

## Reed Canary Grass (*Phalaris arundinacea*)



- Major threat to ecological integrity of wetlands
- Reduces biodiversity
- Alters hydrology
  - traps sediment
  - constricts waterways
- Dense monotypic stands
  - shading and crowding
  - structural diversity
  - species richness
  - wildlife habitat

## RCG Invasion Biology



- One of 1<sup>st</sup> wetland plants to emerge in the spring
- Reproduces prolifically from rhizomes and seed
- Can grow under a variety of moisture regimes
- Vegetative fragments and seeds readily disperse
- Years in soil seed bank
- Responds to disturbance

**Distribution:** Occurs in the upper 2/3 of the US, Canada

**Nativity:** Native strains existed historically; most infestations are considered of European origin.

**Cultivated in the PNW**

- early 1900s on cleared woodland prior to crop planting.
- 1970s for WQ purposes, especially for nitrogen uptake.
- 2000s for biofuel production.
- SCS/NRCS has recommended it for grassed waterways where moisture is a problem.

## RCG Life Cycle



- **Aggressive, cool-season perennial**
- **Grows vertically for 5-7 wks, then tillers**
- **Horizontal spread; extend > 10 ft / year**
- **Matures early summer then dies down**
- **2<sup>nd</sup> growth peak late summer / fall: energy**

## Management Considerations



- **Must suppress:**
  - vegetative growth
  - rhizomes
  - seed bank



- **Disturbed sites are more vulnerable**
- **Persistence; do not allow RCG to recover; 3 – 5 years**
- **Adaptive management**
- **No guarantee of control**



## Mowing RCG



- **Does not control RCG**
- **Mowing in late June**
  - burn / bale and remove; eliminates 1 year of seed
  - site prep for effective fall herbicide treatment



- **Do not mow after July 15; treat with glyphosate Fall**
- **Improper timing can adversely effect success**

## Burning RCG



- Best in highly productive wetlands
- Late spring, native plants dormant but RCG active
- Use with other methods
  - stimulate germination, prevent seeds, kill
- Burn annually 5 – 6 years
- Wet conditions: brown off with herbicide

## Solarization / Shade Cloth



- Small patches: bake under clear or black plastic
- Shade with thick woven geotextile shade cloth
- Keep fabric in place for one year – kill all plants
- Mow prior to installation
- Follow-up not required
- Establish native plants

## Roundup (Glyphosate)



- **Systemic herbicide: kills entire plant / roots**
- **Non-selective**
- **Spray in the fall when physiologically active**
- **Mix to 2% concentration**
- **Burn / cut last year's dead leaves: more effective**
- **2nd treatment in spring as seed bank germinates**

## Poast/Vantage and Assure II



- **Selective herbicides:**
  - kills grasses but not forbs, or sedges & rushes
- **Most effective: late spring or early summer**
- **Takes 4-6 weeks to see visible symptoms**
- **Spot spray:**
  - individual plants
  - small patches

## Combining Techniques



- Mow in prior to July 15 before seed heads appear
- Spray glyphosate when 6-12 in (Aug / early Sept); again early Oct if needed
- Taken into rhizomes – Fall
- Burn in spring – duff
- Spray seedlings early April
- Follow-up for 5 – 10 years



## Tillage and Flooding

### In Summer

- Mow standing stands...hopefully before seed set.
- Deep till multiple times during one season – Chop and re-chop the rhizome mass allowing for drying between tillage treatments.

### In Fall

- Set boards in water control structure to flood site at least 18” for the entire winter.

### Following Spring

- Dewater the site.
- Seed with native species.
- Herbicide surviving growth.