



Cornell University
Cooperative Extension
Northwest New York Dairy, Livestock & Field Crops Team

Planting Winter Triticale, Malting Barley, Wheat, & Rye

Bill Verbeten, Regional Agronomist, Cornell Cooperative Extension

As corn silage, soybeans, and corn grain come off during September and October many winter small grains will be planted in northwestern NY. This article reviews the similarities and differences for current planting recommendations of winter triticale, malting barley, wheat, and rye.

Winter Triticale

Many dairies across the region will be planting this high quality, high yielding winter forage. Farms that have successfully grown winter triticale silage consistently plant in early-to-mid September, apply a large volume of manure at planting (5,000-8,000 gallons), a moderate amount of spring nitrogen at green-up (50-60 lbs. of nitrogen/acre), and harvest at the flag leaf stage the following May. Later planting dates reduce yields (1-1.5 tons DM/acre instead of 2-3 tons DM/acre) and increase the chances of winterkill. If fall growth of winter triticale is greater than 6-8 inches tall a fall cutting should take place to reduce the chances of winterkill. Seeding rates are typically around 100 lbs./acre and drilled 1-1.5 inches deep (use the same seeding depth for all other winter small grains). Broadcasting and rolling winter triticale seed will have a better chance of success if done in early September. Increase the broadcast seeding rate of winter triticale to 120 lbs./acre.

Figure 1: Drilled (Left) vs. Broadcasted (Right) Winter Triticale



Source: Bill Verbeten

However when winter triticale is broadcasted instead of drilled, losses from heaving and weed encroachment are more common due to the shallow seeding depth, see the "[Drilled vs. Broadcasted Winter Triticale](#)" video on our website. Improved varieties are available locally. The seed quality and crop performance are generally better with the purchased seed compared to saved seed grown on farm.

Winter Malting Barley

With farmers getting \$12-15/bu for brewing quality grain and \$10-15/bu for distilling quality grain there is a lot of interest in growing winter malting barley this year. Four malt houses are up and running within our region and farmers also frequently do business with two others regionally so there is an established market to link to the high demand from NY farm breweries and farm distilleries to our local farmers. Winter malting barley is a crop that needs more attention to detail to ensure winter survival. Planting must take place in the second half of September so there is enough time for the crop to establish, but not grow so tall that it falls down on itself and winterkills. Do not plant winter malting barley in wet, poorly drained fields. There have been instances where it has only survived over the tile lines on very heavy soils. If possible pick a field surrounded by trees and/or not on a north facing slope. With no snow cover and below normal temperatures last year winter barley fields that had any kind of protection fared much better than those without. It is also critical to put phosphorous fertilizer in-furrow with the seed at planting to increase winter survival. This is also a great practice for any winter small grain. Fertilizer and machinery reps throughout the region have retrofitted many drills

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to allow for liquid application in-furrow, but solid fertilizer will also work. Winter malting barley also requires a pH of 6.3 or higher at planting. Finally be sure that the seed is treated with a fungicide as a number of soil borne diseases can infect malting barley and all other small grains. A one-page bulletin outlining malting barley best management practices is [available online](#). Wintmalt is the main variety available this year and can be purchased from Seedway or Preferred Seed representatives. It is better than many older varieties of barley in yield, malt quality, and winter survival. It can perform well if properly managed (one farmer had 100 bu/acre in 2014) at planting and the following year, but a number of fields had lower yields and spots where it didn't survive the 2013-14 winter. A couple of elite winter malting barley varieties from the Cornell Small Grains variety trials are currently in seed production and should be available next fall. These varieties have had better winter survival, yield potential, and malting quality for the past 2-3 growing seasons.

Winter Wheat

High yields from high management winter wheat begin at planting. Mike Stanyard has written extensively on this topic and many of you are already taking the necessary steps to give yourself the yield potential of 80-100 bu/acre of winter wheat. Seeding rates will change with planting date and soil conditions, *Table 1*, increasing as we get into October and when planting conditions are poor. Starter fertilizer in furrow should be limited to [15 lbs. nitrogen/acre and 30 lbs. nitrogen + potassium/acre](#). These starter N and K recommendations are also appropriate for other winter small grains. Higher fertilizer rates can be broadcasted and incorporated with tillage if needed. Varietal selection is critical for success, especially for reducing the risk of *Fusarium* head blight infestations. In recent years we have also observed some varieties (e.g. Otsego) that are very vulnerable to powdery mildew infections. Be sure to also consider quality and yield data when selecting your seed. For more information on winter wheat planting check out Mike Stanyard's [September 2012 Ag Focus article](#) on page 14.

Table 1: Winter Wheat Seeding Rates

Soil Condition	Seeding Rate (million seeds/acre)				
	Sept. 15	Sept. 25	Oct. 5	Oct. 15	Oct. 25
Good	1.33	1.45	1.57	1.69	1.8
Average	1.45	1.57	1.69	1.8	1.93
Poor	1.57	1.69	1.8	1.93	2.06

Source: [2012 Winter Wheat Reminders](#), Mike Stanyard

Winter Rye

As one of the easiest winter small grains to grow farmers often neglect managing winter rye beyond a simple cover crop. Mostly planted in early October, it can survive and offer some ground cover or early spring forage at little cost. However as the farm distilling market is demanding more local rye (and paying prices similar to malting barley) farmers are starting consider managing winter rye more aggressively to increase yields. Many of the same practices used in high management wheat and malting barley production can also be used to grow high quality winter rye. However our current winter rye varieties have some characteristics that limit grain yield. Winter rye tends to lodge easily when nitrogen rates are increased to levels similar to high management wheat. Additionally it is very difficult to get more than 40-60 bu/acre of grain due to the poor yield potential of currently available seed. However recent work with hybrid rye varieties from Germany is showing that with better genetics yields of over 100 bu/acre are possible without lodging. Similar to malting barley, seed production of hybrid rye is currently underway in NY and should be available to purchase next fall.