

Rutgers Cooperative Extension

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LEAFY CRUCIERS (COLLARDS, MUSTARD GREENS, KALE, TURNIP GREENS) INTEGRATED WEED MANAGEMENT FIELD GUIDE

Year Prior to Planting Leafy Cole Crops

Procedure	How to Sample	Use of This Information	Additional Notes
Analysis of Soil Texture, Organic Matter and pH	Using a county soil map, identify the different soils in the field. Take a sample from each area where soil types differ. Submit to lab for analysis of texture by mechanical analysis and for analysis of Cation Exchange Capacity (CEC), organic matter (OM), and pH.	With this information an integrated weed management program can be designed using cultural and/or chemical controls for each soil type in a field. Soil type and pH differences within a field affect rate of application, carryover and other interactions.	Mechanical analysis generally only needs to be done once unless there is significant erosion or changes in cropping patterns. CEC and pH should be analyzed annually. Organic matter analysis should be done every 5 - 10 years.

Scout once prior to harvest of current crop to determine weed potential for next season's collards, mustard greens, kale, or turnip greens.

Weeds	Sampling	Threshold	Notes
Zero Tolerance Weeds (ZTW): Canada Thistle, Common Milkweed, Hemp Dogbane, Bindweed spp., Johnsongrass, Bermuda Grass, Quackgrass, Yellow Nutsedge, Horsenettle, Ground Cherry (277, 1326)	Scout field in a zigzag pattern. Sample 10 random locations 1 square yard in size or 10 ft. of row, whichever pattern best suits existing conditions. Map the location of these weeds.	Presence	See "Postharvest Perennial Weed Control" for treatment options. (292)
Summer Annuals Galinsoga, Common Cocklebur, Jimsonweed (277, 1326)	Scout as outlined above for the presence of existing weeds. Potential weed problems are best identified by a non treated weedy check. Identify the weeds, count # of each species. Note whether specific weeds are scattered throughout the field or predominate in one area of the field.	Number of weeds per 10 ft. of row or 1 sq. yd. < 1 weed = very light 1-4 weed = light 4-10 weeds = medium 10-100 weeds = heavy > 100 weeds = very heavy	Untreated check provides the most reliable information about weed potential for the coming year.

Pre-planting Decisions:

1. Use previous season's weed scouting results and maps to select control strategies. Consult County Extension Agent for weed control options. If choosing chemical control, match preplant incorporated and preemergence herbicide rates to soil type and percent organic matter in the field.
2. For crops with limited control choices, consider a stale seedbed technique to reduce the potential for germinating weeds in the top inch of soil. (292)

Three Weeks After Transplanting or Emergence

Weeds	How to Sample	When	Threshold
Zero Tolerance Weeds (ZTW) = Nightshades, Horsenettle, Yellow Nutsedge, Morning Glory, Jimsonweed, Common Cocklebur, Canada Thistle, Common Milkweed, Hemp Dogbane, Bindweed spp., Johnsongrass, Bermudagrass, Quackgrass Summer Annuals (SA) (277, 1326)	In a zigzag pattern, scout 1 sq. yd. in 5 random locations and 10 ft. of row in 5 random locations. Identify species, count # of each weed species. Map location of zero tolerance weeds. Determine whether weeds are predominantly within the row or between rows.	Once approximately 3 wks. after transplanting.	# weeds/10 ft. row or 1 sq. yd. Action ZTW: Presence Control required. SA: < 0.25 weed None 0.25 - 1 weed Control may be required. > 1 weed Control required Whether weeds are within the row or between the row determines if cultivation will be an effective control.
All Weeds	Same as above.	1 week after control measures are implemented from the 3 week scouting.	This information is used to evaluate how well controls worked and whether further control measures are required. Use same thresholds as listed above.

Six Weeks after Transplanting or Emergence

Preharvest This scouting will provide information about whether weeds are present that may interfere with the harvesting operation as well as information about weeds that may be a problem in the next crop to be planted. Use the same thresholds for considering whether controls will be required in the future crop.

Weeds	How to Sample	When	Threshold
Zero Tolerance Weeds Summer Annuals	In a zigzag pattern, scout 1 sq. yd. and 10 ft. of row in 10 random locations. Identify species, count # of each weed species. Map location of zero tolerance weeds. Determine whether weeds are predominantly within the row or between rows.	Once approximately 5 -6 weeks after transplanting.	# weeds/10 ft. row or 1 sq. yd. Action Zero Tolerance Weeds: Presence Control required. Summer annuals: < 0.25 weed None 0.25 - 1 weed Control may be required. > 1 weed Control required

*Bolded numbers in parenthesis indicate sources of additional information found in the Mid-Atlantic IPM database by this special reference number.

Scouting procedures, thresholds, and crop management recommendations have been compiled from a number of sources and may not be valid for all areas within the Mid-Atlantic Region. They are meant to be used as guidelines. As such, they should be validated on small acreages before relying on them. No guarantee of their validity, success, or failure to perform in the field is implied or expressed. Consult your local Cooperative Extension for additional information or assistance.