American Crystal Sugar Company AggNotes

550 - Best Management Practices For Cover Crop

March 03, 2011

Nearly 16% of the 2010 crop was protected by use of spring planted cover crop. Risk of stand loss from soils prone to blowing can be very high. Each 10 beets per 100 foot of row increase has a value of about \$35 per acre. Many, many, fields had the cover crop controlled 2-4 weeks later than desired in 2010. Beet growth will be 2 - 4 leaves behind potential growth when control is delayed. Yield loss experienced was 2-4 tons per acre in these fields, see Figure 1.



Figure 1 - Delayed cover crop control, Hillsboro, 2010

Cover Crop Management Recommendations

• Seeding rate should be ½ - 1 bushel per acre

- Cover crop can be wheat, barley or oats choice might be based on cost of available seed
- Control ¾ -1 bushel seeding rates at the 3 leaf stage
- Dying cover crop will provide stand protection for 2-4 weeks after control
- Banding first herbicide applications will significantly extend stand protection

Table 1. The Effect of Barley Growth Stage at Control on Sugarbeet Yield and RSA,Dexter, NDSU 1991-1992

Barley Growth Stage at Control* Leaf	Yield Tons	RSA Lbs.
2	22.1	7,120
3	21.5	6,997
4	20.9	6,827
5	19	6,076

* 1/2 bushel seeding rate

- Always control spring cover crop by the 3- leaf stage
- RSA loss at 5- leaf stage is 921 lbs. greater than control at 3- leaf stage Table 1.
- Rye cover crop should be controlled within one week of sugarbeet emergence
- Cover crop N uptake and competition may delay canopy closure reducing yield
- Cover crop N uptake may reduce crop quality if cover crop control is delayed beyond the 4 or 5- leaf stage as nitrogen is released later in the season
- Excessive cover crop growth reduces yield by competition for nutrients, water, and light
- Wheat will take up 30-50 lb. of nitrogen per acre within 28 days after emergence

Insect Management in 2011

• Match your insecticide choice to your insect problem this year.

Performance rating of insecticides for control of various sugarbeet insect pests in NDSU trials in the Red River Valley, 2006-2009, M. Boetel

	Performance rating*		
Insecticide	Root maggot	Springtails	Wireworms
Counter 15G	Excellent	Excellent	Good
Cruiser 5FS	Fair	Good	Good
Nipslt Inside	Fair	Good	Good
Poncho Beta	Fair	Good	Good
Mustang Max	Poor	Fair	Good

*Performance ratings are based on three years of control trials on sugarbeet root maggot and springtail control, but only two small trials on wireworms.