



Saffron Biology and Crop Cycle Background Information

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North American Center



For Saffron Research & Development

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**BUSINESS
INSIDER**

The Boston Globe
Founded 1872

Could an exotic spice from Iran help Vt. farmers?

BBC
US & Canada

Could the world's most expensive spice help farmers in Vermont?

The Washington Times

Exotic spice saffron grown successfully in Vermont

Who has grown saffron?



The North American Center for
Saffron Research & Development



What is Saffron?

The world's most expensive spice: \$3,000 - 9,000/lb

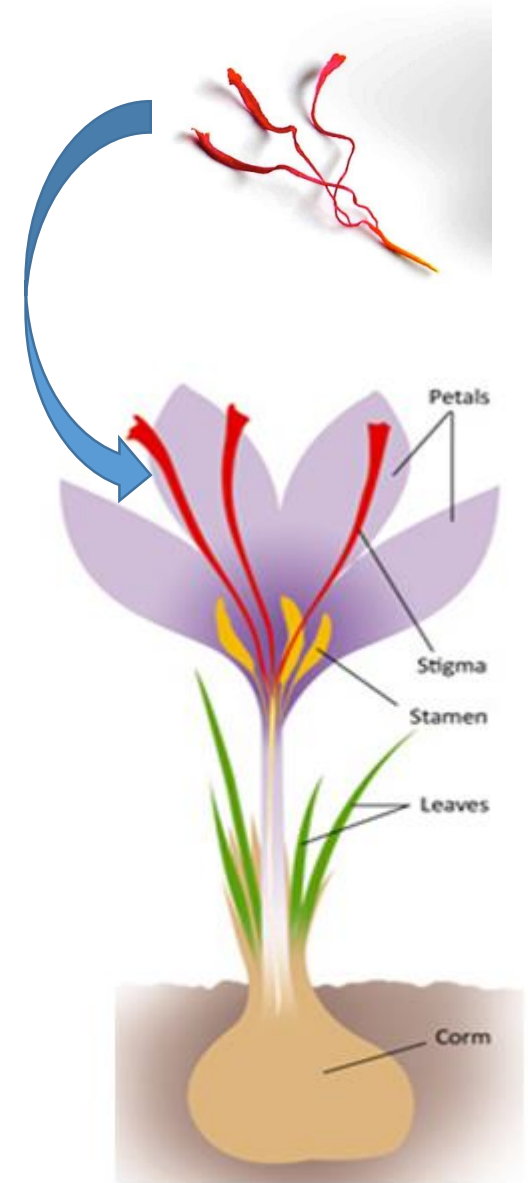
US growers are getting \$25-75/gram (\$11,350-34,000/lb)

Saffron is the dry stigmas of *Crocus sativus* L flowers.

Fall blooming crocus

In cultivation for over 3,500 yr.

Origin: Probably Greece or Crete





What is Saffron good for?



- ✓ Culinary spice
- ✓ Medicinal herb
- ✓ Medicinal extract
- ✓ Perfume
- ✓ Ornamental plant
- ✓ Fabric dye
- ✓ Liqueur



Why is Saffron so expensive?

Currently most processing is done by hand

4,000 blooms = 1 oz of saffron, or 28 grams (~\$1,000)



The average saffron yield is about 8 lb/ha (less than 4 lb/acre).

Phytogeographically, the majority of these species occur within the Mediterranean region extending eastward into the Iran-Turanian region.



First Saffron Farm: 3,500 years ago (Mesopotamia)

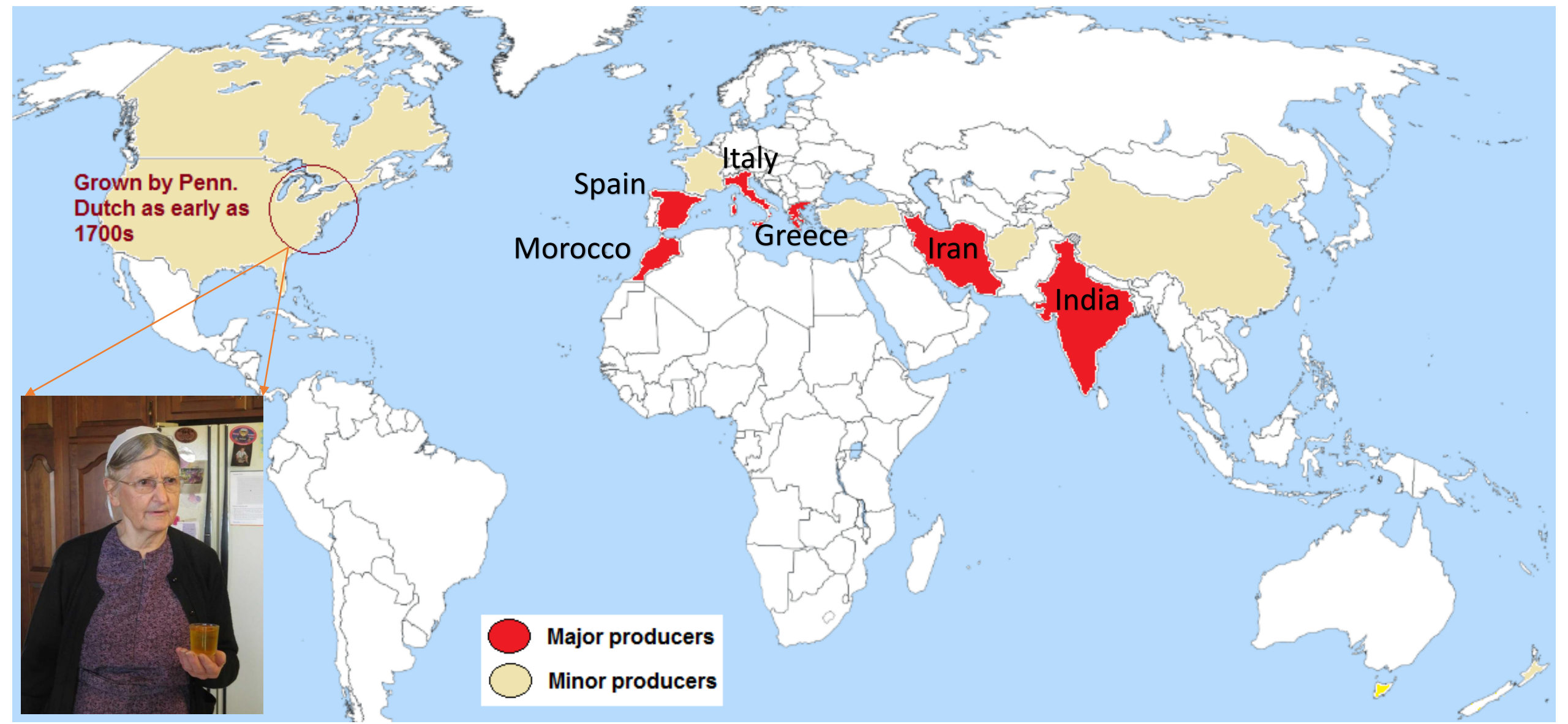
50,000 years old depiction in Iran

Grown by Penn.
Dutch as early as
1700s



- Major producers
- Minor producers

Spain
Morocco
Italy
Greece
Iran
India





Imported Saffron:



~23 tons in 2013!

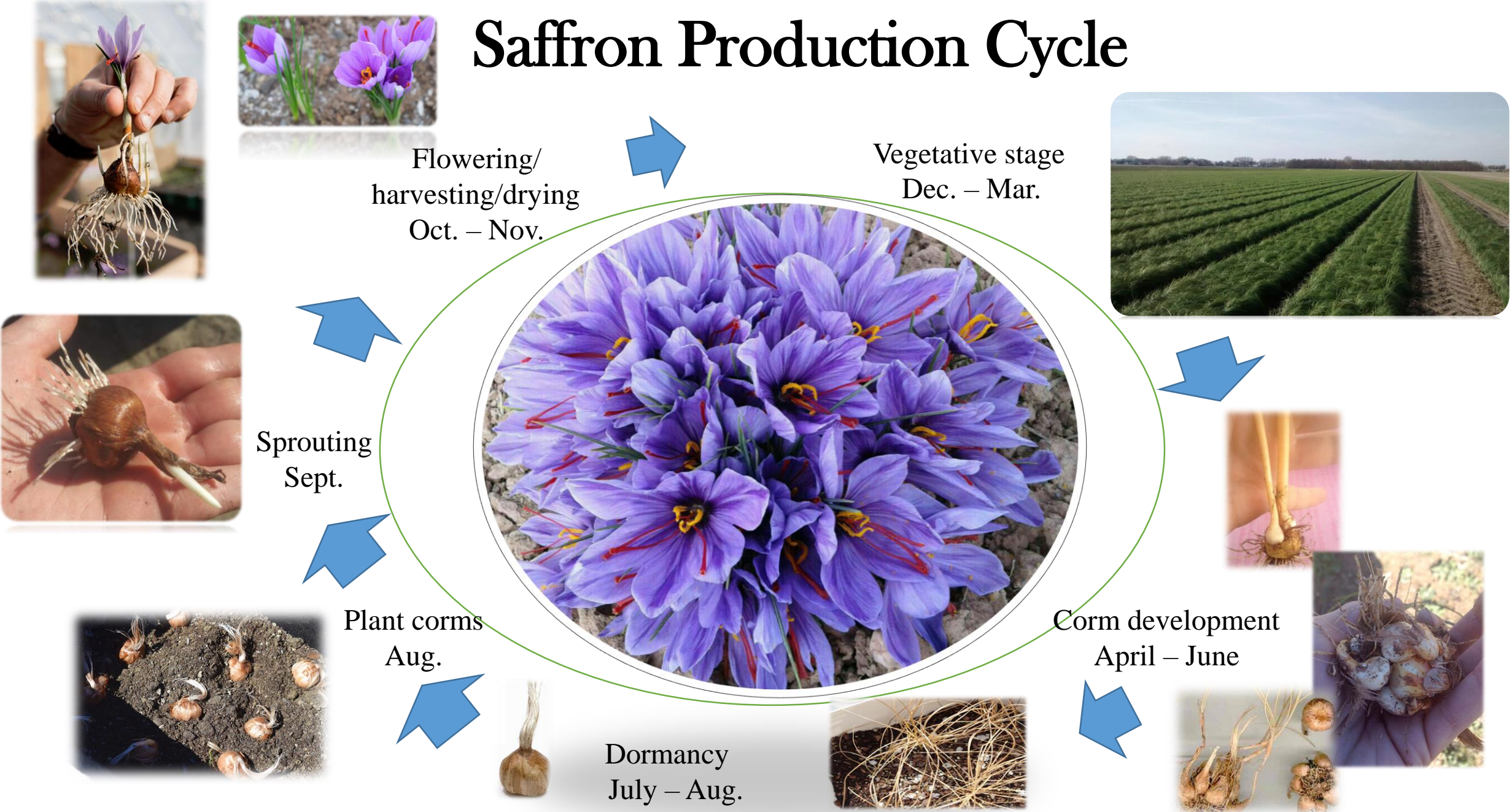
~46 tons in 2016!

~60 tons in 2018!



~??? tons in 2025!

Saffron Production Cycle



Saffron Quality



Crocin: Imparts the color

Picrocrocin: Imparts the unique flavor

Safranal: Imparts the aroma



Saffron Pests and Diseases



A, Female



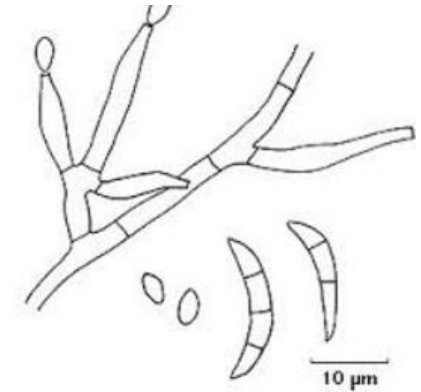
B, egg.



C, Larva.



D, Protonymph.





The North American Center for
Saffron Research & Development

<http://www.uvm.edu/~saffron/>

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