

Twelve Month Forage Pays

By Ed Haag

Dairies that use a twelve month double cropping strategy maximize the return on their forage production dollar. Now is the time to plan for 2010-2011 Season

There was a time when a dairy's annual forage production schedule began in the spring and ended in the fall.

That was before fuel, fertilizer, feed and hay prices went through the roof forcing a growing number of milk producers to look for new ways to increase forage production on their own home turf. "Confinement operations that don't produce at least a portion of what their cows consume just can't make it today," says Washington State University Forage Agronomist, Steve Fransen, "The cost of purchased feed is too high and the price for milk is too low for them to make any sort of profit."

One proven way to increase forage production on irrigated home acreage is double cropping. This usually involves spring planted silage corn followed by late summer planted winter triticale which is harvested as silage or hay the following spring before replanting corn.

Typically the triticale is planted the second week of September and is ensilaged during the last 2 weeks of April or the first week in May. Corn is planted by May with an expected cutting date in early September.

Dairies that were satisfied with 30 wet tons of conventional corn silage per acre per year in a single crop system can now expect 29 wet tons of corn plus 9 wet tons of high protein triticale with the double crop system.

Washington farmers plant approximately 30,000 acres of triticale annually. Nation wide figures run around 1 million acres with the largest percentage being planted in California.

Healthy Addition

Jeff Harris, a nutritionist and dairy specialist with Purina Mills sees recently developed varieties of triticale as even surpassing alfalfa as a dairy forage. He has been helping integrate triticale into the feeding regimen of large

Eastern Washington dairies. When Harris recently reformulated the ration on a 1900 cow operation substituting triticale for most of the high quality alfalfa hay the volume in the milk tank jumped over 3 lbs per cow. "It was obvious where that was coming from," says Harris . "The triticale had improved the overall quality of the feed."

His view is supported by test results. Tissue samples taken from plants in the preboot stage showed 25.69% crude protein and an ADF of 21.99%.

Harris sees triticale as particularly beneficial when feed fresh, as green chop. "This is one way to give the cows a nice nutritional bump early spring," he says adding that a lactating cow consumes between 30 and 50 lbs of the fresh wet feed a day.

Because triticale can grow 3 inches over a 24 hour period under ideal conditions Harris sees some lucky dairymen getting up to two cuttings before planting their corn.

Besides the feed benefits triticale and corn grown in the same year is proving to be an excellent nutrient management tool. A growing number of dairies in the Northwestern states are using the two crops consecutively to help take up nitrogen (N) resident in the soil after applications of dairy manure. It is calculated that triticale can utilize 120 lbs to 180 lbs of N per acre--- combined with corn silage that amount increases to over 250 lbs per acre per year.

Backed By Research

Up until recently dairy operators who elected to double crop forage triticale after silage corn had very little scientific data to help in their seed selection. Now, thanks to the comprehensive test plot studies conducted by plant scientists at Progene Plant Research (PPR) of Othello, Washington, that is no longer an issue.

Building on earlier University of Idaho research, that concluded that out of over 70 small grain candidates, triticale was the best forage annual for beef and dairy producers in the Northwest quadrant of the United States, Progene has focused its research on determining which available types, and their respective traits, are best suited for a double crop system. "With shrinking profit margins, unstable feed prices and an increased focus on nutrient

management double cropping is the answer for a growing number of milk producers,” says Kurt Braunwart, CEO of PPR. “This research should help them select the tritcale best suited to their needs.”

But that is only half the equation warns Braunwart. To maximize total yield of both corn and tritcale combined some serious thought must go into selecting a corn with the appropriate maturation dates.

Double Cropping Requires 12 Month Plan

For this reason alone it makes sense to begin planning your double cropping system before ordering your corn adds Braunwart. “What you are trying to do is balance the amount of time you allow for each crop for maturity and harvest dates that will optimize the yield potential of both crops combined,” he says noting that every situation is different and corn maturity dates that work for one farm might not work for the next.

Braunwart recommends consulting with a knowledgeable field man early in the year before making the decision on what corn to plant. “That way you have enough time to match up the right corn with the right tritcale,” he says.

One milk producer who is well aware of the advantages of planting tritcale after corn is Don Gaalswyk of Castleford, Idaho. An early convert to the double cropping system he has been planting tritcale right after harvesting his silage corn for a decade and sees the practice as a major contributor to his bottom line. “The more high quality forage you can produce on your land the less you have to spend on feeding your cows,” he says. “And besides the nitrogen and phosphorous uptake of a second crop is a big help with my nutrient management.”

In addition to improved production and nutrient uptake Gaalswyk also sees some real benefits in winter tritcale in relation to test and butterfat. Chopped and ensilaged in the spring prior to planting his corn, the wheat/rye cross offers his cows a second round of fresh, nutritious feed at a time that many of his neighbors are struggling to maintain milk quality. “The tritcale adds some real nice forage for my cows when they need it,” he says. “It definitely bumps the test and the butterfat.”

As a milk producer who sells to a cheese manufacturer test and butterfat is critical to Gaalswyk’s bottom line. “We get paid on cheese yield,” he says. “The triticale helps us get our bonus for good components.”

He estimates his annual yields on triticale run 12 to 18 tons to the acre with his cost of production at \$17 per ton at 70% moisture.

Winter Forage Triticale

Irrigated (Columbia Basin) Othello, Washington
 Data from 2003 through 2009 Replicated Yield Trials

Mid-Boot Yield 2003, 2005 & Two Year Average (AS% of TRICAL 102)

Variety	2003 Yield	2005 Yield	2 Year Averages
TRICAL 103 BB	115%	107%	111%
TRICAL 102	100%	100%	100%
TRICAL 815	105%	82%	94%
TRICAL 336	98%		
Bobcat Triticale	68%	75%	72%
Mamouth Triticale		109%	
Forerunner Triticale		93%	
Hoody Barley		69%	

Late-Boot Yield 2005 through 2009 Dry Matter Basis (As % OF TRICAL 102)

Variety	2005 Yld	2006 Yld	2007 Yld	2008 Yld	2009 Yld	5 Yr Ave
TRICAL 102	100%	100%	100%	100%	100%	100%
TRICAL 103BB	97%	78%	98%	102%	78%	91%
TRICAL 336	94%	87%	84%	83%	55%	81%
TRICAL 815	68%	84%	88%	87%	72%	80%
Forerunner Triticale	66%	92%	71%	101%	67%	79%
Bobcat Triticale	62%	78%	55%	83%	54%	66%
Mamouth Triticale	72%	68%	89%	86%	70%	77%
Hoody Barley	55%	53%	*	70%	Not tested	
* Did not survive the winter						