

Bill Johnson

Glenn Nice

Purdue Extension Weed Science

What Do We Do About the Yellow Fields?

There are a lot of yellow fields out there, especially in the southern half of Indiana. The weed species is cressleaf groundsel, aka, ragwort, butterweed, senecio, “that mustard thing” (Figure 1). See a related article for more information on the biology and identification of this weed.

Glenn and I have received a number of questions about control of this weed this past week because the recent wet spell did not allow burndown applications to be made in a timely manner during late April. Now we have fields with groundsel, plus chickweed, henbit, deadnettle, and winter annual grass in the seed set stage, and summer annuals that have started to emerge such as giant foxtail, giant ragweed, common lambsquarters, black nightshade, pigweeds and waterhemp and bolting horseweed (marestail) that emerged in the fall and seedling horseweed that emerged this spring. So what do we do? There are a couple of different herbicide programs to consider. In all cases, it is going to be best to add some 2,4-D to the mix to improve control of groundsel, bolting horseweed, and the summer annual broadleaf weeds. The chickweed and other winter annuals won't be controlled well by anything since they are in the seed set stage, but they could be desiccated more rapidly if a paraquat-based program is used. Control of groundsel will also be a challenge since it is large, flowering and many of the lower leaves have fallen off of the plant, so herbicide uptake is limited by lack of leaf area.



Figure 1. Yellow fields in Indiana with cressleaf groundsel.



Figure 2. Flowering cressleaf groundsel.

Key Considerations. If flowering (Figure 2) groundsel is the primary target, you can use glyphosate + 2,4-D or 2,4-D + paraquat + Sencor (beans) or atrazine (corn) if you desire more rapid desiccation of weed biomass. In the glyphosate-based program, use the 1.5 lb ae/A rate with 1 pt/A of 2,4-D. Most labels require you to wait 7 days before planting corn or soybean with this rate of 2,4-D. In the paraquat-based program, use the upper end of the rate range for more effective control of large weeds. In our research, these programs have usually provided about 85 to 90% control of large, flowering groundsel. However, if the weather stays cool and wet, expect some regrowth of groundsel with either herbicide program that can be cleaned up with various postemergence treatments in corn or soybean.

How to Prevent this from Happening Next Year. This situation is a good educational opportunity to see the value of fall applied herbicides for managing groundsel. Groundsel is primarily a winter annual and fall applied treatments containing glyphosate and/or 2,4-D are very effective in reducing infestations. In figure 3 (taken May 6, 2006) at the Southeast Purdue Ag Center, the field on the left was sprayed with glyphosate in the fall, the field on the right was not treated. Although we do not have 100% control of all weeds on this date, the field on the left is noticeably drier and will be planted 1-3 days earlier than the field on the right. Our recommendations would be to start with a clean field in both cases, so the weeds present in both fields should be controlled before planting with tillage or a burndown herbicide. If no-till practices are used, the field on the left could be managed effectively with the 0.75 lb ae/A rate

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May 6, 2006



Figure 3. Fall applications of glyphosate were applied on the left field, the right field did not receive a fall application.

of glyphosate alone. Because the field is in southeast Indiana and glyphosate-resistant horseweed is widespread in this area, so, we would also recommend using 2,4-D with glyphosate or a paraquat-based program with 2,4-D and a triazine. A low rate of paraquat could be used in this field compared to the field on the right. For the field on the right, we would recommend using a 1.5 lb ae/A rate of glyphosate with 2,4-D or a paraquat-based program mentioned above. The paraquat rate would need to be towards the upper end of the labeled rate range. If conventional-till practices are used, the field on the left will likely require at least 1 less field preparation pass with a field cultivator than the field on the right. The field on the right will likely need to be disking which would create large clods (Figure 4 and 5), allowed to dry, and then field cultivated before planting – an investment of time and labor and potentially a practices that leads to excess soil compaction.



Figure 4. Conventional tillage practiced in the field on the left.

This image shows what a fall applied treatment of glyphosate + 2,4-D + Canopy EX looks like on May 6, 2006 (Figure 6). Notice that all of the winter vegetation is controlled by the addition of Canopy EX to the mixture. A field with this type of control could be planted into without additional soil preparation or spring applied herbicides.

As a final note, use of fall applied herbicides are not the solution to all spring problems, particularly horseweed. Since we have a lot of summer emerging horseweed in southern Indiana, use of fall applied herbicides is not the most effective technique for managing horseweed unless products with significant residual activity are used in the fall. I will discuss that in more detail later in the summer as we begin planning fall herbicide applications.



Figure 5. Large clods from disking.

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Figure 6. Fall application of glyphosate + 2,4-D + Canopy EX. Taken May 6, 2006.

Information listed here is based on research and outreach Extension programming at Purdue University and elsewhere. The use of trade names is for clarity to readers of this publication and does not imply endorsement of a particular brand nor does exclusion imply non-approval. Always consult herbicide labels for:

information must bear the statement "Produced and prepared by Purdue University Extension Weed Science" unless approval is given by the author.