

Slug Management Field Plot – assessing starter N and row cleaners

Matt Yancey, Crop and Soil Environmental Extension Agent
Virginia Cooperative Extension, Rockingham Unit
540/564-3080 yancey@vt.edu

Slugs can be a major issue in no-till fields with both corn and soybean, particularly at establishment. They have been identified as a major barrier to increased no-till cropping adoption. Past studies suggest that row cleaners, or residue managers, may reduce slug feeding damage by eliminating cover for the slugs immediately adjacent to seedlings and/or warming the soil and promoting rapid initial growth. Furthermore, the use of starter fertilizer may result in rapid early growth allowing the seedling to advance beyond a critical damage period. A study was put in place to test the effect of row cleaners and starter nitrogen fertilizer on slug damage.

Slug population sampling was performed across a replicated strip trial with the following treatments evaluated:

- Dawn “Trash Wheel” row cleaners on; no starter fertilizer;
- No row cleaners; no starter fertilizer;
- No row cleaners; 30 lbs starter nitrogen; and
- Dawn “Trash Wheel” row cleaners on; 30 lbs starter nitrogen.

Slug numbers and damage were extremely low in this and most fields across the Mid-Atlantic this spring, obviously making any conclusions about influence on slug damage difficult. The overall average slug count across plots was one slug (ranging from zero to six on ten plots sampled multiple times), and loss due to slugs was virtually non-existent. More information is needed on what influences slug populations year to year as slug numbers were high last year and this spring was quite wet.

Table 1 shows the yield results of each treatment. As mentioned, slug damage was minimal this year, but an interesting result is that the replicated treatments *without* the starter band were nearly 10 bushels higher than those with the starter fertilizer. Tissue tests at GS V6 showed that average percent nitrogen in plant samples for plots with and without starter differed by less than 0.1 %, a negligible amount. While there were no visual signs in the plants, one theory behind the yield difference is that the starter band was too rich or close to the plant. This reiterates the point that growers should be aware of potential nitrogen burning, not to mention salt injury from over-application. Heavy residue was effectively moved away from planting rows with the row cleaners.

Table 1 - Yields of Treatments

Yield (Bu/ac)	Treatment
158	cleaners off, starter off
157	cleaners on, starter off
149	cleaners on, starter on
147	cleaners off, starter on



Figure 1 – Row cleaners are effective in moving high residue.