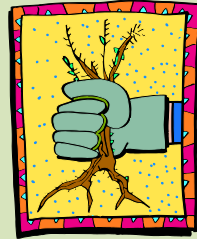


# Know Your Weeds



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

Antelope Garden Club

June 3, 2022



# Think it's a weed?

1. Identify plant
2. Determine biology / life cycle
  - Winter annual, summer annual, perennial
3. Determine method(s) of control 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.*

# Filaree (Storksbill)

*Introduced winter annual*



# Bur-clover

*Introduced winter annual*



# Prickly lettuce

*Introduced winter or early summer annual*



# Tumble mustard

*Introduced winter or summer annual*



Blue or Purple Mustard –  
aka crossflower  
*Introduced winter annual*





# Puncturevine (Goathead)

*Introduced summer annual*



# Buffalobur

*Native summer annual*



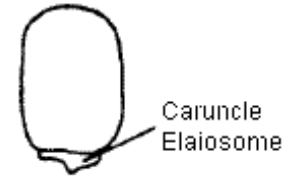
# Red stem pigweed

*Introduced summer annual*



# Spurge

## *Introduced summer annual*



### Ants/spurge relationship

- ants eat caruncles on spurge seeds
- accidentally plant them



# Western Salsify

*Tragopogon dubius*



- Non-native
- Biennial (sometimes annual)
- Flowers April through October
- Taproot
- Invasive – remove flowers before going to seed



# Annoying Seedheads

## Tumble Windmill Grass

*Chloris verticillata*

*Introduced Summer perennial*



## Bottlebrush Squirreltail

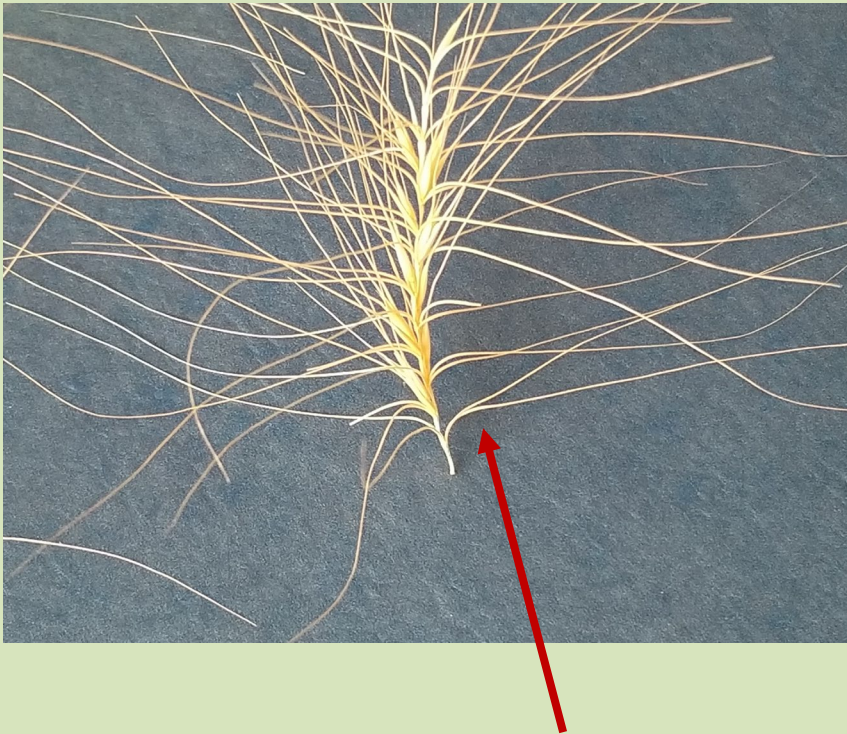
*Native perennial*

*Cool & Warm Season*



# Squirrel Tail vs Foxtail

Squirreltail  
2 spikelets per node



Foxtail  
3 spikelets per node



# Russian thistle (tumbleweed)

*Introduced summer annual*





# Milkvetch aka Locoweed (*Astragalus*)

*Native Perennial – cool season*



*Toxic to livestock*



# Silverleaf nightshade

*Native perennial – warm season*



# Dalmation toadflax

*Introduced perennial – warm season*



*Invasive*



# Field bindweed

*Introduced perennial – warm season*



# 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 .....










# Annuals

Summer Annuals				
Seeds germinate	—————			
Flowers mature		—————		
Seeds produced			—————	
Plant dies with first frost				—————

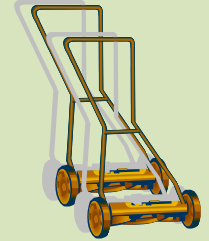
April

Winter Annuals					
Seeds germinate		—————			
Flowers mature			—————		
Seeds produced				—————	
Plant Dies					—————

Sept

Apply Pre-emergent

# How to Manage Annuals



## Mechanical

- 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.

## Cultural

- Solarize to kill seeds and roots in heat of summer (use **clear** plastic).
- Mulch – at least 3” can prevent annuals  
**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

# How to Manage Annuals contd.



## 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.

## Chemical

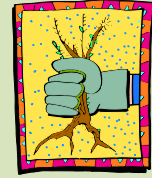
- Pre-emergent herbicides
  - ✓ Warm season weeds (e.g. tumble weeds) – apply in Spring
  - ✓ Cool season weeds (e.g. filaree) – apply in late Summer/Fall
- Post-emergent **contact** herbicides – kills green growth, not the roots
  - ✓ Selective – only kill targeted weeds –read product label
  - ✓ Non-selective – kill all vegetation touched by herbicide

# Perennials

Roots can be rhizomes, stolons, fleshy tap roots, corms or tubers.

Some flourish in cool months and go dormant at onset of summer heat, others grow actively in summer and are suppressed with frost.

# How to Manage Perennials



## Mechanical

- Hand dig when soil is moist; pieces of root often break off and sprout new plants.

## Cultural

- Solarize to kill roots in heat of summer (use **clear** plastic).
- Mulch –
  - **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

# How to Manage Perennials contd.



## Biological – won't eradicate

- 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.

## Chemical

- Post-emergent systemic/translocator herbicide (kills the root)
  - ✓ Selective – only kill targeted weeds –read product label
  - ✓ Non-selective – kill all vegetation touched by herbicide
  - ✓ Apply when weeds actively growing
  - ✓ Best in spring when weeds are small
  - ✓ Does not prevent new weeds

Got all that?  
There's more...



# 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	
flauzifop (Grass-B-Gon)		X		X	X		X		X	



# 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

# 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

# Roundup?

Research indicates that it is the “inert ingredients” or “adjuvants” (e.g. spreader/stickers) that are added to products, such as Roundup, that may be the most harmful chemicals in the glyphosate products.

<http://npic.orst.edu/factsheets/glyphogen.html>

<https://www.reuters.com/investigates/special-report/glyphosate-cancer-data/>

<https://www.scientificamerican.com/article/weed-whacking-herbicide-p/>

# Read Product Labels

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# Ortho Ground Clear EPA document states:

*DO NOT use on lawns, on or around fruits, vegetables, flowers, shrubs, trees, or over the root zone of shrubs or trees. For residential use.*

## *Where to Use*

- *Apply only where no vegetation growth is wanted for up to 1 year.*
- *Use on driveways, parking areas, brick walks, gravel walks, gravel pathways, patios, along fences, curbs and cracks in sidewalks.*
- *To kill weeds in areas where you want other plants to grow, the use of [product name] is recommended. Always follow label directions for these products.*

# Spray Guidelines

- ADOT's guidelines are to not spray herbicides with winds over 10mph.  
<https://azdot.gov/sites/default/files/2019/09/RVMG-Herbicide-Use.pdf>
- U of A says not over 10mph for herbicides in this publication  
<https://cals.arizona.edu/crop/cotton/files/auxin.pdf>
- AZ Dept of Ag says not to spray pesticides with winds over 15mph  
[https://agriculture.az.gov/sites/default/files/Arizona Agricultural Pesticide Applicator Training%20Manual az1149.pdf](https://agriculture.az.gov/sites/default/files/Arizona_Agricultural_Pesticide_Applicator_Training%20Manual_az1149.pdf)

# What controls would you use?

## *Russian thistle – summer annual*

- Pre-emergent before germination
- Hand pull
- Post-emergent w/ 2,4-D, dicamba or glyphosate (glyphosate if warm enough)
- Plant more desirable species that compete with weeds



www.ipm.ucdavis.edu UGA1363367



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/yavpaia/yavapaiplants>

## ➤ Weed Management Extension Publication

<https://extension.arizona.edu/sites/extension.arizona.edu/files/attachment/weedmanagementinthelandscape.pdf>

## ➤ Herbicide Information - **Read product labels**



???

