Know Your Weeds

How to Control Undesirable Plants (i.e. Weeds)

OLLI

May 2, 2013

Think it's a weed?

1. Identify plant
2. Determine biology / life cycle
    - Winter annual, summer annual, perennial
3. Determine method(s) of management or leave it and enjoy it

Hog potato
C.V. Community Church

Let’s test your knowledge – can you identify the following “weeds”?

Pay attention to the biology / life cycle.

Buffalobur

Native summer annual

Filaree (Storksbill)

Introduced winter annual

Puncturevine (Goathead)

Introduced summer annual

Prickly lettuce

Introduced winter or early summer annual

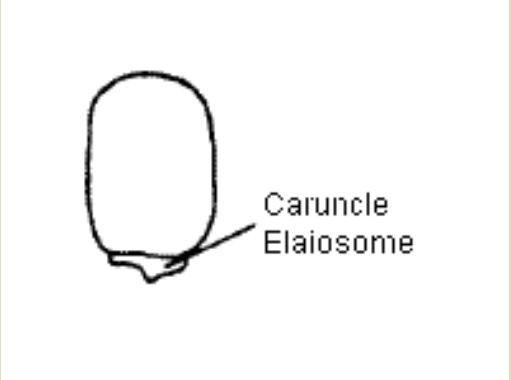
Red stem pigweed

Introduced summer annual

Tumble mustard

Introduced winter or summer annual

Spurge
Introduced summer annual



Ants/spurge relationship
- ants eat caruncles on spurge seeds
- accidently plant them

Russian thistle (tumbleweed)

Introduced summer annual

Locoweed

Native Perennial

Toxic to livestock

Silverleaf nightshade

Native perennial

Dalmation toadflax

Introduced perennial

Invasive

Field bindweed

Introduced perennial

Squirreltail

Cool season native perennial

Broom snakeweed

Native warm season perennial

Toxic during
weed formation

Kochia

Introduced summer annual

Thistles

Smooth stem = native; thorny stem = introduced

Information you should know before you can effectively manage weeds …….

Summer and Winter Annuals

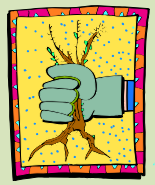
- Summer annual - germinates from seed in spring and early summer; matures in summer; produces seed in fall and dies with first frost

- Winter annual - germinates from late summer through early spring; grows in winter and dies in late spring or early summer when temperature exceeds 85°

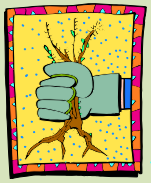
Perennials

Some flourish in cool months and go dormant at onset of summer heat, others grow actively in summer and are suppressed with frost. Roots can be rhizomes, stolons, fleshy tap roots, corms or tubers.

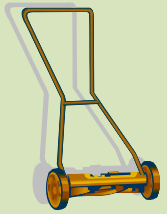
Management Methods



- Mechanical (pull, mow, till, etc.)
- Cultural (burn, solarize, seed bare ground w/ competitor like cool or warm season grass, or mulch)
- Biological (animals, insects)
- Chemical (herbicides)



Mechanical



Annuals (weeds reproduce from seed)

- Cut before they go to seed.
- If in bloom, cover w/ plastic bag before pulling to keep seeds from spreading.
- Cut (weed eater)or mow before going to seed. Mowing sometimes ineffective because plants flower too close to soil.

Perennials (grow from roots each year)

- If hand digging, do so when soil is moist; pieces of root often break off and sprout new plants.

Cultural

Solarize to kill seeds and roots in heat of summer (use **clear** plastic).

Mulch – at least 3” can prevent annuals, not perennials like Bermuda grass.

- Organic: bark, chipped trimmings, wood debris, lawn clippings, compost, etc. Straw not recommended; could have weed seeds.
- Synthetic: landscape cloth, rocks, etc. Plastic not recommended.

Biological

Animals

Chickens, goats, sheep, etc. graze to control weeds.

Insects

Introduced insects can control noxious weeds but will never eradicate; should be done by professionals.

Chemicals

- Pre-emergent herbicides

- Post-emergent herbicides

Pre-emergent Herbicides

- Work best on annual weeds
- Can control perennial species prior to establishment
- Warm season weeds (e.g. tumble weeds) – apply in Spring
- Cool season weeds (e.g. filaree) – apply in Fall

Post-emergent Herbicides

- Selective – only kill targeted weeds –read product label

- Non-selective – kill all vegetation touched by herbicide

Got all that?

There's more…

Herbicides: Contact and Systemic

- Contact herbicide
  - Use on **annuals** or non-flowering biennials (only kills green tissue contacted by the spray, not the roots)
- Systemic/translocator herbicide
  - Use on **perennials** to kill the root
  - Apply when weeds actively growing
  - Best when weeds are small
  - Does not prevent new weeds

Examples of Ingredients & Products

Ingredients (Product Examples)	Broadleaf	Grass	Pre-emergent	Post-emergent	Contact	Systemic	Selective	Non-selective	Warm weather	Cool weather
oryzalin (Weed Stopper)	X	X	X					X		
trifluralin (Preen)	X		X					X		
isoxaben (Gallery)	X		X					X		
diquat (Zeneca, Weed & Grass Killer)	X	X		X	X			X	X	X
dicamba (normally combined w/ others)	X	X		X		X	X		X	X
glyphosate (Round-up)	X	X		X		X		X	X	
2,4-D (Weed B Gon)	X			X		X	X		X	X
acetic acid (Burn Out)	X			X	X			X	X	X
ammoniated soap of fatty acids (Natria)	X	X		X	X		X		X	
glufosinate (Finale)	X	X		X	X	X		X	X	
flauzifop (Grass-B-Gon)		X		X	X		X		X	

What about…..

Corn gluten meal?

- Can work as a pre-emergent on seeds, but it is nitrogen, so timing is critical

Household vinegar?

- Household vinegar is 5% acetic acid & not an approved herbicide; 10% is better for killing weeds

Read Product Labels

- Product may contain more than one herbicide
  - e.g. glyphosate (systemic - slow) & diquat (contact - fast)
- Labels will specify residual impact to soil, but be cautious of run-off, ground water impacts, etc.
- May need stronger application in cooler weather

Caution: chemical sterilents should not be used in residential landscapes

How would you manage -

Russian thistle - summer annual

-Pre-emergent in spring (before germination)
-Hand pull
-Post-emergent
-Plant more desirable species that compete with weeds

Pull, trash, burn, etc.

Or…

Resources

Plant ID

- Weeds of the West
- Plants of Arizona
- Extension's Native & Naturalized Plant Database http://cals.arizona.edu/yavapai/yavapaiplants

Herbicide Information

- **Read product labels**

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