

Winterkill. What to do now?

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As we know, reports of winterkill in the spring of 2019 were widespread. Due to the challenging spring weather, it is now late June and many of these damaged fields have not been addressed. General ideas to address upcoming forage are in [Late Spring: Forage considerations beyond corn](#).

While it is hard to say there is anything traditional about the weather, we are entering a time of year that is traditionally hotter and drier, a tough time to establish perennial cool season crops. Our best windows for seeding establishment are early spring and late summer (early August).

So what can be done in late June with thin hay fields? At this point the answer is dependent on your forage needs and goals. While there are some minor differences between a spring seeding and late summer seeding, many of the same principals apply and some general guidelines can be found here: [Assess Alfalfa, Winter Cereal and Grass Stands for Spring Reseeding Decisions](#).

Scenario 1 – More high quality forage is needed this year.

Many farms are facing forage shortfalls, particularly of high quality forage and the need to boost inventories is a priority.

Work to make the most of existing stand

If the stand of hay is generally OK, but needs a boost, then you may be pleasantly surprised with what some focus on management will yield, especially for grasses. Two keys for grasses are the use of nitrogen (N) fertilizer to bolster yield and protein content (see [Nitrogen Fertilization of Perennial Grass](#) and [Guidelines for Nitrogen Management of 4-5 Cut Intensively Managed Grasses](#)) and cutting height. Note that the effectiveness of N applications is dependent on adequate moisture for that cutting.

It may seem counterintuitive but a higher cutting yield will actually yield better results with grass. Grass should be cut at three to four inches. While it is true that this will slightly reduce the yield for that specific cutting, it will result in a healthier stand and more vigorous regrowth that will improve overall performance for the season.

Summer annuals

One option may be to terminate the poor stand and establish a summer annual. Warm season summer annuals are a more suitable options for planting this time of year but still have their challenges.

A number of resources are available on summer annuals including: [Summer Annual Forage Options for NNY](#) from the North Country Regional Ag Team.

Depending on planting dates some of these crops may provide two cuttings of quality forage. In this case a winter grain (i.e. rye or triticale) may be established after the second harvest to provide an early spring

forage (double crop). A second approach may be to take one cutting of a summer annual and then plant a late summer seeding to re-establish the field as a perennial hay crop.

Forage Oats

A slight alternative to the summer annual approach may be to wait, take a second cutting of the thin hay field, and then terminate it in preparation for establishment of an oat crop (early-mid August) for a fall harvest of oats for forage. The downside is this eliminates the option of establishing a new perennial seeding and also makes it unlikely that a winter grain can be established for an early spring forage harvest. For many summer annuals, harvest through grazing or silage is the best option, as dry down for dry hay can be challenging (an exception is Teff which is well suited for dry hay). Prussic acid accumulation after a frost presents an animal health risk for many sorghum and sudangrass species.

Interseeding summer annuals into the existing hay field

This is generally not recommended. It is essentially trying to work with two opposing forces and better outcomes are more likely to result from choosing a side and managing it optimally. In general, larger seeded crops will have a better chance of success than smaller seeded crops; however, to have any chance of success you are reliant on the weather and are counting on a lack of competition from the existing crop. In some cases, extra steps such as a very short cutting height, are taken to stress the existing plants to give the new seedlings a better chance of survival. So you have to ask yourself, are really gaining anything from the interseeded annuals if you had to really stress out (and thereby reduce the potential yield of the existing crop) to get the new seed established? Conversely, anything you do to promote better growth of the existing crop will reduce the chances that the new seedlings will survive and amount to anything. Additionally, the likelihood of the existing perennial stand and the interseeded crop maturing at the same time is slim. In the best case scenario this option may provide more tonnage but is unlikely to provide high quality, adding variable quality to the silo or hay mow.

Scenario 2 – Forage inventories are OK for this year. I am more concerned about improving the stand for the long-term.

It is important to take a critical look at the existing stand. Is it generally thin throughout or are there defined areas of healthy crop and bare ground?

Re-establishment

Re-establishment carries the cost of termination and new seed but often results in the most productive stand. The use of no-till (with a properly setup drill) can save you the inputs associated with tillage, rock picking, etc.

- Alfalfa can be successfully planted back into a terminated alfalfa field following a rest period (there is no exact rest period but three to four weeks is generally considered acceptable). See [Seeding Alfalfa Fields Back into Alfalfa](#) for more information.
- Determine the species that have the best chance of success (i.e. if alfalfa drowned out this past year, does it make sense to put alfalfa back in that area?) Orchardgrass is also known for susceptibility to winter kill, particularly where ice sheeting is a risk.
- Preferred timing is still late summer or early spring
 - Do not use a companion crop with late summer seedings.

Interseeding perennials into existing stand

This can be done but is risky. The considerations outlined above for interseeding summer annuals should be taken into account. As with any seeding, seed drill performance and seed placement are critical to success. The timeframe to attempt this would be early August, though another option may be early next spring. If the

August timeframe is used keep in mind that you will eliminate the potential for any later fall cuttings of the field as the new seeding will not tolerate that.

The nature of the damage (generally thin or defined bare spots) plays a role here.

Generally thin stand

- Do not no-till alfalfa into existing alfalfa.
- Consider a low cutting height in the harvest prior to interseeding.
- Frost seeding of clover in early spring may be another option in this situation.

Defined bare spots

- Chances of success may be better in this situation as there is not direct competition from existing plants.
- Determine why the spot is bare and use that information to determine what crop will most likely succeed in that area. Often if it is a low area where alfalfa could not handle the wetter conditions grass or clover may be more suitable options.
- When planting into a less than ideal environment, selecting species or varieties that are quick to establish increases the chances of success.
 - In general clovers have the highest rate of success over other legumes or grasses.
 - For grasses, timothy and orchardgrass have a high ease of establishment.
 - Ryegrasses (annual and perennial) are generally quick to establish but winter survival is highly variable in New York.
 - In some cases the best options for ease of establishment may not be the most compatible with your forage goals. Clover can be difficult to dry, timothy is not our most productive grass species, orchardgrass matures much earlier than many other forages. This is an important consideration for determining if interseeding is a viable option.