



Weed Identification and Control Options

Katie Jennings

NC State University

November 9, 2012



Beale's Study

- Buried seed of 20 species.
- Extracted seed at various time intervals and checked germination.

Beale's Study

40 Years Later Some of the Following Seed Still Viable

- Curly dock
- Evening primrose
- Black mustard
- Virginia pepperweed
- Broadleaf plantain
- Common purslane
- Redroot pigweed

Weed Identification

- To identify a weed it is necessary to understand “key” features of a weed and their differences between species.
- Use of a hand lens for small seedlings is important as seedling ID can be important.
- Accurate weed ID is crucial for implementation of a weed control method.

Life Cycle of Weeds

- Annual
- Biennial
- Perennial

Winter Annual Weeds

Completes life cycle in one year

- Germinate in the fall, overwinter as small plants, flower and produce seed in the spring and die in late spring as temperatures rise.
 - Henbit, deadnettle, chickweed, geranium, yellow rocket, mustards

Biennial Weeds

Requires two growing seasons to complete life cycle

- Seed germinate in the spring, summer or fall of the first year and a rosette is formed. Plants overwinter as a rosette with a thick storage root.
- After vernalization (exposure to cold) the plants flower and produce seed in the second year.
 - Cutleaf evening primrose

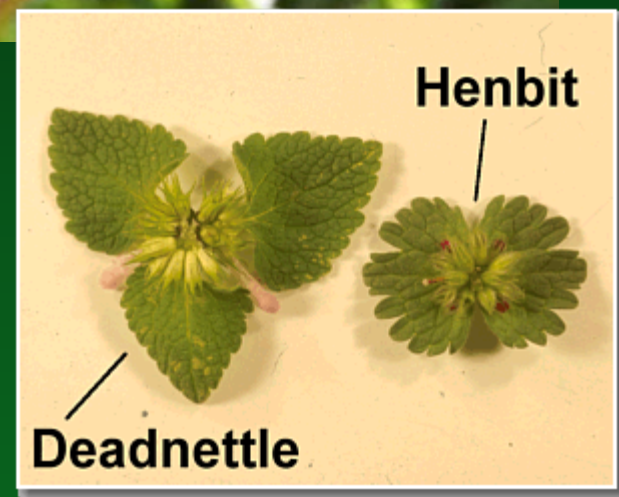
Perennial Weeds

- Produce vegetative structures that allow them to live for more than two years without having to produce seeds.
 - **Simple perennial** – overwinters by means of a vegetative root but primarily reproduces by seed; does not spread by means of a vegetative structure.
 - ☞ Curly dock
 - **Creeping perennial** – can overwinter and produce new plants by vegetative structures. Most can reproduce by seed also.
 - ☞ Common bermuda, yellow and purple nutsedge

Winter Annual Weeds

Completes life cycle in one year

Henbit



Herbicide Options:

1. Chateau 3 oz/A applied to preformed bed prior to laying plastic.
2. Goal 1 pt/A applied to preformed bed prior to laying plastic.
3. No postemergence options available.

Common and mousear chickweed

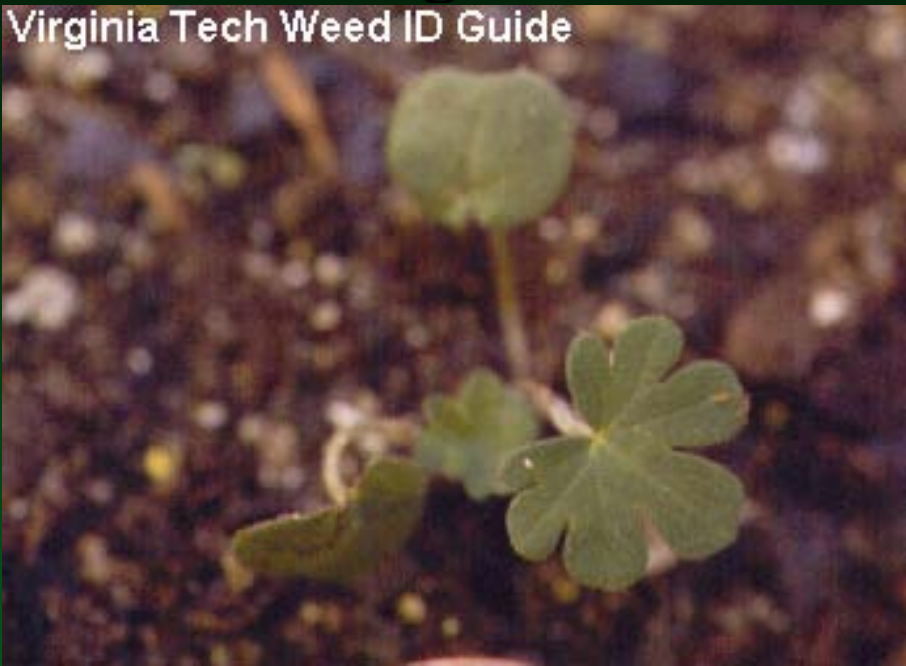


Herbicide Options:

1. Chateau 3 oz/A applied to preformed bed prior to laying plastic.
2. Devrinol 8 lb/A applied to preformed bed prior to laying plastic.
3. No postemergence options available.

Carolina geranium

Virginia Tech Weed ID Guide



Herbicide Options:

1. Goal at 1 pt/A applied to preformed bed prior to laying plastic.
2. No postemergence options available.

Vetch



Herbicide Options:

1. Stinger POST at 0.3 to 0.5 pt/A.

Wild radish



Herbicide Options:

1. Goal at 1 pt/A applied to preformed bed prior to laying plastic (wild mustard).
2. Chateau at 3 oz/A applied to preformed bed prior to laying plastic.
3. No postemergence options available.

Biennial Weeds

Requires two growing season to complete life cycle

- Seed germinate in the spring, summer or fall of the first year and a rosette is formed. Plants overwinter as a rosette with a thick storage root.
- After vernalization (exposure to cold) the plants flower and produce seed in the second year.

Cutleaf evening primrose



Herbicide Options:

1. Goal at 1 pt/A applied to preformed bed prior to laying plastic will provide partial control.
2. Chateau 3 oz/A applied to preformed bed prior to laying plastic.
3. No postemergence options available.

Perennial Weeds

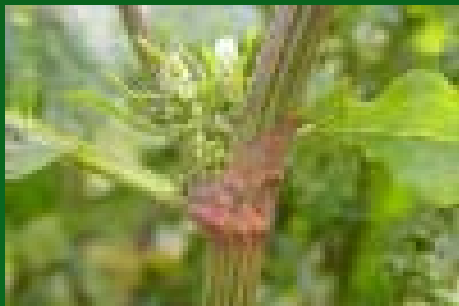
- Produce vegetative structures that allow them to live for more than two years without having to produce seeds.
 - **Simple perennial** – overwinters by means of a vegetative root but primarily reproduces by seed; does not spread by means of a vegetative structure.
 - **Creeping perennial** – can overwinter and produce new plants by vegetative structures. Most can reproduce by seed also.

Curly dock



Herbicide Options:

1. Goal at 1 pt/A applied to preformed bed.
2. Chateau and Devrinol will not control.
3. Stinger 0.3 to 0.67 pt/A applied postemergence



White clover



Herbicide Options:

1. Chateau and Devrinol will not control.
2. Goal has some activity.
3. Stinger 0.3 to 0.67 pt/A applied postemergence.

Buckhorn plantain



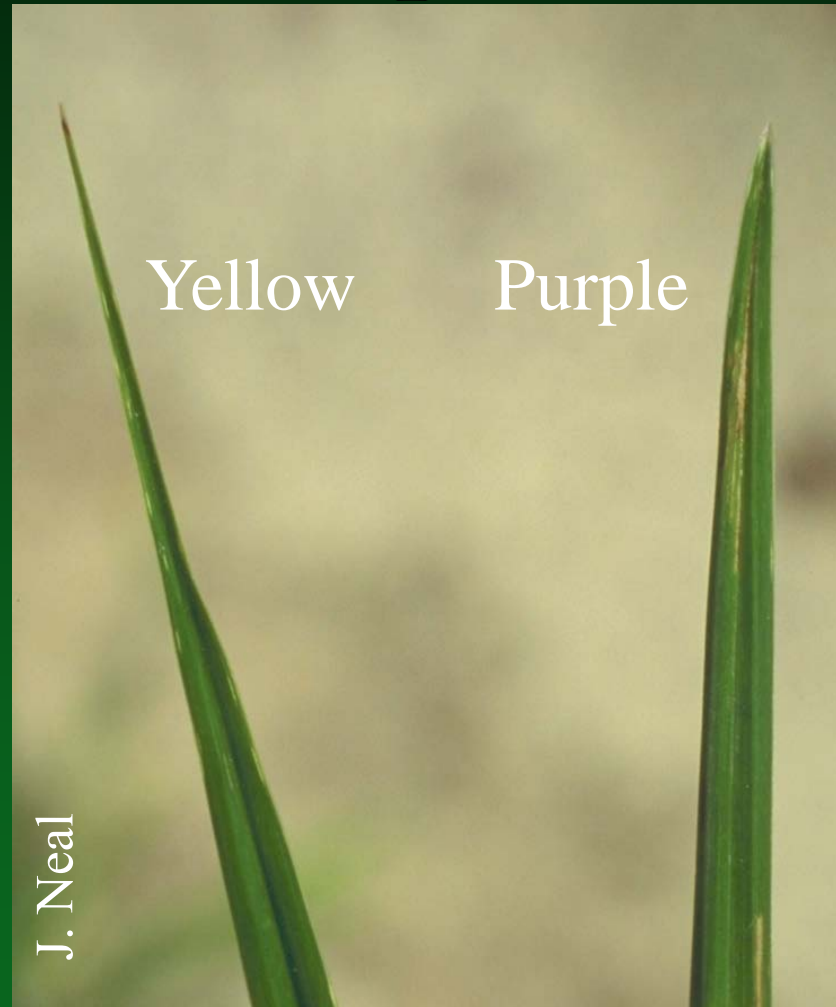
Herbicide Options:

1. Chateau, Goal, and Devrinol will not control.
2. Stinger 0.3 to 0.67 pt/A applied postemergence will suppress.



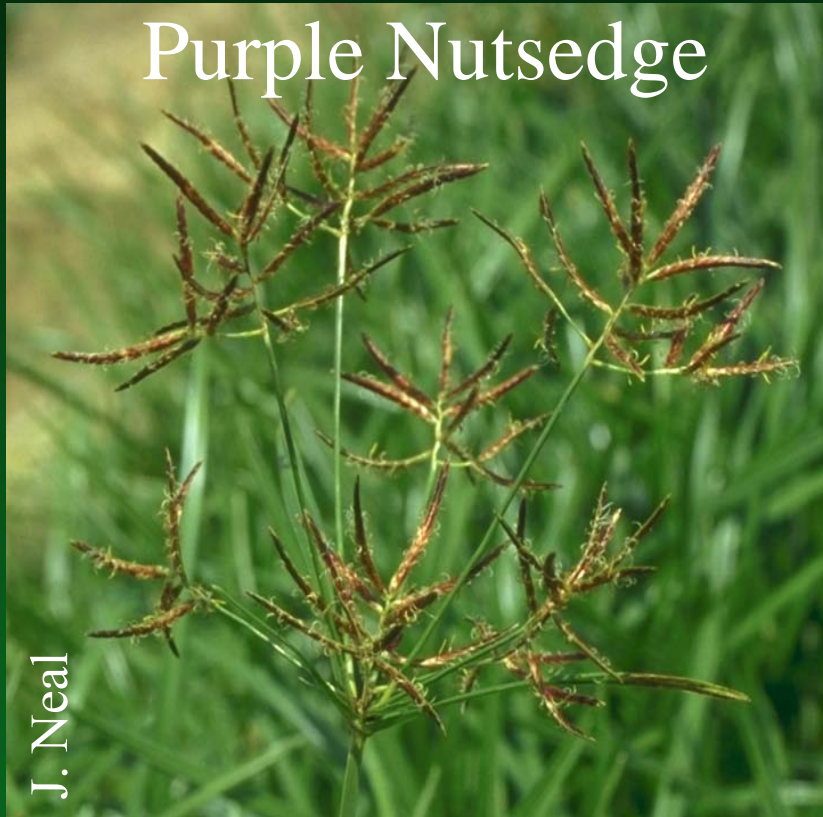
Yellow vs. Purple – Leaf tips

Yellow
nutsedge
leaf tips
taper to a
long,
narrow
point

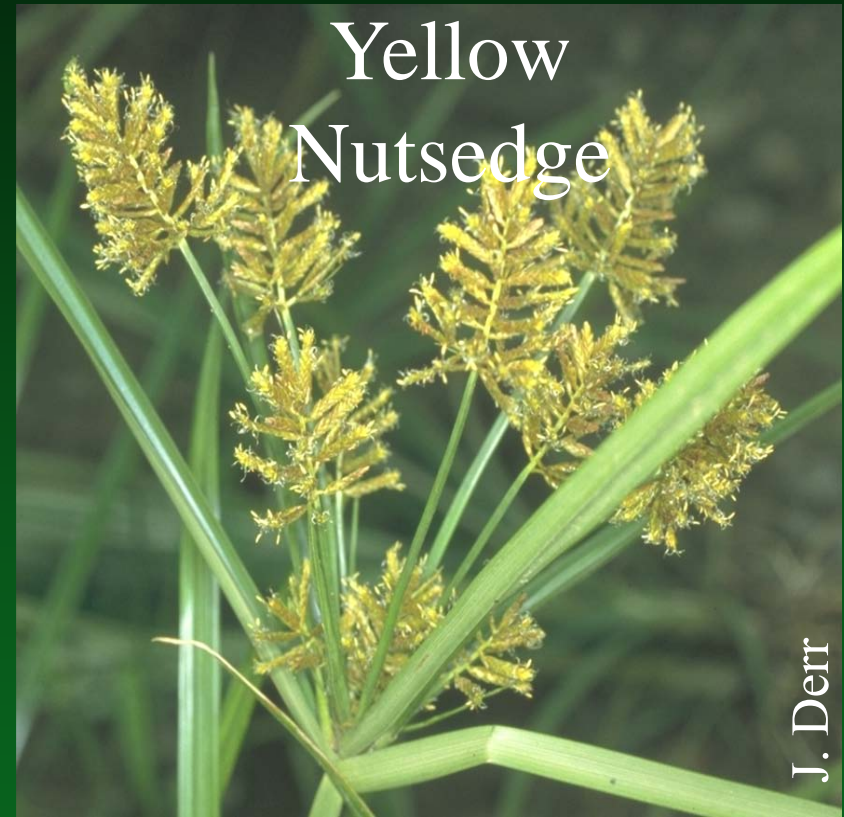


Purple
nutsedge
leaf tips
are
pointed
but not
tapered

Yellow vs. Purple -- Flowers



Purple or reddish
brown turning black



Yellow fading to tan

Weed Response to Preemergence Herbicides in Strawberry

	Yellow Nutsedge	Carolina Geranium	Cut. Evening Primrose	Vetch	Henbit	Curly Dock	Chick	Annual Grasses
Chateau	N	---	G	N	GE	N	GE	F
Devrinol	N	N	N	G	N	N	G	G
Goal	N	GE	GE	N	GE	GE	GE	F
Ultra Blazer*	N	---	---	N	---	---	---	F
Prowl H ₂ O	N	N	N	N	FG	N	F	G

Key: N = no control, F= fair, G = good, E = excellent, --- = no data available.

*Data is limited but activity is probably similar to activity from Goal.

Weed Response to Postemergence Herbicides in Strawberry

	Yellow Nutsedge	Carolina Geranium	Cut. Evening Primrose	Vetch	Henbit	Curly Dock	Chick	Annual Grasses
Aim	P	FG	FG	PF	F	P	FG	N
Paraquat	F	G	G	G	G	G	G	FG
Roundup	FG	G	FG	G	FG	F	G	G
Stinger	N	N	N	E	N	G	N	N
Poast Select Select Max	N	N	N	N	N	N	N	GE

Key: N = no control, F= fair, G = good, E = excellent.

Questions?

