



The Milkweed Seed Market

Availability, production challenges, and strategies for growth



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Photo: John Anderson, Hedgerow Farms Inc.

Strategy: Conserve Existing Milkweed Stands



Photos: Brianna Borders, The Xerces Society

Strategy: Restore Milkweeds to the Landscape



Photos: Brianna Borders; John Anderson, Hedgerow Farms, Inc; William M. Ciesla, FHMI, Bugwood.org



Project Milkweed – Goals

- Bring new seed sources to market
- Develop seed production technology
- Promote and conduct habitat restoration using milkweeds





Project Milkweed – Outcomes

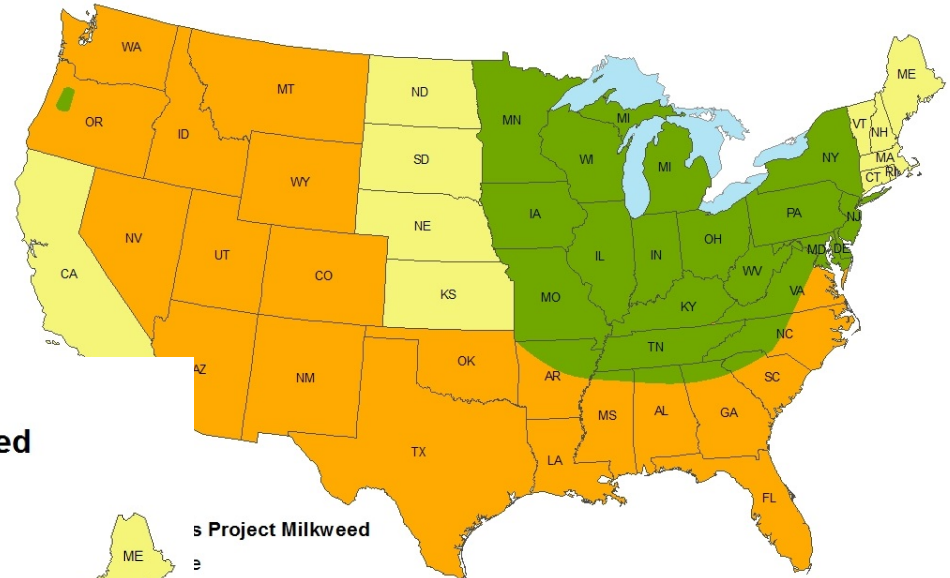
- Partnerships with the native seed industry and USDA-NRCS Plant Materials Program
- Launched production of 10 species in 5 regions
- Produced more than 1,200 lbs of seed (40+ million live seeds!)



Photos: John Anderson, Hedgerow Farms, Inc.

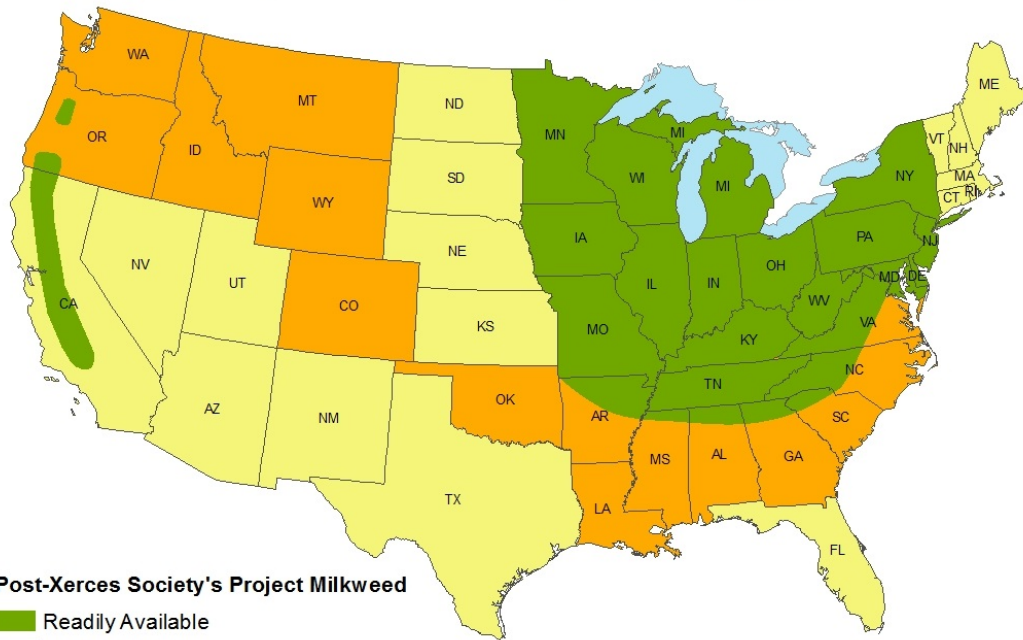
Milkweed Seed Availability

Commercial availability of
regionally native milkweed (*Asclepias* spp.) seed



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Project Milkweed

Availability

Post-Xerces Society's Project Milkweed

- Readily Available
- Limited Availability
- Typically Unavailable

- Disponible en grandes cantidades
- Disponibilidad limitada
- Normalmente no disponible



Milkweed Seed Availability

- ~130 species native to North America (72 spp. in the U.S.)
- In the U.S., 7 species are generally commercially available by the pound
- Central/Eastern species: *A. incarnata*, **swamp or rose milkweed**; *A. syriaca*, **common milkweed**; *A. tuberosa*, **butterfly milkweed**; *A. verticillata*; **whorled milkweed**
- Western species: *Asclepias eriocarpa*, **woolypod milkweed**; *A. fascicularis*, **narrowleaf milkweed**; *A. speciosa*, **showy milkweed**



Asclepias speciosa



Asclepias tuberosa



- National directory of 80+ vendors
- Only some specialize in growing source-identified seed

www.xerces.org/milkweed-seed-finder



Milkweed Seed
— FINDER —

The Milkweed Seed Market

- Average price per pound: \$275
- Range: \$120 - \$450
- Average number of seeds per pound: 74,000
- Average price per ounce: \$35
- Range: \$10 - \$75
- Average number of seeds per ounce: 4,500





Supply and Demand

- Seed surplus in some regions (Midwest)
- Shortages in other regions (Texas, Florida)
- Demand for seed packets seems high
- Demand for live plants outstrips supply in many regions
- Debate around 'varieties' vs 'wild types'



Milkweed Production Challenges

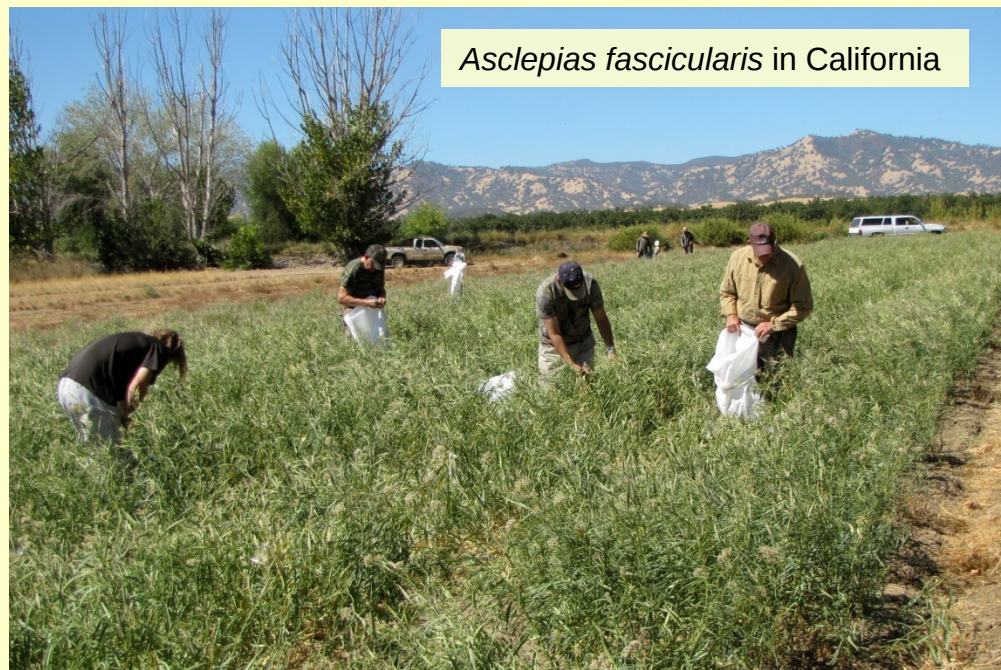
- Perennials; sometimes take 2 – 3 years to begin producing seed
- Specialist herbivores -> crop pests
- Floss fibers attached to seeds complicate harvest and cleaning
- Seeds mature unevenly over several weeks; multiple harvests often necessary



Overcoming Production Challenges

Needs:

- Develop integrated pest management (IPM) strategies for milkweed crops
- Optimize seed harvesting and cleaning methods
- Increase demand to incentivize production



Asclepias fascicularis in California



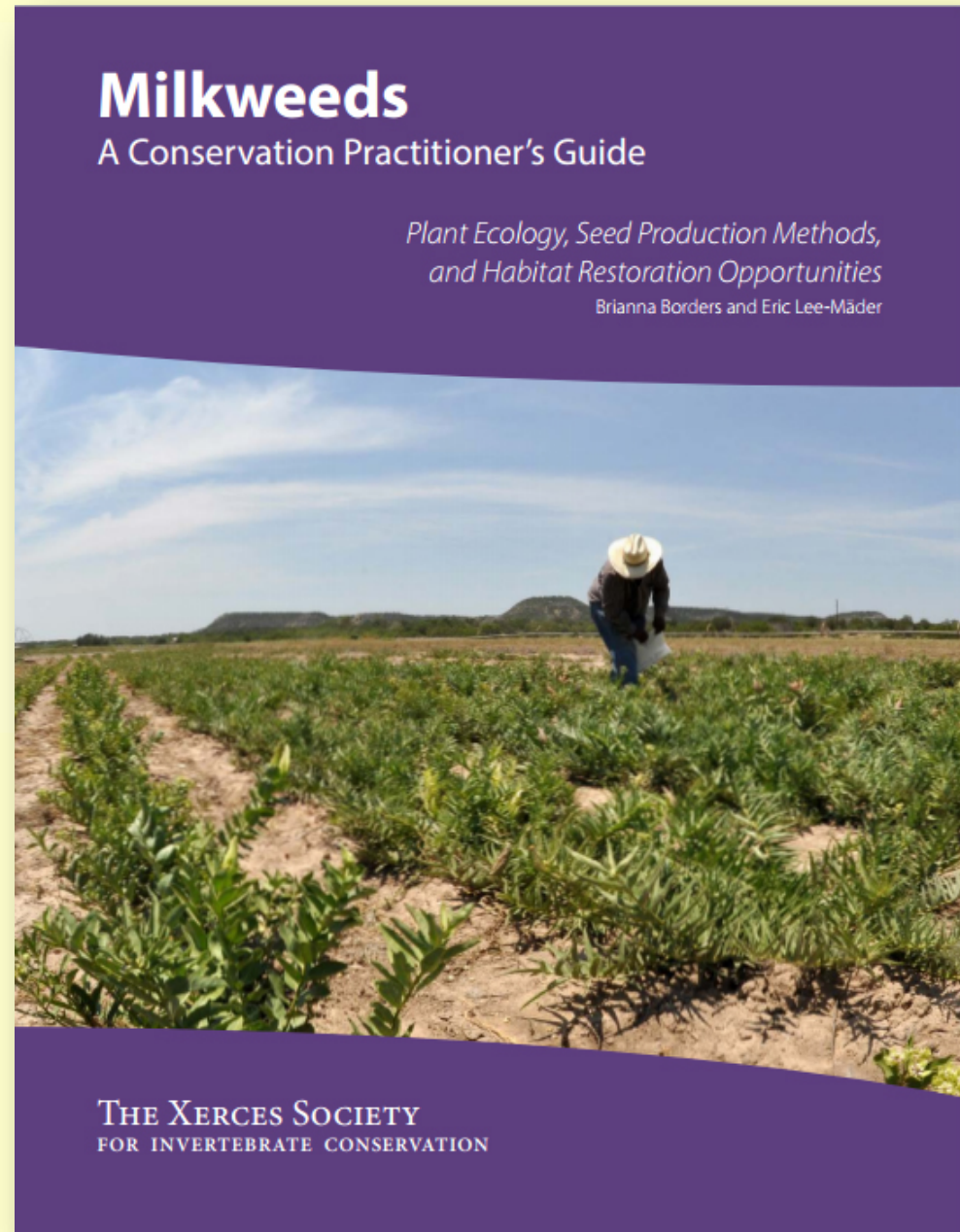
Blue milkweed beetles in California



Photos: Hedgerow Farms, Inc

Seed Production Methodology

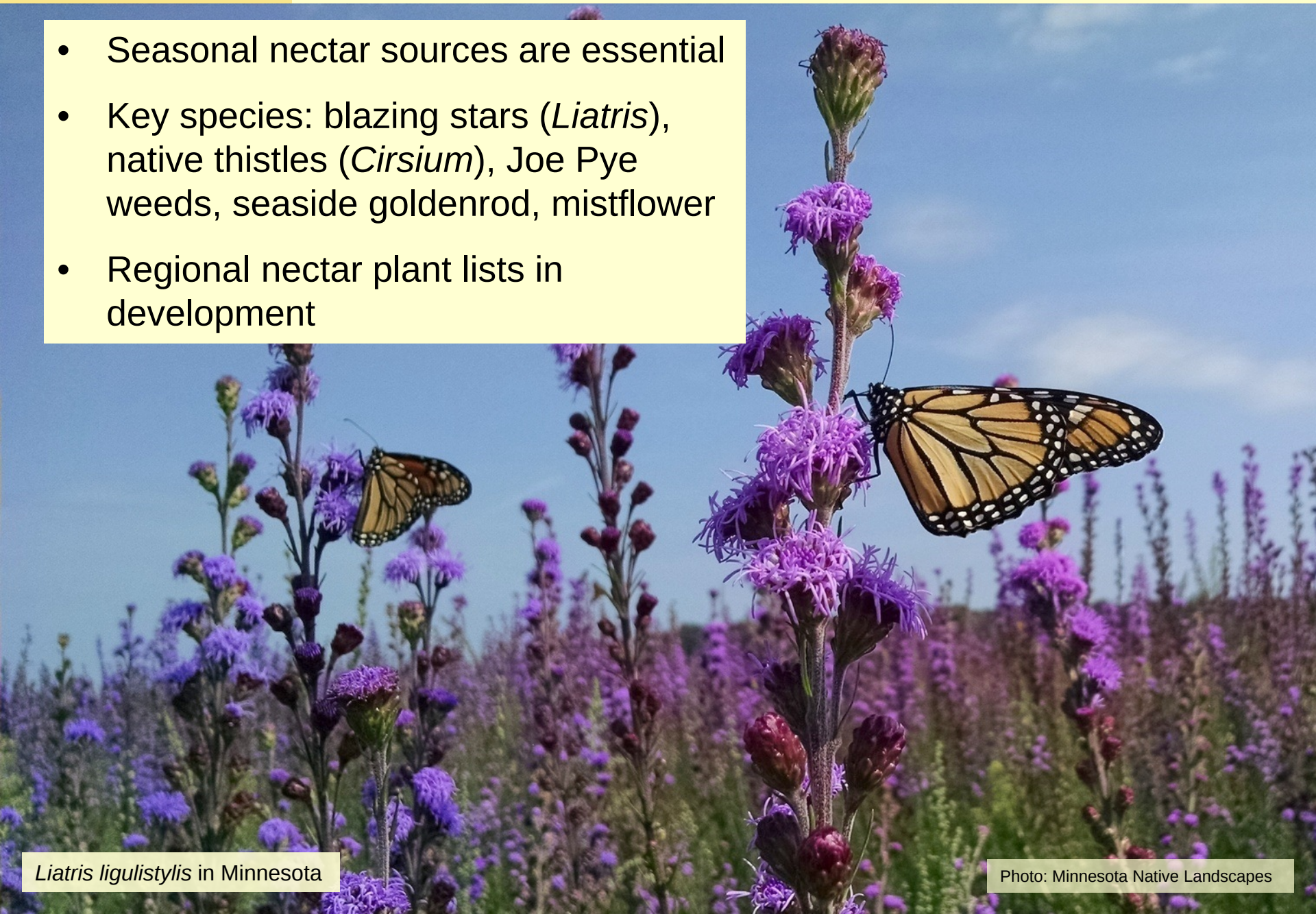
- Best available resource for seed production methodology
- Detailed profiles of specialist herbivores
- Background on milkweed biology & ecology
- Free download from Xerces Society website





More Than Milkweeds

- Seasonal nectar sources are essential
- Key species: blazing stars (*Liatris*), native thistles (*Cirsium*), Joe Pye weeds, seaside goldenrod, mistflower
- Regional nectar plant lists in development



Liatris ligulistylis in Minnesota

Collaborators

- Hedgerow Farms, Inc.
- Native American Seed
- Ernst Conservation Seeds
- Painted Lady Vineyard
- Arizona Western College
- Gunnell Farms
- NRCS Plant Materials Program

Supporters

- **Natural Resources Conservation Service**
- **Monarch Joint Venture**
- The Hind Foundation
- SeaWorld & Busch Gardens Conservation Fund
- The Elizabeth Ordway Dunn Foundation
- The William H. and Mattie Wattis Harris Foundation
- The CERES Foundation
- Turner Foundation Inc.
- The McCune Charitable Foundation
- Xerces Society members

