Volume 11 Issue 4

DAIRY, LIVESTOCK AND FIELD CROPS NEWS

INSIDE THIS ISSUE:

Now Playing in a Field Near You - Corn Rootworm

Kevin H. Ganoe

Western Corn Rootworm Adult(Female)

Recent storms have knocked over a lot of corn. It was easy but it shouldn't have been. Try pulling a corn plant out of the with a good root system: you can't! But those laid over from the strong winds have little or no root system from corn rootworm feeding. The damage was done over a month ago from a very small whitish larva that feeds on the roots. The insect in the picture at the right is the adult beetle that will lay eggs for next year's larva.

Now is the time to check fields to determine if you will have a problem next year. And it is easy. One adult corn rootworm per plant this summer means that you will have sufficient eggs laid and larva present next growing season to cause an economic loss. If you go scouting for them male western corn rootworms look similar to the female but more of their back will be black. Northern rootworm adults are green, both male and female, and when counting beetles per plant you only count a half rootworm adult. So one western adult and two northern adults equals two beetles per plant when you are scouting.

But I can not stress enough to take action! Fields over the one beetle per plant may have a 39% corn silage yield loss the next year. Rotate out of corn if you don't want to use an insecticide. First year corn won't need an insecticide. Use a soil insecticide (Force, Lorsban or Counter) or Poncho 1250 seed treatment if you are over threshold or look to use rootworm-resistant corn.

Put Your Winter Forage Strategy Together

David R. Balbian

The wet spring weather has really compromised hay crop quality for many people. I did see a few people get 1st cut grass in during mid-May before the deluge came. Hopefully you were one of those folks or you were able to get some second cutting in between the rain. Now is the time to think about the forage you'll have available for your milking herd this winter. Quality forage is one of the key pieces to profitable milk production.

If I look at the milk futures as I write this article it would appear to me that we will not be able to rely on high milk prices to pay the bills and put groceries on the table this winter. What can you do to put the odds in our favor?

Here's a few ideas:

- Segregate any high quality hay crop you will yet harvest so you can feed it to your lactating cows.
- If the quantity of high quality forage won't allow you to feed it to all lactating cows try to allocate it to high producers and early lactation cows.
- Watch corn silage maturity closely so it doesn't get too mature and dry on you. I'd rather see people err on the side of (a little) too wet than too dry. Cows seem to always milk better when it's wetter than dryer.
- If you normally harvest corn silage and corn grain and your hay crop will be poor, consider harvesting more acres for corn silage (assuming you have the storage space). Feeding a higher corn silage diet will reduce the negative impact of poorer quality hay crop. By all means don't find yourself short of corn silage after you've harvested a huge acreage of your corn for grain.
- If most of your forage will be poor quality investigate the use of soy hulls, citrus pulp, or beet pulp as a partial replacement of the poor quality forage. These highly digestible fiber sources will help your herd hold production. Make you decision early. Don't wait until mid January after the cows have been off in milk for several months.

When to Begin Corn Silage Harvest for Bunker Silos?

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What's Cropping Up issue (Vol. 14, No. 4, July-August, 2004)

Many agriculturists consider 65% as the optimum moisture for corn silage harvest. A horizontal or bunker silo allows dairy farmers to safely store corn silage at harvest moistures at just below 70%. Consequently, many dairy producers with bunker silos begin corn silage harvest when silage moisture is just below 70%. We evaluated two corn silage hybrids, 34B23 and TMF108, in 2002 and 2003 to determine if silage yields or quality are compromised when harvesting corn silage at just below 70 vs. 65% moisture. The 2002 growing season was extremely dry in July and August and the 2003 growing season was dry only during the latter part of August.

Despite differences in weather conditions between growing seasons, most silage quality measurements were consistent across years (Table 1). Starch consistently increased by 3 to 4 percentage units and crude protein decreased by 0.3 to 0.4 percentage units as silage moisture decreased from about 70 to 65% moisture. The NDF concentrations decreased in the dry 2002 growing season and the IVTD concentrations decreased in 2003 as silage moisture decreased from 69-70% to 65%. Harvest moisture did not affect NDF digestibility in either year of the study.

Likewise, harvest moisture did not affect silage yield in either year of the study. In 2002, milk per ton, a forage quality index that combines NDF, NDF digestibility, starch, crude protein, and ash into a single term, showed a hybrid x harvest moisture index. TMF108, which had a 4 percentage unit increase in starch with no real change in NDF digestibility and crude protein concentrations, had a 242 lb/ton increase as harvest moisture decrease from 69.4 to 64.5%. 34B23, which had a 5 percentage unit increase in starch but a 3 percentage unit decrease in NDF digestibility and a 0.6 percentage unit decrease in crude protein, had similar milk/ton values at both harvest moistures. In 2003, however, harvest moisture did not affect milk/ton and there was no hybrid x harvest moisture interaction. Harvest moisture did not affect milk/acre in either year of the study mostly because of no significant change in silage yields.

Conclusion

Dairy producers do not compromise corn silage yield or quality in most years by harvesting corn silage at just below 70 instead of 65% moisture. In years with dry July and August conditions when starch concentrations are inherently low, some hybrids may have higher corn silage quality at 65% harvest moisture because of the increase in starch concentrations. Nevertheless, we recommend that dairy producers who use bunker silos begin corn silage harvest at just below 70% harvest moisture, especially in years when drought did not occur, because silage yields and quality do not change much and an earlier harvest usually results in less soil compaction. In years with dry July and August conditions, dairy producers may wish to delay harvest to about 65% moisture because of the potential for improved quality. In a year with dry August and September conditions, silage moisture can decrease by 1 percentage unit or more per day. A delay in harvest until 65% moisture can increase the potential of harvesting the silage at too low a moisture if more than one field is at 65% moisture or if harvest equipment malfunctions.

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At our Web site you should expect to find the following:

- **Calendar of Events**—not only the subject, date place and time but also the ability to access a copy of the announcement that you will be able view and print with Adobe Acrobat Reader.
- **Newsletters**—again they will be online with also the ability to access with Adobe Acrobat Reader.
- **Fact Sheets and Software Files**—we have put together various fact sheets and computer files that may be of interest and you will be able to download.
- **Current Crop Conditions** for the six counties—tracking 1st cutting forage quality, crop growth and development, pest problems and what to do about them.

When to harvest corn silage for bunker silos?

from page 2

	2002			2003		
Harvest Time	**34B23**	**TMF108**	**Avg.**	**34B23**	**TMF108**	**Avg.**
% Moisture						
Early	69.9	69.4	69.7	69.5	68.5	69.0
Optimum	66.1	64.5	65.3	65.9	64.2	65.0
NDF						
Early	43.7	44.8	44.3	42.2	47.2	44.7
Optimum	40.1	43.2	41.7	42.9	48.4	45.6
LSD 0.05			1.2			NS
NDF Digestibility						
Early	62.2	59.4	60.8	56.9	57.1	57.0
Optimum	59.0	60.0	59.5	53.7	55.4	54.6
LSD 0.05			NS			NS
IVTD						
Early	83.5	81.8	82.7	81.8	79.8	80.8
Optimum	83.5	82.7	83.1	80.2	78.4	79.3
LSD 0.05			NS			1.2
Starch						
Early	20.6	21.6	21.1	26.7	27.5	27.1
Optimum	25.8	25.9	25.9	28.8	31.2	30.0
LSD 0.05			1.9			2.0
CP						
Early	7.8	7.5	7.6	7.2	6.5	6.9
Optimum	7.2	7.3	7.3	6.6	6.4	6.5
LSD 0.05			0.3			0.2
Tons/acre (65%) moisture)						
Early	14.4	15.7	15.1	25.8	23.9	24.9
Optimum	14.6	16.3	15.5	25.9	23.7	24.8
LSD 0.05			NS			NS
Milk/Ton (lbs/ton)						
Early	3201	3185	3193	3312	3411	3362
Optimum	3235	3427	3331	3328	3357	3343
LSD 0.05	NS	201				NS
Milk/Acre (lbs/A)						
Early	16197	17551	16874	29982	28515	29249
Optimum	16526	19502	18014	30086	27845	28966
LSD 0.05			NS			NS

Table 1. Percent moisture, neutral detergent fiber (NDF), NDF digestibility, in vitro true digestibility (IVTD), starch, crude protein (CP) concentrations, corn silage yield (65% moisture), milk per ton, and milk per acre of 34B23 and TMF108 at two harvest times in the 2002 and 2003 growing seasons at Aurora, NY.

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