# Medusahead Identification and Control: Field Results

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# Not all weeds are created equal:-

**Weeds:**

- native and non-native plants that impact production, cause health problems or are aesthetically unpleasing.

**Invasive weeds:**

- non-natives that aggressively infest ecosystems.
- increase in area and density

**Noxious weed**

- designated by country, state, county as injurious to public health, agriculture, recreation, wildlife or property.

# Medusahead identification

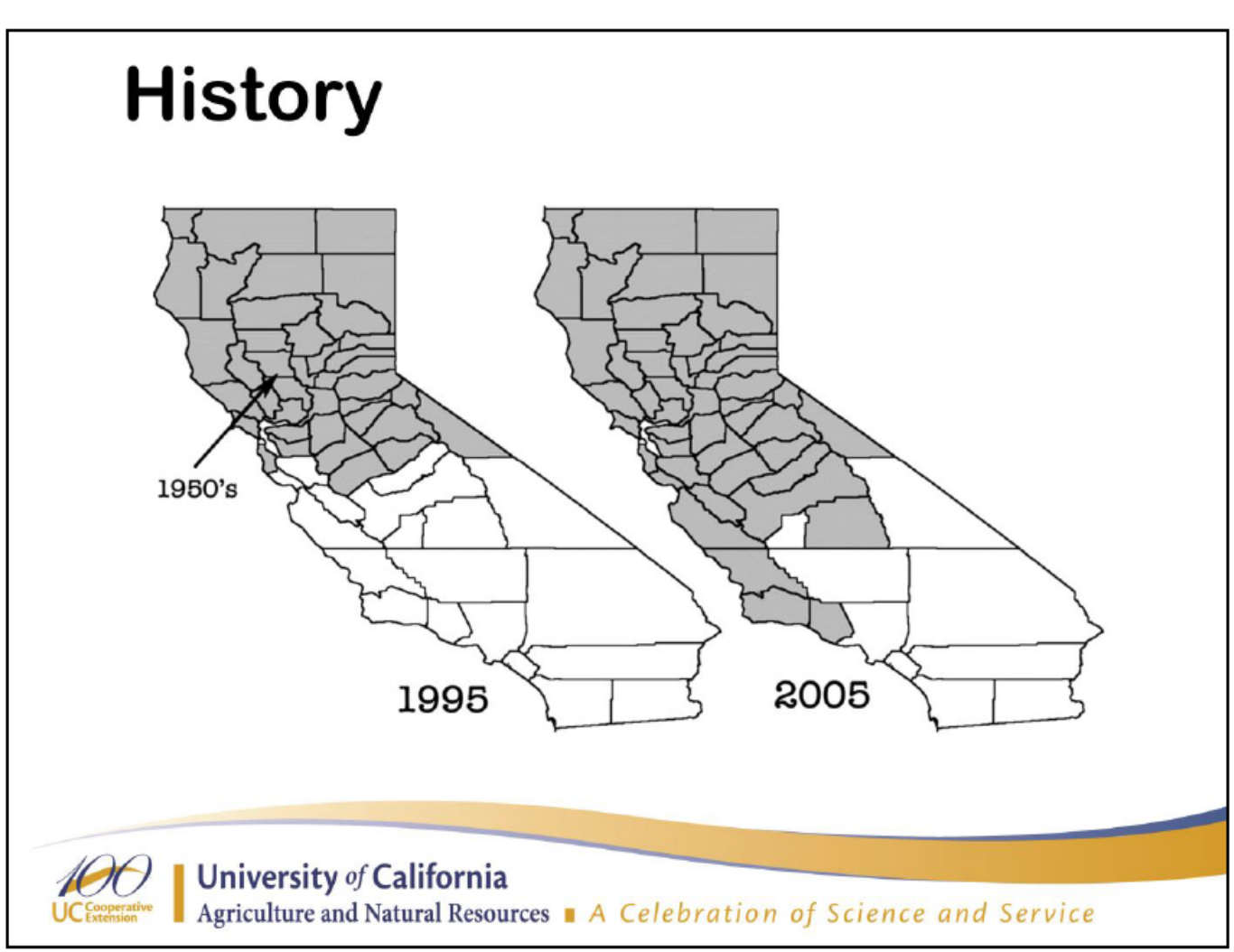
- *Taeniatherum caput-medusa*
- *Elymus caput-medusae*

- Origin: non-native - Eurasia

- **Lifecycle:** Annual 6-18” tall
- **Habitat:** Varied
  - rangeland, woodlands, chaparral
  - >9”, but typically 12 – 24”
  - Diverse soil types – mostly finer soils

# Bad grass?

- Invasive



# Bad grass?

- Nutritional content –
  - Protein content declines fast with maturity
  - Silica content – reduced digestibility and decomposition
- Mechanical injuries to livestock
- Effects on ecosystem:
  - Thatch
  - Monoculture
  - Reduces forage value
  - Reduces wildlife habitat and diversity
  - Fire risk

# Principles of Weed Control

- Identification
- Prevention vs control
- Invasion corridors
- Timing of control after invasion:
  - The sooner the better - effectiveness declines with time
  - Season: When most susceptible

# Principles of Weed Control

- Method of control:
  - Physiology (annual vs perennial, seed vs vegetative reproduction)
  - Phenology
  - Seed dormancy
  - Ecological concerns

- Develop a strategy – plan

- Monitor and evaluate

# Medusahead control methods

- Fire
- Herbicide
- Competition (seeding)
- Grazing
- Mowing

# Fire control

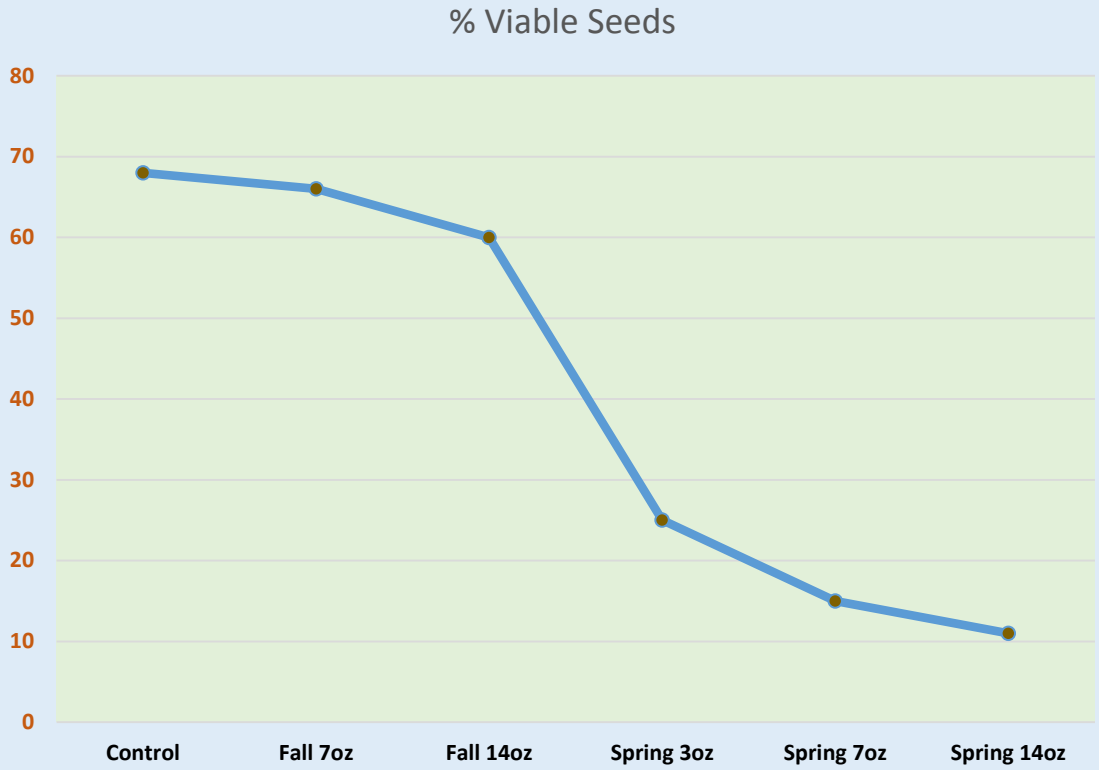
- Burn when grass is dry enough to carry fire
- Before seeds fall
- Higher fine fuels increase effectiveness

- ~90% medusahead seed kill

- Reduced forage production for up to 3 years
- Medusahead comes back without follow up tre

# Herbicide control

- Aminopyralid (milestone) Fall
  - 7-14oz/acre
  - Expensive @$40/acre
- Aminopyralid in Spring
  - 3-14oz per acre
- Disadvantages:
  - Reduces clover and filaree
  - Reduces a few desirable grasses



# Competition (Seeding)

- Control weeds the year before

- Seed with desirable grasses
  - e.g. annual ryegrass
  - Soft chess

# Grazing

- Timing is critical (boot stage)
- Medusahead matures later than most annual grasses

- High cattle density critical
  - Small pasture size
  - Use supplements to attract livestock to patches

- Nitrogen fertilization
  - ~30lb/acre spring application
  - ~50lb/acre fall application

# Mowing

- Similar to grazing but larger window
- Limited by landscape condition
- Less practical on large infestations

# IPM Approach

- Use a combination of methods
- Over 3-4 years
- Highest potential for success

- Questions?