

Crop-Scouting: Minimal Investment, Huge Returns

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I often find myself having the same conversation with farmers about the value of scouting their fields (or hiring someone to scout them if they don't have the time). This year, the infestation of Armyworm and Potato Leafhopper has highlighted the importance of scouting your crops. Now the question is, sure it would have paid in 2012 but would it have paid in 2011 or any other year?

The answer is undoubtedly YES, it pays each and every year.

The costs of not scouting are many. The most obvious one is losing a crop because you don't find the problem until you can see it from the road (windshield scouting) and that is far too late. Less obvious may be the subtle yield losses (that can add up in a hurry) due to weed breaks, low level pest pressure, planter malfunction, nutrient deficiencies to name a few.

Then there is the cost of treating when it was not necessary. Even if you feel the treatment is "cheap insurance" there is a cost. Chemicals cost money, time and equipment (yours or hired) cost money, with insecticides the harm to beneficial insects cost us. The worst case (but not all that uncommon) scenario is treating when the pest is not there or there in low levels and then having to treat a 2nd time when the pest actually shows up or because you knocked out all the beneficial predators with the 1st spray and you allow the pest to come in with no natural enemies (this is common with soybean aphids and the ladybird beetles that feast on them).

There are a number of ways to get your acres scouted but as I already mentioned a windshield survey is not one of them. By the time you can see the damage it is too late and no farm can afford to lose a cutting of hay, let alone a crop. Often times professional scouts charge on a per acre basis so there can be flexibility if you wish to just scout a certain crop or your most important acres.

You can invest the time yourself to scout, train an employee to do it or hire a professional, the important thing is that it gets done and does not slip off the radar as you get busy with other task on the farm. Remember it is only cheaper to do it yourself if it actually gets done in a timely manner, otherwise you are always money ahead hiring someone to do it.

The NYS Integrated Pest Management (IPM) program has all the resources you need to scout for all of the relevant field crop pest we encounter; including Black Cutworm and Corn Rootworm in corn, Alfalfa Weevil and Potato Leafhopper in alfalfa and Soybean Aphids in Soybeans. These resources can be found on the NYS IPM website: www.nysipm.cornell.edu
<<http://www.nysipm.cornell.edu/>> or from your local CCE office.

Putting Economics to It

We know commodity prices are high right now but more often than not in this area we are dealing with forages, so we will use those prices as a base. Current values of corn silage and haylage are at least \$45 to \$50 per ton.

There are a number of ways to lose a ton of corn silage without even noticing; low plant populations (commonly from planter performance or early season insect pressure), nitrogen deficiencies, weed pressure (especially on young corn).

How easy is it to loss a ton or more?

If we take weed control as an example, a recent study by Russ Hahn, Cornell Weed Science Extension Specialist looked at the impact on yield of late post emergence weed control. This was done in a comparison of pre-emergence vs. post emergence herbicide programs but could also be used to look at re-spraying after a failed pre-emergence program (another problem we saw in 2012 due to lack of rain to activate the herbicides). What did the study find; corn silage yields were **decreased by 5 tons per acre** when with a mid post emergence application was made (weeds 4-12" tall) vs. an early post emergence application (weeds 1-3" tall). So our 1 ton loss is pretty conservative but we will stick with it. A \$45 per acre loss (1 ton per acre) will pay for more scouting than you could ever need.

The cost of a bag of corn seed is also another important consideration. Each year farms are faced with the decision of what "tools" to purchase in a bag of corn and the cost can vary quite a bit. Let's take Corn Rootworm as an example; rootworm protection is great *if you need it*. However, aside from 1st year corn where we know it is not needed the only way to know for sure if it is necessary is by scouting the field the previous season to look for the adult beetles laying their eggs.

Impact of Potato Leafhopper, *"Once you see V-shaped yellowing on the tips of the leaves it's too late. Potato leafhopper has likely reduced plant protein by 5% and yield by about .10 - .25 ton per acre pre cutting. New seedlings are at higher risk to potato leafhopper damage. Crop stress from this insect can impact production this season as well as affect production potential for subsequent years."* Ken Wise, NYS IPM.

Again the yield loss is relatively easy to calculate, 0.10 tons/acre *\$50 per ton = \$5 loss per acre (0.25 * \$50 = \$12.50 loss per acre) and that is just on one cutting. I asked Ron Kuck for some input on the cost of the 5% loss in protein. Using an average herd and feed ratio Ron concluded that it would take 200 lbs of Soy48 to replace that protein lost per ton of alfalfa haylage. With Soy48 currently at \$0.216 per lbs (\$431 per ton) that would be a loss of \$43.1 per ton (or \$4.31 to

\$10.78 per acre per cutting). So our total loss per acre per cutting could range from \$9.31 to \$23.28, again enough to pay for quite a bit of scouting.

For Potato Leafhopper you can buy a 15" insect sweep net from a source such as Gempler's for \$40-\$50. The cost of a net and a little of your time to use it is a cheap investment for protecting your crop.