

SO WHAT DO WE DO?

Leaving tillage out of the equation (however minimal tillage may be necessary in some situations)

Vole Control

- Plan to terminate covers 3-4 weeks prior to planting. Early cover crop termination and effective residue management at planting time are ways to reduce the risk of pest damage.
 - Our team has noticed less incidence of voles in small grains planted in 15" rows
- Keep roadsides and ditches/waterways mowed in the spring – this will decrease the protection voles have, especially when vole breeding is heavy and numbers are growing. Consider late fall mowing as well.
 - Even mowing the cover crop at least 30 days prior to planting will give enough time for vole populations to leave the field
- Perch poles or stations for predators have been effective in IN/OH, but may not make sense for larger fields
- Zinc-phosphide pellets (around 5-6 lbs. / acre) has been somewhat effective across the Midwest. Need to get the pellets / bait covered in-furrow (as it's toxic to other vertebrates). This allows growers to only treat the ends rows or field edges / adjacent parts of the field next to grassy areas or waterways. Growers will probably need to add a delivery system on their planter (Gandy, others).
- Our group has heard of growers spreading small grain seed (perhaps alongside a light fertilizer application) to give voles an alternative food source. Cracked corn has also been effective, and it doesn't pose a threat of competitive plants. Sounds too easy, but it's been working.

Slug Control

Many steps can be taken to reduce the occurrence of slugs (alongside cover crops). Cold, wet springs will obviously give slugs a perfect environment (what we had this year BTW).

- Enhance your rotation – varying your crop rotation often disrupts the life cycles and perennial timing issues we see with many pests. The more varied the cropping cycle, the less pests (like slugs) can adapt.
- Cover crops can give slugs an alternative forage source and keep them away from cash crops. This works when the cover crop is allowed to mature to the point of seed production. I understand this isn't for everyone, but I've witnessed this myself in a couple cases this past spring.
 - An argument can be made that green cover can attract ground beetles as well – the same beetles that feed on the gray garden slugs
- Plant cash crop early – the quicker establishment results in less feeding from slugs as the crop will be too large for feeding. Select hybrids/varieties rated for strong emergence and seedling vigor. Row cleaners also help foster quicker establishment.
- A couple other considerations that many growers continue to use with some level of success:
 - Metaldehyde 3.25-4% (Deadline and other products) – about 4-6 pellets / sq.ft. or about 5-10 lbs. / acre broadcast. Slugs will eat the pellets and die from dehydration. Industry research shows that this product doesn't have any harmful effects on many of slugs' natural predators. BUT... getting slugs to eat the pellets can be difficult – they must ingest the product for control.
 - Iron Phosphate baits (Sluggo) – more expensive and less effective. OMRI-listed for organic systems.
 - Nitrogen. Applying liquid nitrogen at night (when slugs are most active) has worked in many areas. Using 28% or 32% mixed with water for a couple nights (maybe a 3rd) in a row should be the plan. The nitrogen basically melts the slugs.
 - I've personally witnessed this a couple times this spring in soybeans. 2 nighttime applications of 10 gal 32% mixed with 10 gal water. We estimate over 70-80% were destroyed.

In the case of both slugs and voles, make sure the seed slot is closed and firm to reduce the incidence of feeding directly on the seed (and it may mean placing the seed a bit deeper in the soil than usual)