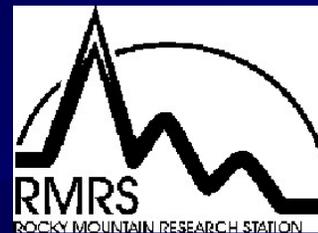


Seeds, Weeds, and Needs: Farming Native Seed

Utah Division of Wildlife Resources
Great Basin Research Center Ephraim, UT

Therese Meyer, Jason Vernon,
Danny Summers, Tana Pickett

1/30/2008



Building capacity:

- ✱ Meet with potential growers
- ✱ Teach about the need
- ✱ Advertise the opportunity
- ✱ Convince them to sign on
- ✱ Follow through with education, support, technical assistance
- ✱ Buy their seed at a premium

Native Forbs: We need more seed!

- ✦ **Non-native** grass and forb seed abundant (crested wheat, alfalfa)
- ✦ **Native grass** seed becoming more available (western wheatgrass)
- ✦ **Native forb** seed: scarce supply

What are Forbs?

- ☀ Herbaceous flowering plants
- ☀ Not shrubs
- ☀ Not grasses
- ☀ Examples: pansy (non-native); globemallow, balsamroot (natives)



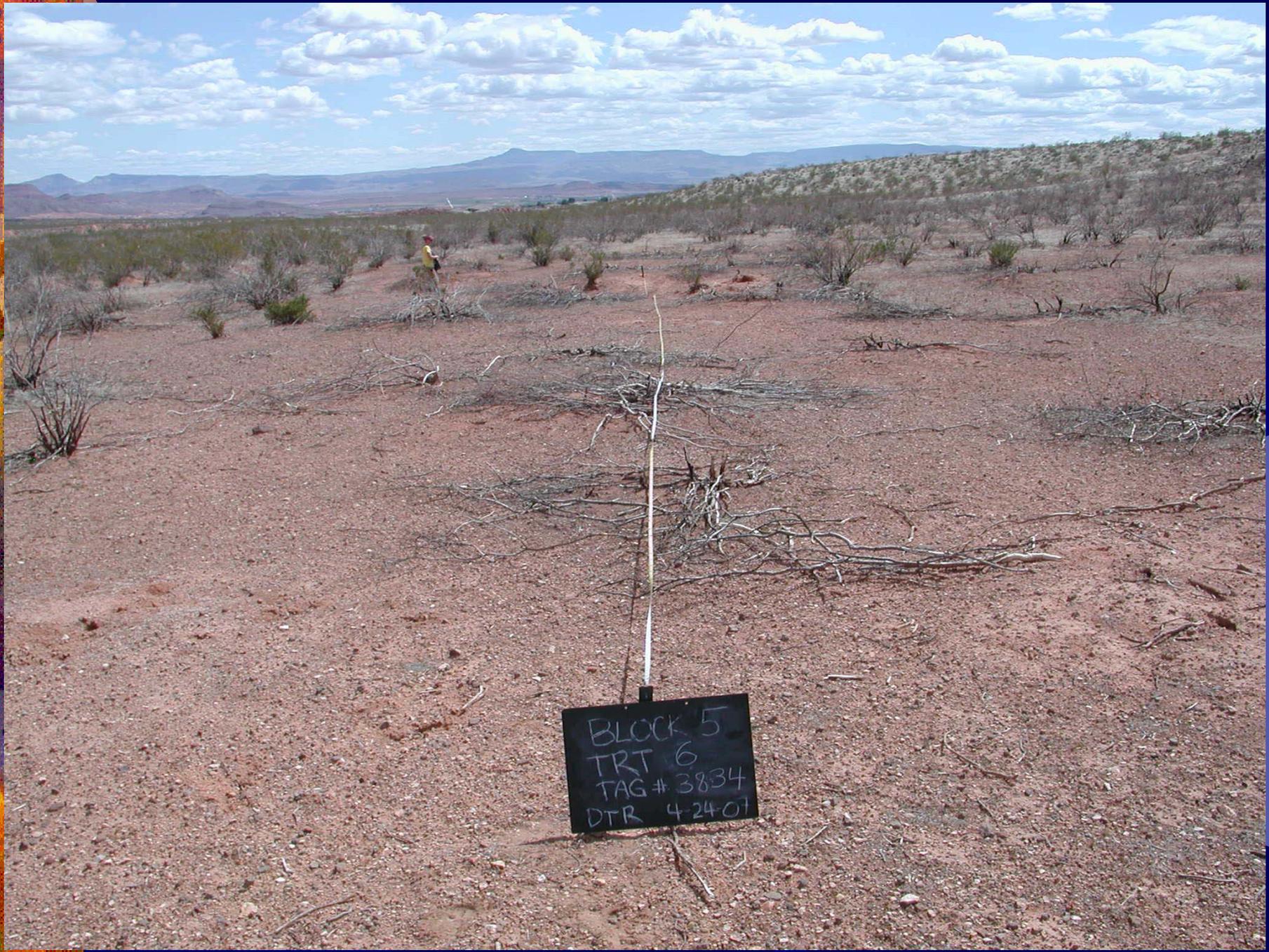
Why do we want more native forb seed?

- ✦ To restore herbaceous understory
- ✦ Important components of the wildlife food chain: vegetarians eat plants
- ✦ Mule deer (Tier III)
- ✦ **Utah**, Gunnison, White-tailed **Prairie Dogs** (Tier I, II, II) [**Black-footed ferret** (Tier I)]
- ✦ Greater, Gunnison Sage-grouse (Tier II, I)
- ✦ Sharp-tailed grouse (Tier II)
- ✦ Pygmy rabbit (Tier II)
- ✦ **Desert tortoise** (Tier I)



Great Basin Restoration Initiative

- ★ Funded by BLM, Forest Service (Rocky Mt. Research Station), DWR
- ★ Poorly managed livestock grazing
- ★ A century of wild land fire suppression
- ★ Drought
- ★ Conifer encroachment
- ★ Increasing fire frequency and intensity
- ★ Invasive weeds (cheatgrass, knapweed)



BLOCK 5
TRT 6
TAG # 3834
DTR 4-24-07

Squarose Knapweed



Cheatgrass, fire





Milford fire 2007: 350,000 Acres

Big Hollow, Salt Creek 2007





AOSCA program: Utah Crop Improvement Assn.

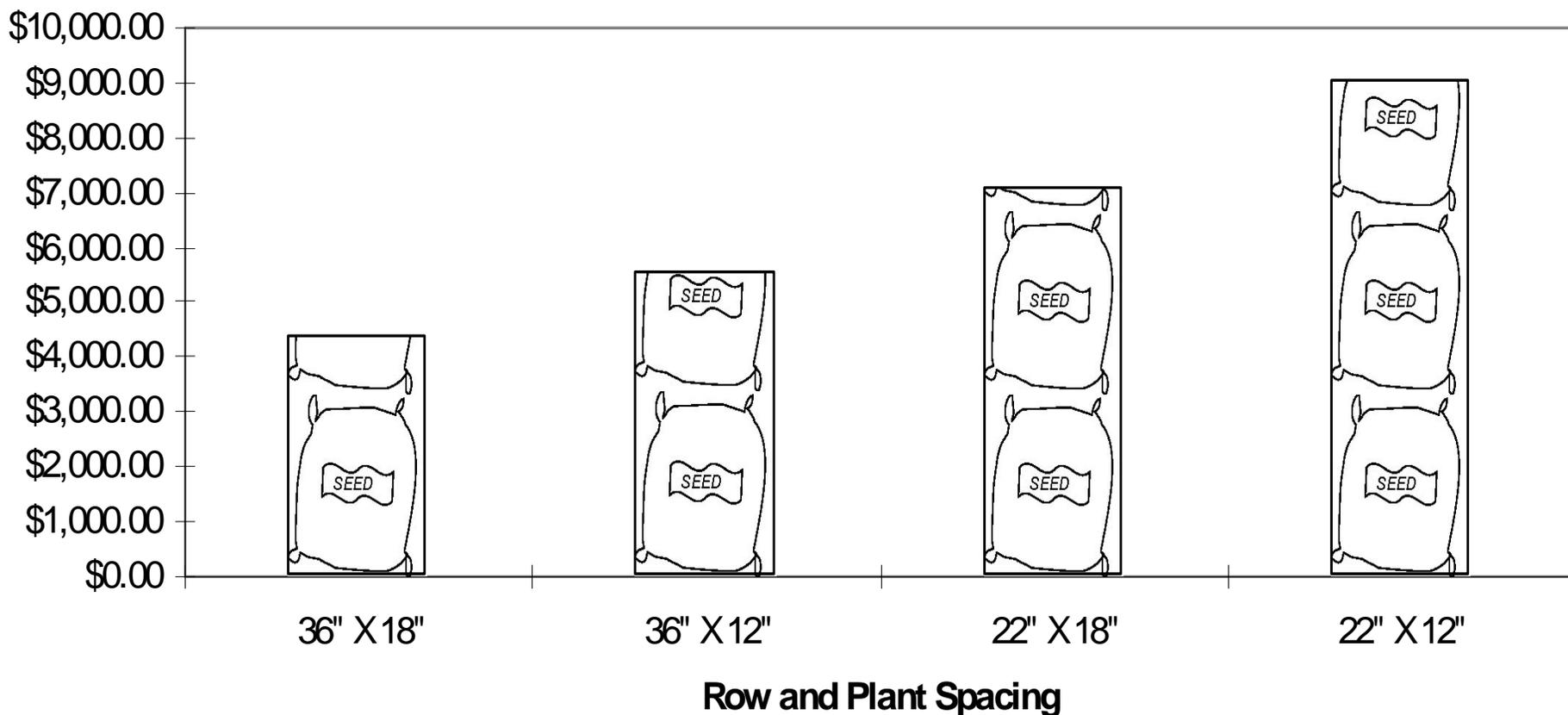
- ✦ Foundation Stock seed
- ✦ Buy-back program, contracts
- ✦ Seed labeling
- ✦ Tie-in to bid process for sales

Seed buy-back program:

- ✱ We provide stock seed
- ✱ First lb. back to DWR no charge
- ✱ Additional lbs. at 125% going price
- ✱ Or sell on open market

Projected Per-Acre Income:

Globemallow Seed Production Per Acre at \$35/lb

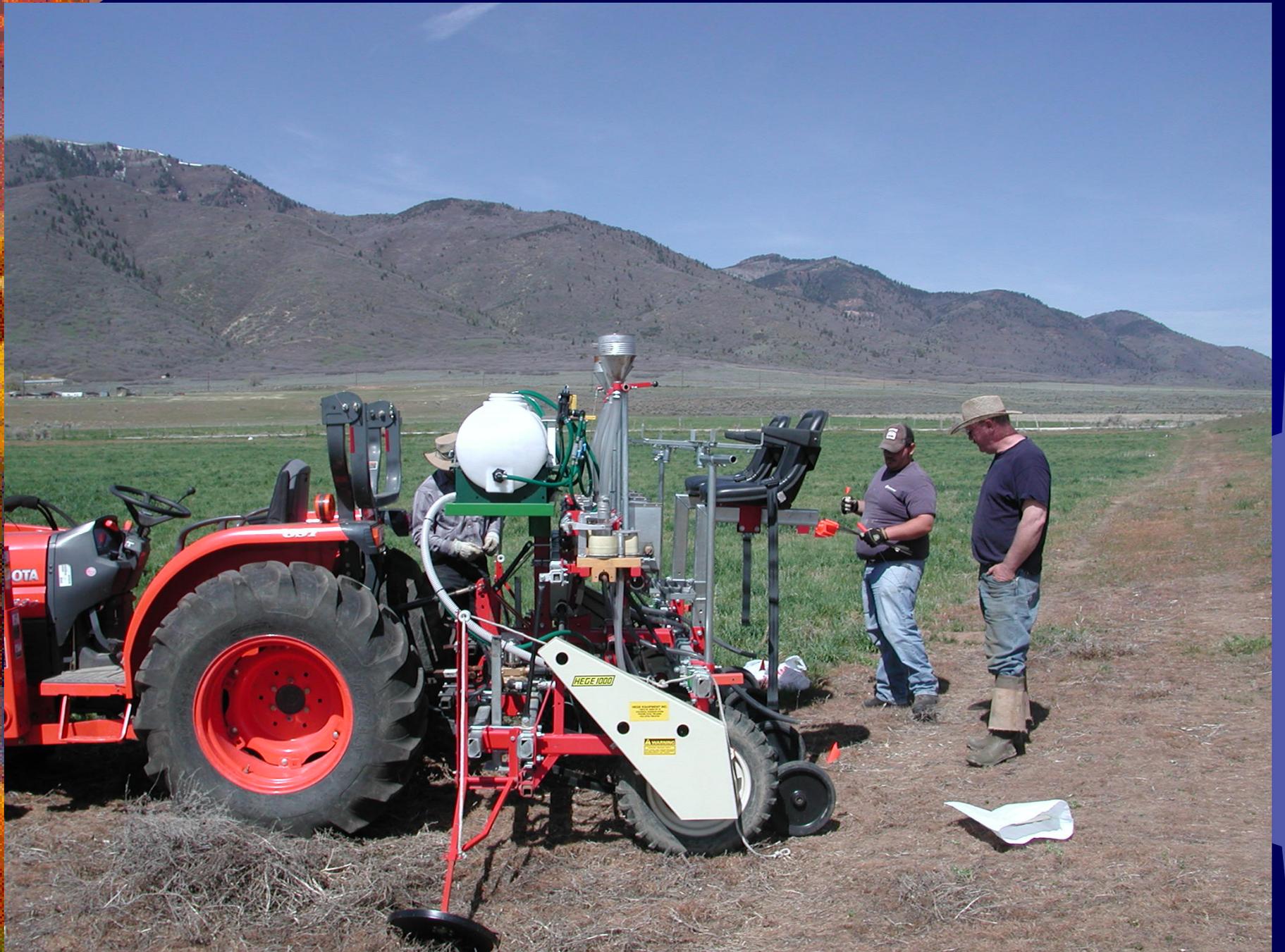


























Private grower: T-tape, plant plugs 5/29/07



7/25/07 (two months later).

5.1 lbs produced by 8/15/07 (~4.66 g/ft)



L&H Seeds, Connell WA: Indian ricegrass



Flail-Vac







WINTERSTEIGER
classic



Seed Predation: Weevils



Use "No-Pest" strips while drying, storing seed

Seed cleaning equipment



Debearder



• CARTER DAY •







Other Potential Partners:

- ✦ Resource Conservation and Development Councils
- ✦ UDAF Specialty Crop grants?
- ✦ Tribes



Research Advances

Seed retrieval study (stratification)

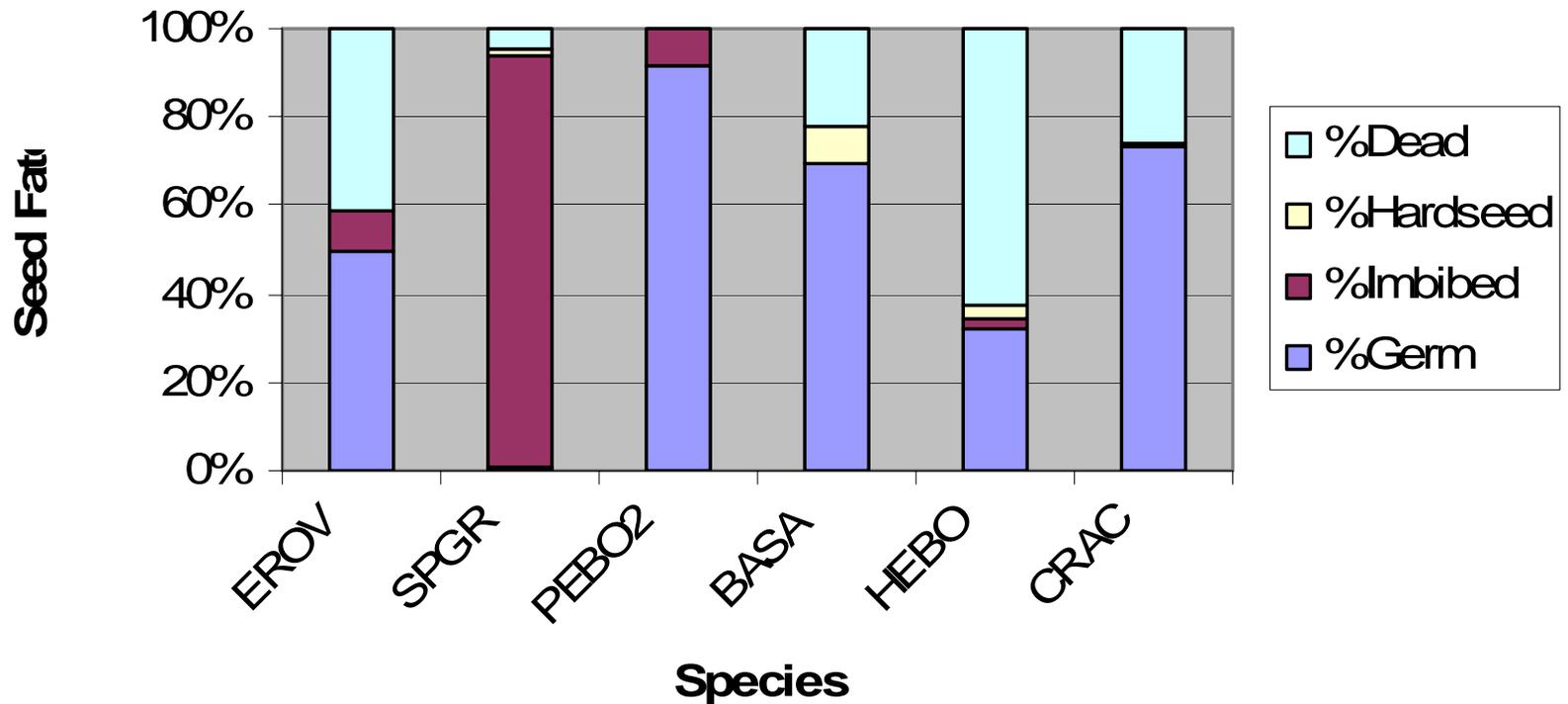
Globemallow plant spacing, harvest timing (phenology)

Hedysarum inoculants (rhizobial cultures)

Common gardens

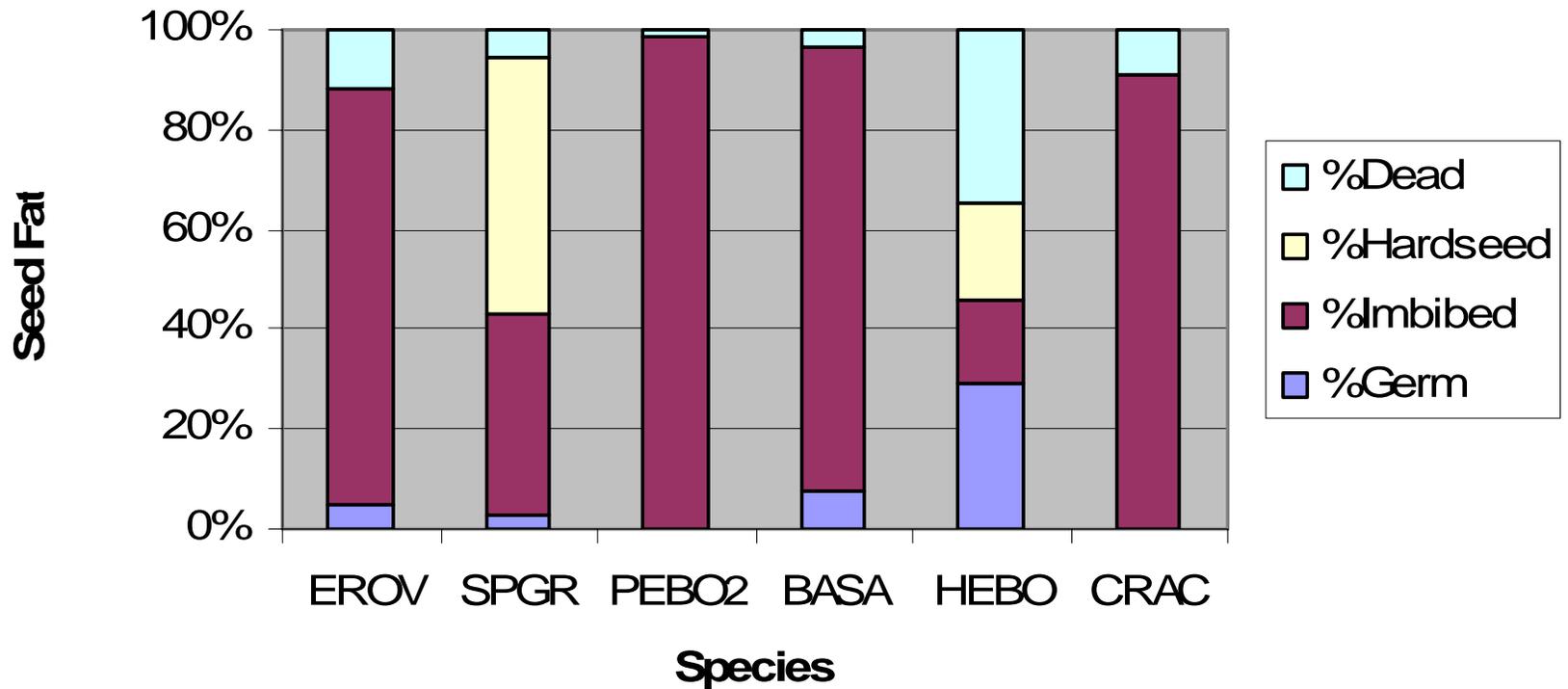
Seed retrieval: fall planting

Seed Retrieval: Overwintered Sept 28-March 14



Spring planting

Seed Fate: Spring Planting; March-April

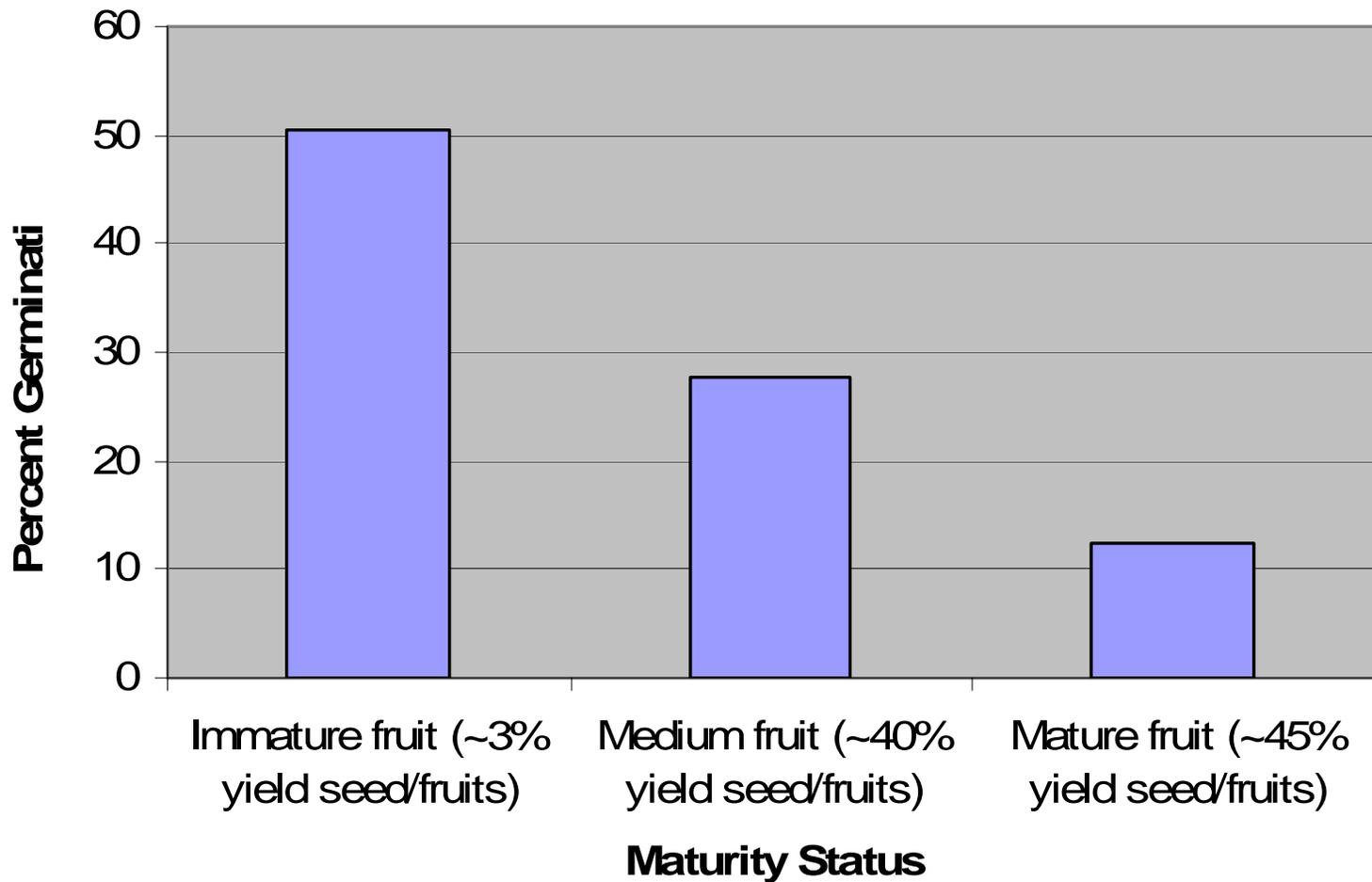


Globemallow trial, Fountain Green



Timing of Harvest

Globemallow Harvest Phenology

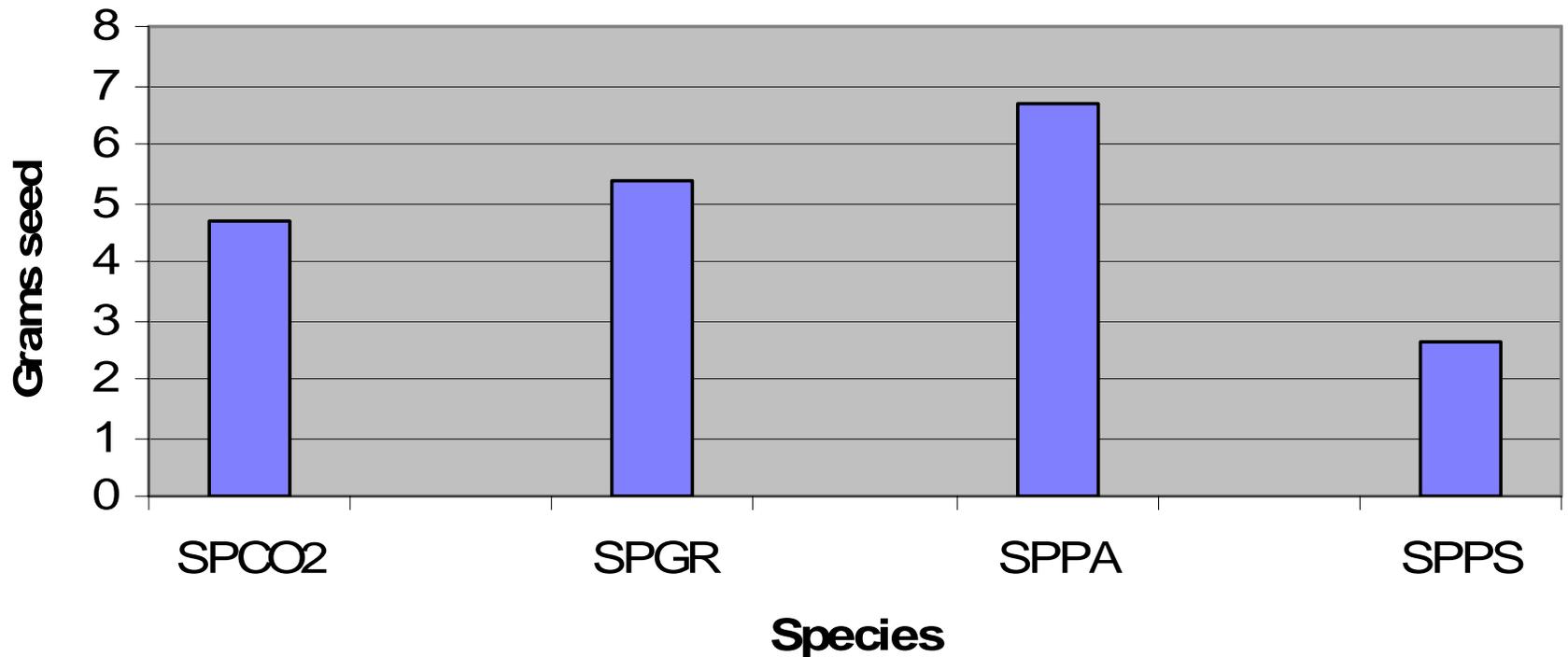


Globemallow Spacing Effect on Seed Production:

12"	4.97 grams/plant
18"	5.88 grams/plant

Globemallow Seed Production

**Globemallow Average Per Plant Seed Production
at 18" Plant Spacing by Species**



Hedysarum inoculants





Thank you!

