Three Troublesome Weeds









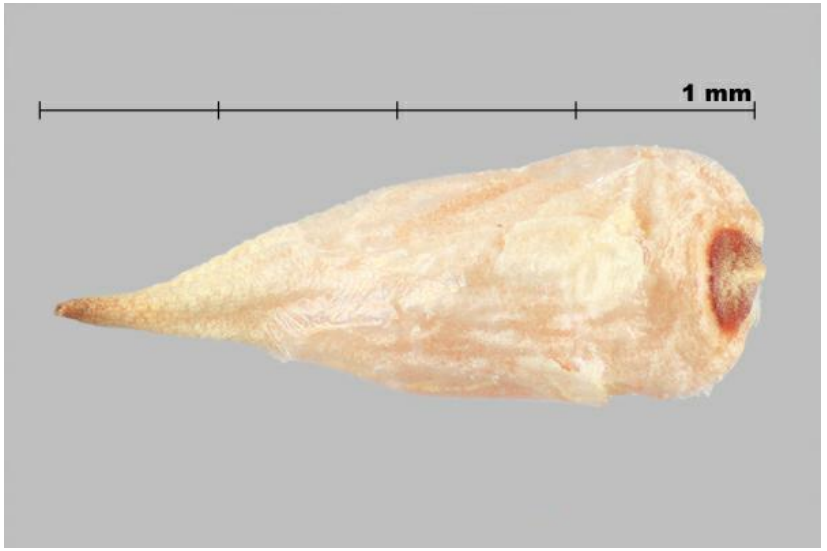
Outline

- Weed Characteristics
  - Puncture Vine
  - Field Bindweed
  - Foxtail Barley
- Control Practices and Chemical Control
- Helpful Hints (Application Considerations)
- Summary

Puncture Vine

Puncture vine

- Summer Annual.
- Seeds (fruits) are the destructive parts.
- Can grow in droughty areas.
- One plant normally produces 200-5,000 seeds. 1,152,000 seeds under the right conditions.

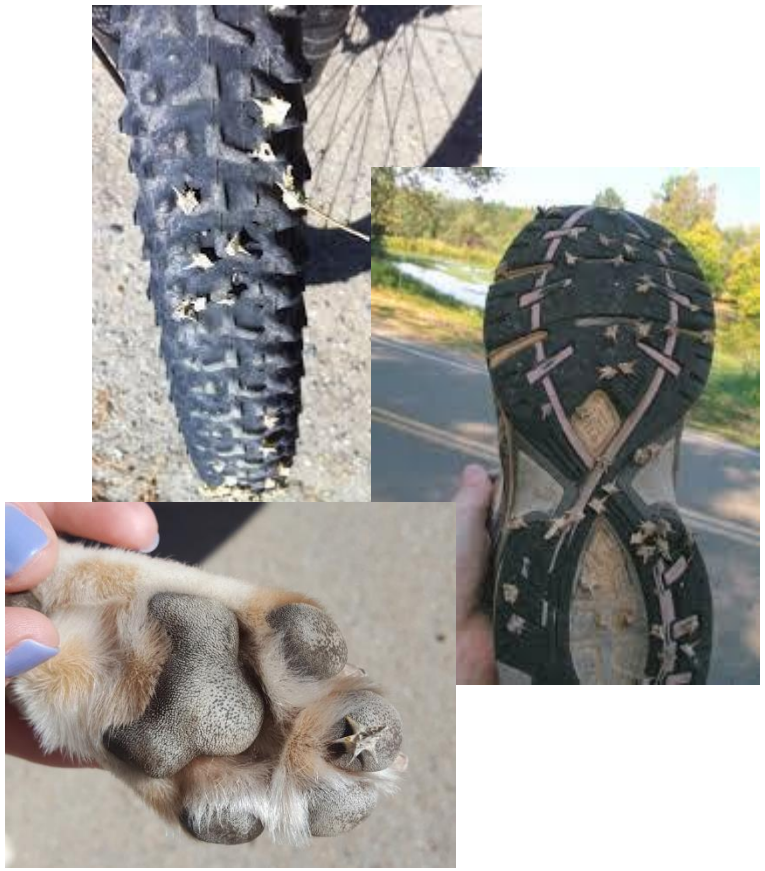


Puncture Vine

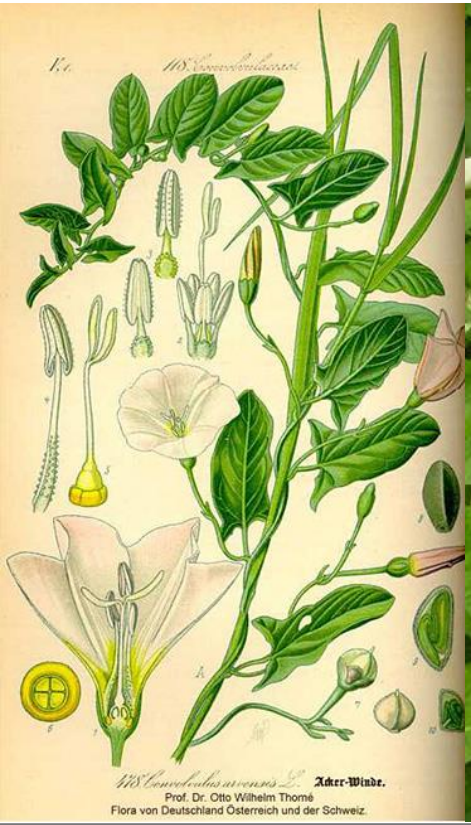
- Germination starts in warm weather
- Can germinate until frost
- Seedlings appear after rain or irrigation
- Do not readily emerge if greater than 2” below surface

Puncture Vine

- Thorns (fruit) will injure feet, paws, mouths, and noses of livestock and domestic animals.
- Can cause photosensitivity in sheep.
- Injury to feet/hands in recreational areas. Damage to bicycle tires.
- Aphrodisiac?



Field Bindweed



Field Bindweed

- Deep-rooted Perennial
- Extensive root system (30’)
- Seed can persist in soil 60 years
- Prostrate growth, will climb structures and plants
- Flowers are trumpet-shaped, 5-petals, pink-white

Field Bindweed

- Most reproduction accomplished by shoots emerging from roots.
- Seeds moved in forage, seed, or equipment can establish in new areas.
- Very difficult for mechanical control (removal) because of roots.

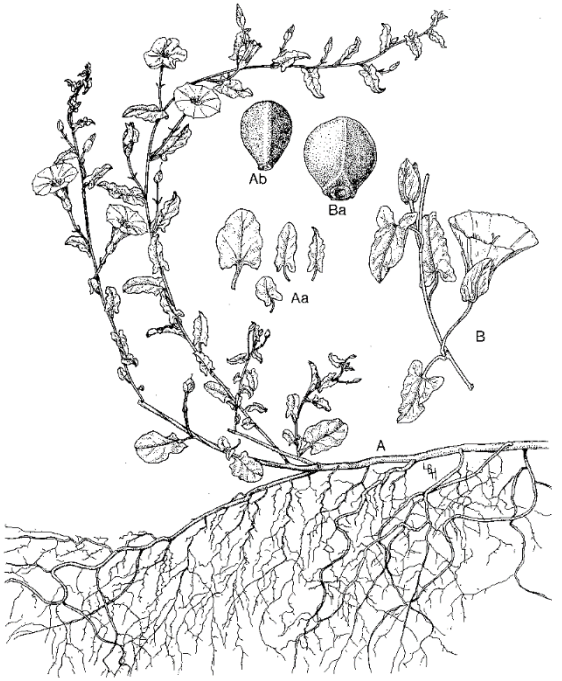


Fig. 111. *A*. Field bindweed *(Convolvulus arvensis)*. Prostrate plant with both flowers and seedpods. *Aa*. Various shapes of leaves. *Ab*. Seed. *B*. Hedge bindweed *(C. sepium)*. Branch with flower. *Ba*. Seed.

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Field Bindweed

- Vines form dense mats, will compete for light, water, and nutrients.
- Limits the forage value of pastures and hay.
- Infestations must be controlled before crop planting.

Foxtail Barley

Foxtail Barley

- Short-lived Perennial.
- Likes disturbed areas, meadows, basins, ditchbanks and roadsides.
- Moist areas that are alkaline.
- Aggressive, can displace favorable vegetation.
- Barbed awns can cause injury.

Foxtail Barley

- Tolerant of cutting or mowing.
- Generally germinates in the spring or fall.
- Dies in the early to late spring.
- Can provide good grazing for livestock if grazed early before seed production.

Foxtail Barley

- Reduces the value of hay and pastures.
- Seeds get into nose, eyes, ears, mouth and coat of animals.
- Large stands will displace native vegetation.
- Large stands can cause intense wildfires when ignited.

Control Practices

Puncture Vine - Non-Chemical

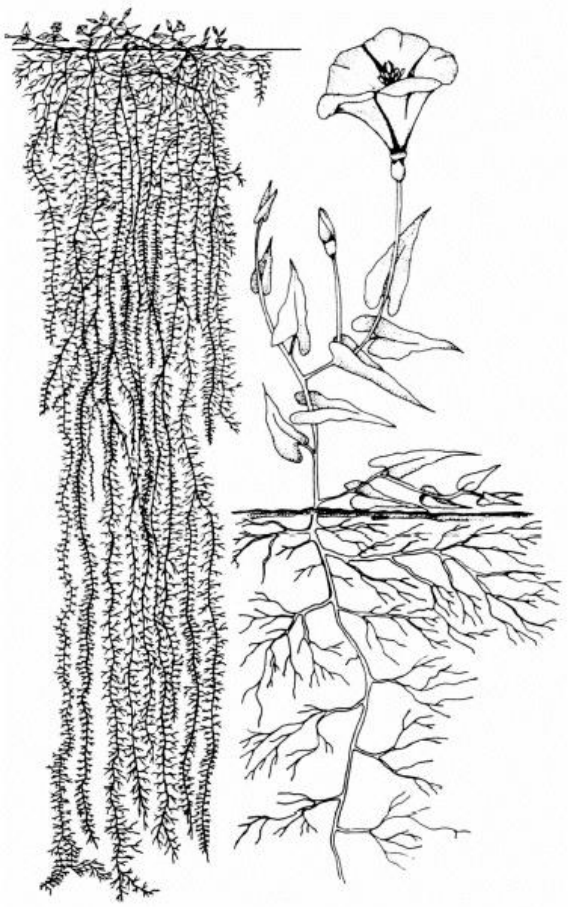
- Cultivation and tillage is helpful on puncture vine to reduce seed production.
- Hand removal before flowering or seeding.
- Burning can be effective.
- Seedhead and stem weevils are being tested; inconsistent results.
- Mulches >3” deep or weed mats.

Puncture Vine - Chemical

- Contact Herbicides: Diquat and Paraquat. Apply in 2-week cycles.
- Preemergent Herbicides: Oryzalin, benefin, trifluralin, bromacil and diclobenil.
- Translocated Herbicides: 2,4-D, glyphosate, dicamba, imazapic and MCPA.
- Apply before plant forms fruit for best results.

Field Bindweed – Non-Chemical

- Cultural practices, especially exclusion and competition.
- Cultivation of seedling plants effective if >2-3 weeks old. Mechanical removal of vines difficult.
- Landscape fabrics helpful – No sunlight (3-5 years).
- Organic mulches not effective unless on top of landscape fabrics or plastics.

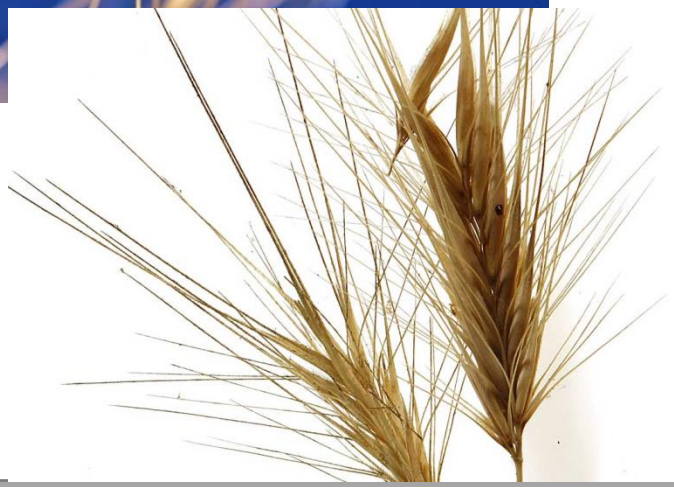


Field Bindweed - Chemical

- Turfs, grass pastures: Growth regulator types such as 2,4-D, dicamba, triclopyr, and picloram.
- Non-crop areas: glyphosate, dichlobenil, and certain soil active herbicides.
- Plant should be actively growing, in bud or bloom stage of growth.
- Crops: Consult U of I Extension, ISDA or Crop Advisor.

Foxtail Barley – Non Chemical

- Cutting or mowing is not effective.
- Plowing in fall followed by cultivation in spring is effective.
- Late-spring burns are effective if the fire is hot enough to destroy plant.
- Manage poorly drained areas to prevent standing water.



Foxtail Barley - Chemical

- Non-Crop: Broad spectrum herbicides such as glyphosate, diquate/paraquat applied postemergence. Sulfometuron if soil residual is not an issue. Hexazinone if leaching is not an issue. Clethodim if there are no desirable grasses.
- Pasture: Imazapic and sulfometuron if pasture grass is tolerant.
- Crops: Consult U of I Extension, ISDA or Crop Advisor.

Application Considerations

Timing Considerations

- For puncture vine and foxtail barley: Application prior to flowering/seed head formation is essential to control seed production.
- Field bindweed should be sprayed when the majority of the plants are in the bud or flowering stage.

Adjuvant Considerations

- Growth Regulator Herbicides and Glyphosate
  - Are weak acid herbicides, lower pH of water to at least 6.0 before mixing.
  - Hardness should be <50 mg/L.
  - Spreader-stickers are recommended.
- Sufonylurea and other herbicides
  - Read label for proper tank pH and adjuvants.

Sprayer Considerations

- Pre-spraying checks are important!
- Make sure your output is consistent.
- Make sure your coverage is adequate.

Plant Considerations

- Plants should be actively growing and not stressed.
  - Temperatures should not be overly high or low.
  - Humidity should not be low.
- Plant should be in the right stage of growth.
- Pay attention to susceptible non-target species.

Herbicide Considerations

- Make sure the herbicide's use is allowed by the label.
- Mix and apply the correct quantity as directed by the label.
- Watch label restrictions for use, tankmixing, and disposal.
- Integrate non-chemical control when appropriate.

Summary

Weed killing is serious business…

- Know your target
- Determine when the target is vulnerable
- Choose your weapon(s)
- Choose the best time and the best opportunity
- Neutralize your target
- Repeat as necessary

Plan for long term efforts!





Questions?