvin, for all you have done for our organization!

Save Your Hay Samples for the Ag Progress Days Hay Show



As you make hay this year, pull a couple of your best bales and store them in a dry spot so that when APD rolls around you will have easy access to them. Hay Show entry forms will be sent with the Summer PFGC News.

Forage Variety Trials Report Available

The 2015 Penn State "Forage Variety Trials Report" is now available, at your county extension office. It can also be downloaded from the web at <http://pubs.cas.psu.edu/FreePubs/pdfs/uc068.pdf>

Forage Conference held February 24

The PFGC Forage Conference was held Wednesday, February 24 at the Holiday Inn and Conference Center in Grantville, PA. Thank you to all who attended and made this a successful event.

Speakers included **Clayton Gerald**s, who is a large hay grower from Munfordville, KY. He grows alfalfa and timothy hay on more than 720 acres and makes it into small bales that he sells to horse farmers. One of his keys to success has been the way he "rolls" equipment. Gerald has six small balers that are switched out of his fleet every four years. Within those four years, each baler will bale about 100,000 small bales.

Dr. Peter Ballerstedt is the Forage Product Manager for Barenbrug Seeds. He has an extensive background in forage production, utilization, and forage-based livestock production systems. His personal Experience has led him to reexamine human diet and health. What he's learned doesn't agree with the advice you've gotten for the past several decades. This new understanding, combined with his forage background, has given him an interest in local, sustainable animal production systems; specifically in grass-fed beef production.

Kendall Guither of Walnut, IL has repeatedly won the top Commercial Balage award at the World Forage Super Bowl which is part of the World Dairy Expo held annually in Madison, WI. Kendall attributes his outstanding balage to excellent fertility management and an intensive cutting schedule that maximizes both quality and per-acre profitability.

Alfalfa Frost Heaving: Assessing the Damage

Now is the time to scout for alfalfa frost heaving so that preparations can be made if the stand will need to be rotated out this spring. Here are some answers to frequently asked questions about frost heaving of alfalfa.

Is there anything that can be done to push the crown back into the soil?

No. While many people have tried cultipackers or lawn rollers to push the heaved alfalfa crown and root back into the soil, there is no data suggesting that any of these techniques are beneficial.

How much frost heaving is needed to justify rotating an alfalfa field into another crop?

The answer to this question depends on the severity of the heaving. Consequently a complete evaluation of the stand is needed. Depending on when the crowns were elevated above the soil, all of the crown buds could have been frozen and the plant is essentially dead. Look for green growth coming from the crown and count the number of these crowns per square foot. If there is an average of five or more live crowns per square foot then the stand is probably worth keeping at least through the first harvest.

Will the alfalfa that is still alive remain productive throughout the season?

Frequently, alfalfa plants that have heaved only a small amount (one inch or less) still have their tap root intact and can remain productive. Caution must be used to insure that the crown is not removed when cutting the alfalfa during harvest. These crowns will also receive additional damage from wheel traffic with each harvest which kills additional crown buds and exposes the crown to more diseases.

Fields in which alfalfa crowns have heaved a lot (greater than 1 inch) are strong candidates for rotation into another crop. However, if there are greater than five live plants per square foot then it may be best to take an early first harvest prior to rotating. Plants with their crowns elevated to this height generally have their tap root broken and will be more susceptible to drought stress (low production) this summer. In addition, crowns at this height can be cut off during the first harvest leaving the root with no growing points for herbage regrowth.

How can I tell if the alfalfa is worth keeping after the first harvest?

As mentioned earlier, the number of crowns per square foot is one method for determining alfalfa stand productivity. Another determinant is the number of stems per square foot. As the stem number declines to 40 stems or less per square foot alfalfa fields begin to lose profitability and should be rotated out of alfalfa.

Will the heaved alfalfa survive another winter?

Unfortunately, the crown buds (from which spring growth comes from) of heaved alfalfa plants will be exposed to colder temperatures next winter because the crowns will not be insulated by the soil. Exposure to freezing temperatures next winter may kill the crown buds. If an alfalfa field with heaving this spring is kept until next spring it should be monitored very closely with anticipation that it should be planted to another crop.

Source: Marvin Hall, Penn State

Preparing Your Pastures for Spring

When planning to get your pastures ready for spring, the earlier the planning begins the better.

Soil Fertility

Applying fertilizer after spring green-up according to your fall soil sample will ensure optimum pH and soil fertility according to your targeted forage species. Ensuring proper soil fertility provides your desirable plants a competitive advantage over undesirable species which may reduce your pasture's value by reducing carrying capacity, lowering the quality of available forages, and reducing the aesthetic appeal of your operation. Maintaining the proper pH increases the availability of other nutrients to forages by releasing them from the soil, as well as increases the activity of beneficial soil bacteria.

If a pasture is in need of a production boost, applying 30-40 lb. of nitrogen per acre can help not only increase forage yield, but also improve pasture carrying capacity, increase plant nutrient reserves, help to build a denser root system, and could result in improved forage quality. An application of N will give the desirable plants the added benefits they need to out-compete undesirable weeds, leading to greater forage yield. However, if forage quality and yield are not a factor in the spring, consider waiting to apply N to pastures when it is needed; when plant growth slows and forage resources are more limited.

Grazing Management

After evaluating past managed grazing systems and determining what did and did not work on your operation, early spring can be the best time to plan how to improve your grazing system in the upcoming grazing season. Walking fencelines and repairing where necessary is a task that can alleviate a lot of headache later in the season. Splitting a large pasture in half to improve grazing efficiency and eliminate selective grazing, improving watering systems to allow for easier and more environmentally-friendly watering of livestock, or adding another strand of

barbed wire to a perimeter fence to keep those calves from going over into the neighbor's yard are just a few examples of what may be lingering on your to-do list in the upcoming months.

Dragging Pastures

A major benefit of grazing livestock is that 80 percent of the nutrients that animals consume are returned to the soil. Dragging is a practice that needs to be analyzed on each operation individually by evaluating whether the practice will be economically or environmentally beneficial for its purpose on your operation. Dragging pastures that have wintered livestock allows the manure to be better distributed and prevents forage from being smothered by manure piles. Dragging is recommended as soon as manure piles are no longer frozen to disperse forage seeds within the manure and provide them the proper seed-to-soil contact needed to germinate. This is particularly important in grass-legume mixtures, as legume seeds benefit from the frost-thaw cycles in early spring. Fields where livestock were fed heaviest during the winter should be dragged first, where the greatest accumulation of manure occurred.

Later in the grazing season, the control of parasites is also increased by breaking-up manure piles and disrupting their life cycle. External parasites, such as flies, prefer fresh manure piles for laying their eggs. Dragging pastures breaks up these piles, in turn exposing the moist manure to sunlight and allowing it to dry, killing the larvae and potentially reducing the overall external parasite load on the operation.

Dragging also helps to more-evenly distribute manure piles so selective grazing is not as prevalent. Animals will not graze where they have defecated, so dragging pastures after rotating animals out of a paddock is one way to manage spot grazing by dispersing the manure throughout the pasture.

Warm, early spring days are upon us! Now is the time to have your plan in place to optimize your pasture productivity this year.

Source: Jessica Williamson, Penn State

How About Including Some Grass in that New Alfalfa Seeding?

Planting new fields of pure alfalfa sometimes gets to be too automatic. Maybe it's time to consider adding some grass to the mix. Let's look at some of the advantages for including grass with our alfalfa plantings:

1. Grass may grow in areas of the field where alfalfa plants are not well adapted.
2. Grass may fill in spots as alfalfa plants die rather than weeds, so acceptable yields may persist longer.
3. Grass-alfalfa mixtures dry faster than pure alfalfa.

4. Grass forage quality declines more slowly than alfalfa during second and later cuttings because grass regrowth is mostly leaves.
5. Grass suffers less damage from wheel traffic of harvest equipment or manure spreaders.
6. Grass sheds rainfall better than alfalfa, both in the windrow and in the bale.

From an animal nutrition perspective, adding grass to alfalfa also has some advantages:

1. Grass-alfalfa mixtures come closer than pure alfalfa to meeting the desired TDN:CP ratio of 5-7.5:1 for beef cows on high roughage diets.
2. Grass adds more potentially needed fiber than alfalfa for high grain or corn silage diets.
3. Grass can reduce acidosis in dairy rations without impacting milk production by lowering non-fiber carbohydrates.
4. Bloat risk is less when grass is part of the pasture mix.

Of course, including grass with the alfalfa adds some management challenges. Selecting the initial seeding rate to achieve a desired balance of grass to alfalfa is difficult. Basing the seed mix on seeds of each species per square foot is one way to start.

For example, assume a 60:40 mix of alfalfa to orchardgrass is desired. Most seeding rate recommendations for mixtures of cool-season species range from 50 to 80 seeds per square foot. Using 70 seeds per square foot for the example, a seed mix containing 42 seeds of alfalfa and 28 seeds of alfalfa will give the desired 60:40 ratio.

If one pound of alfalfa seed provides 4.8 seeds per square foot and one pound of orchardgrass seed provides 6.4 seeds per square foot, then a mix of 8.75 pounds alfalfa plus 4.375 pounds orchardgrass per acre will give the desired seed mix.

Seed size can vary substantially, so determine the seeds per pound of the specific seed to be planted if this seed ratio method is to be used with precision. From a practical standpoint, however, using average seed size values will do just about as well.

Planting date will affect the ratio. The optimum temperature for alfalfa seedling development is as much as 15 degrees warmer than that for grasses. Planting in early spring will favor grass while planting in late spring or late summer will increase alfalfa.

Chemical weed control is severely limited when grass is grown with alfalfa. Most herbicides will cause significant injury to either the alfalfa or the grass.

Pennsylvania



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Most of the grass yield likely will come at first harvest. This could be advantageous if some nearly pure alfalfa is desired as well as an alfalfa-grass mixture. The amount of grass in regrowth will depend greatly on the grass species. Smooth brome grass and timothy produce little summer growth.

Tall fescue, meadow fescue, meadow brome, orchardgrass and festulolium give a more uniform balance through the growing season. Variety selection also is important, especially if hay harvests are planned. Late maturing grass varieties usually match up best with alfalfa.

Fertilization can have important impacts on the ratio of alfalfa to grass. Nitrogen usually will increase the proportion of grass while phosphorus and potassium sometimes can increase the amount of alfalfa in the mix.

Other challenges may come from attempts to market hay of a mixture of grass with alfalfa to dairies or other customers that prefer pure alfalfa. Some potential customers, though, may like having some grass in their hay. Grass also is more difficult to grind, which also could influence its use.

Despite these challenges, it is worth considering when new hay fields are planted.

Source: Dr. Bruce Anderson, Univ. of Nebraska, Lincoln

PFGC Officers and Board

The following is a list of the current officers and Board of Directors of the PFGC. If you have questions, concerns or suggestions on how the PFGC could serve you better, please contact one of these people.

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