

## Rutgers Cooperative Extension

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# WINTER SQUASH AND PUMPKIN INTEGRATED WEED MANAGEMENT FIELD GUIDE

## Year Prior to Planting Winter Squash or Pumpkins

PROCEDURE	HOW TO SAMPLE	USE OF THIS INFORMATION	ADDITIONAL NOTES
<b>Analysis of Soil Texture, Organic Matter and pH</b>	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 mechanical analysis of texture 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.

## Preharvest

Scout once prior to harvest of current crop to determine weed potential for next season's winter squash or pumpkins.

Weeds	Sampling	Threshold	Notes
<b>Horsenettle, Groundcherry, Yellow Nutsedge, Canada thistle, Common Milkweed, Hemp Dogbane, Bindweed spp., Johnsongrass, Bermudagrass</b> (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. Plant fall cover crop. (292)
<b>Summer Annuals Galinsoga, Common Cocklebur, Jimsonweed</b> (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 and count # of each species. Note whether specific weeds are scattered throughout the field or predominate in one area of the field.	<b>Number of weeds per 10 ft. of row or 1 sq. yd.</b> < 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.

## Production Year

### Pre-planting Decisions

1. Use the information obtained from the previous year's scouting to select recommended control options for those weeds.
2. Use the map locating perennial weeds to determine if fall treatment controlled these.
3. Match preplant incorporated and preemergence herbicides to soil type and percent organic matter in each field. (292)

### Plant Emergence to Four Leaf Stage

Weeds	Sampling	Frequency	Threshold
<b>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</b> (277, 1326)	In a zigzag pattern, scout 1 sq. yd. in 5 random locations and 10 ft. of row in 5 random locations. Identify and 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 weeks after planting.	<b># weeds/10 ft. row or 1 sq. yd.</b> <b>Action</b> ZTW: Presence Control required. Summer annuals: < 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.
<b>All Weeds</b>	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.

### Prior to Row Closure with Runners

Weeds	Sampling	Frequency	Threshold
<b>ZTW (see above) Summer Annuals</b>	In a zigzag pattern, scout 1 sq. yd. in 5 random locations and 10 ft. of row in 5 random locations. Identify and count # of each weed species. Map location of ZTW. Determine whether weeds are predominantly within the row or between rows.	Once, approximately 5 -6 weeks after planting.	<b># weeds/10 ft. row or 1 sq. yd.</b> <b>Action</b> ZTW: Presence Control required. Summer annuals: < 0.25 weed None 0.25 - 1 weed Control may be required. > 1 weed Control required

### Preharvest

Weeds	Sampling	Frequency	Threshold	Notes
<b>Perennial Weeds</b>	Scout for these weeds in the same manner as outlined above. Map the location of perennial weeds.	Once, prior to harvest.	presence	This information is used to determine if a fall treatment is required to control perennial weeds. See "Postharvest Perennial Weed Control" for treatment options. (292)

\***Bolded numbers in parenthesis indicate sources of additional information found in the 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. These field guides are meant to be used as guidelines. As such, they should be validated on a small acreage 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 Agent for additional information or assistance.