Weeds of Interest: Dead Weeds Tell Tales

Andy Senesac, Weed Scientist, Cornell Cooperative Extension of Suffolk County

In late winter and early spring, it pays to take a tour of the weeds in the fields. Though nothing is actually growing at this time of year, there is a wealth of information that can be gathered and used to hone the coming year's weed management plan. Although most fields that are cropped with annual crops such as corn, beans, and tomatoes have long ago been disked and planted to winter cover crops, there are many fields with perennial crops that are not cultivated at season's end such as: Taxus, asparagus, shade trees, and small fruit. In these fields, lies the forensic evidence to show how well (or poorly) a weed management program worked during the previous season. At this time of year, the dead skeletons of last year's weeds are lying on the ground. They can be read and interpreted to reveal what was and wasn't controlled last year. The first step in interpretation is to review the fields' recent weed management. Things to look for in last year's program include the timing of various herbicide and cultural practices. If herbicides were applied, were they meant to control all weeds, or just broadleaves, grasses, or sedges? When scouting a field, look for some common escapes: annual grasses, yellow nutsedge, mugwort, and annual broadleaf weeds like jimsonweed. If a field is covered mostly in annual grass weed skeletons, this might mean that in general the management program is mostly successful except for late emerging grasses that can germinate well into August. Adjusting a management plan to control late germinating grasses like yellow or giant foxtail is relatively straight forward. These weeds can be well managed with selective graminicides (grass killers) in several crops, or with well timed cultivations. If a field has patches of nutsedge with few other weed remains, then these areas could be easily mapped and tracked for spot treatment this year.

Jimsonweed capsule spilling its seeds in the winter. Photo by A.F. Senesac

Annual grass 'skeletons'. Photo by A.F. Senesac

Mugwort, although it is an early emerging weed, does leave a very distinctive 'fingerprint' from last year's growth. The seed stalks are narrow and 3-5 feet tall with many small seeds still attached to the rachis. They usually appear in groups and colonies, but sometimes with only a few stalks if the infestation is new and spreading. These are the areas to map and plan for aggressive management in the coming season. Sometimes weeds in certain families leave fruits or capsules that can be used for diagnosis. Weeds in the Solanaceae family (Nightshade) such as horsenettle (*Solanum dulcamara*) and jimsonweed (*Datura stramonium*) will

mostly disappear with the killing frosts and leave their seed capsules for winter dispersal. If you see many yellowish round berries that might look like old cherry tomatoes, then you are most likely looking at a mature infestation of horsenettle. This creeping perennial is very difficult to manage once it is established, so it's very worthwhile looking for this weed while it is just starting. Alternatively, if you find large, dry, spiny capsules with the ends bent backwards, then you are likely looking at jimsonweed's spawn. Walking the fields in late winter can also reveal green, but dormant weeds. Many of these will be winter annuals. On Long Island, these weeds begin to germinate in mid-August and can continue through mid-October. Winter annual broadleaf weeds include bittercress, horseweed, pepperweed and oxalis (woodsorrel). Only a few grasses, like downy brome and annual bluegrass (*Poa annua*) have a winter annual life cycle. Of the winter annuals, horseweed is by far the most competitive and difficult to control. At maturity in mid-summer, it can reach heights of five to six feet. Yet, in the winter it is a multi-leaved rosette that is less than ½ inch tall! It seems that we can learn something about the weeds of the field during every season, even the dead of winter. ●

Overwintered, intact horsenettle fruit. Photo by A.F. Senesac

Mugwort seedhead in late winter. Photo by A.F. Senesac