

Saffron production in VT ecosystem

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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)

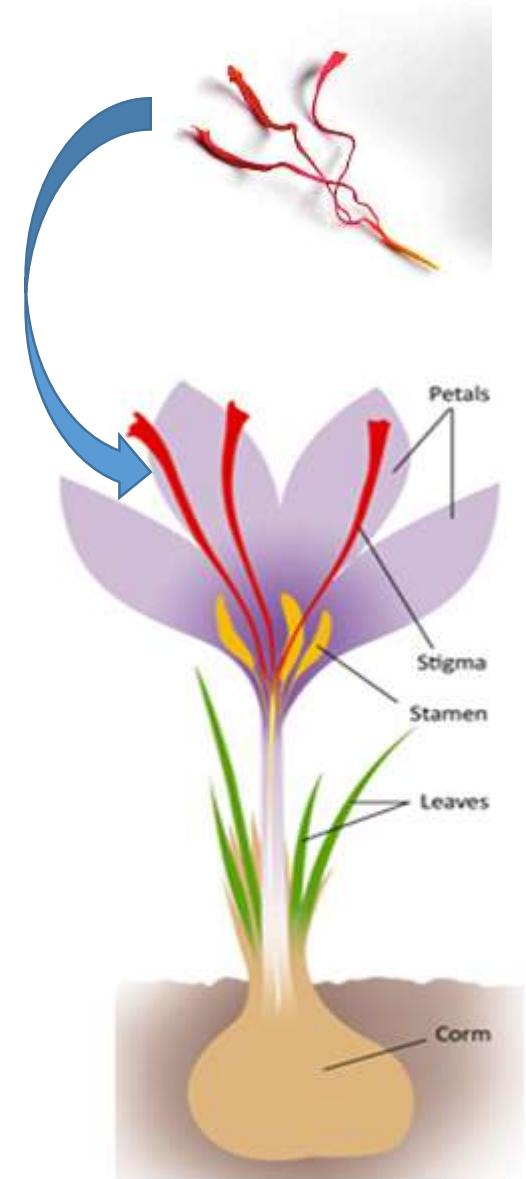
Saffron is the dry stigmas of *Crocus sativus* L flowers.



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.

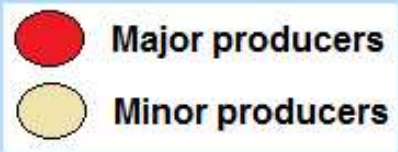


First Saffron Farm: 3,500 years ago (Mesopotamia)

50,000 years old depiction in Iran

Grown by Penn.
Dutch as early as
1700s

Spain
Morocco
Italy
Greece
Iran
India





Imported Saffron:

~23 tons in 2013!

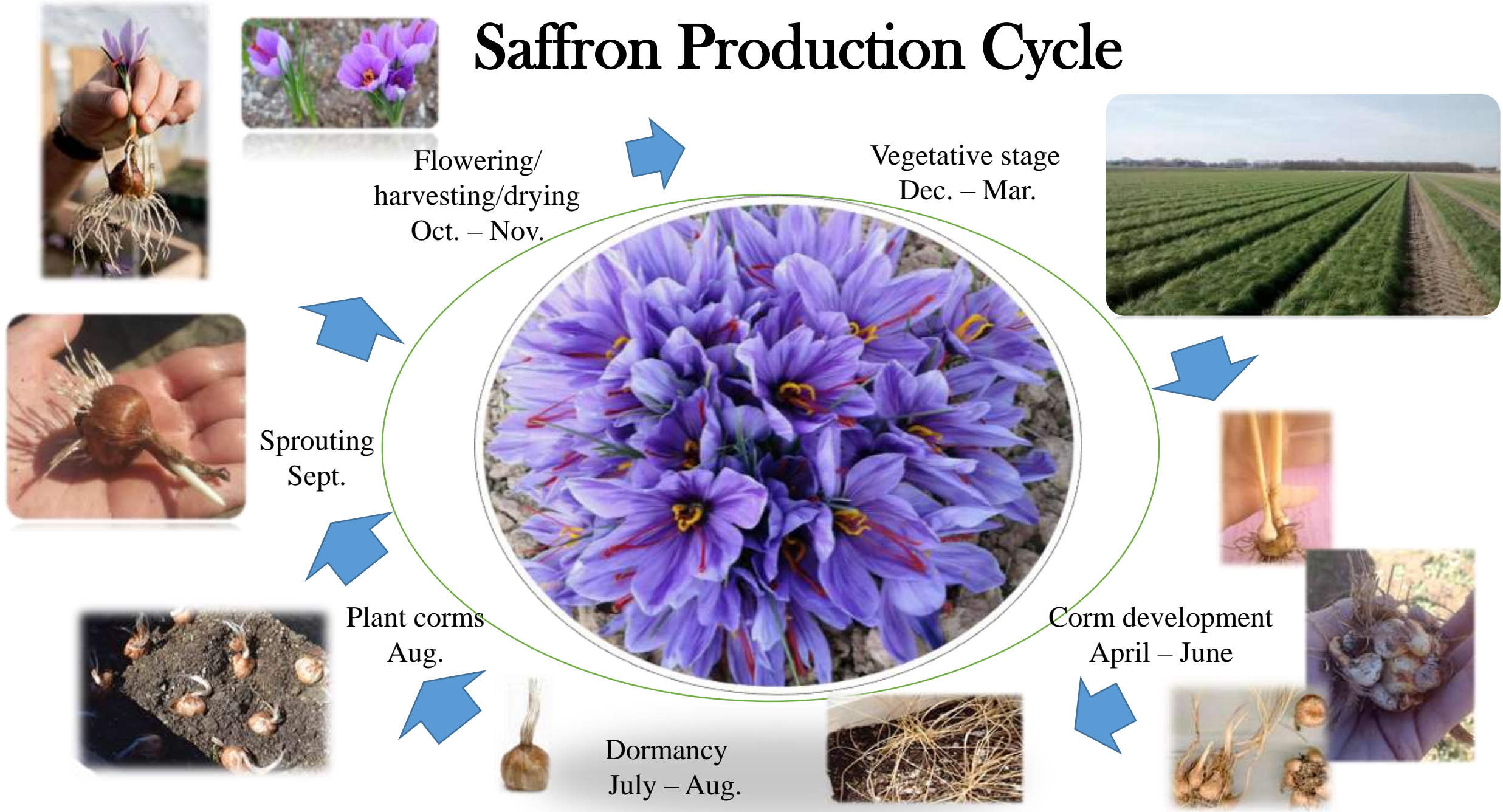
~46 tons in 2016!

~60 tons in 2018!

~??? tons in 2025!



Saffron Production Cycle



Products

???



Petals

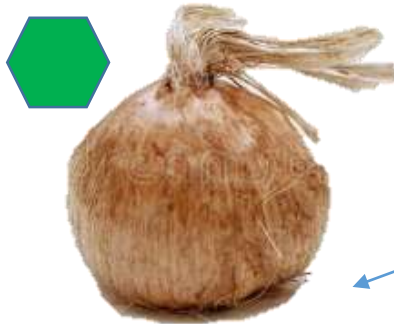
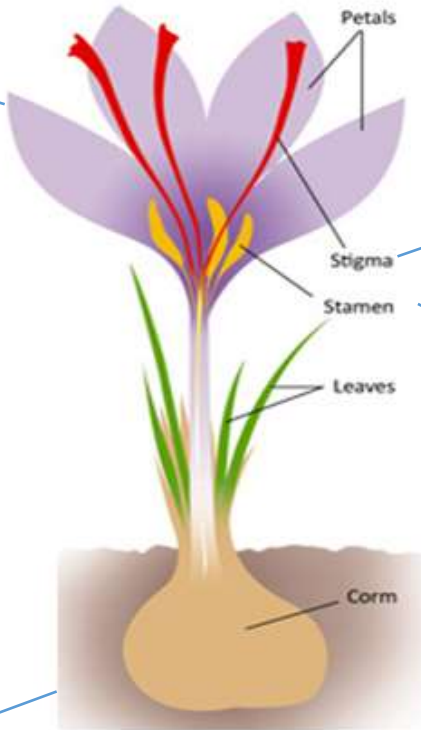


Stigmas



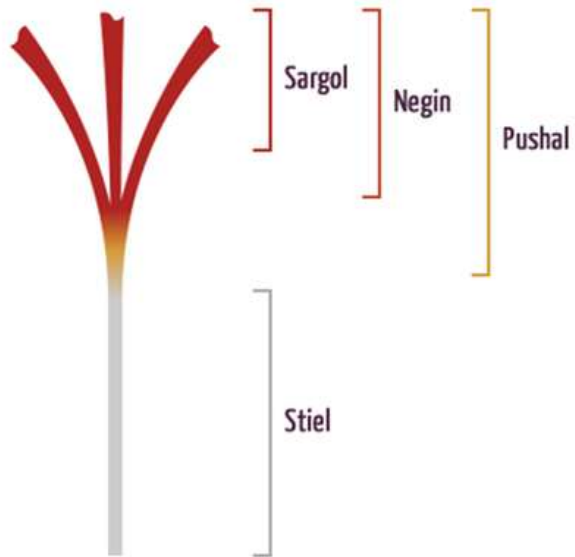
Stamens

???

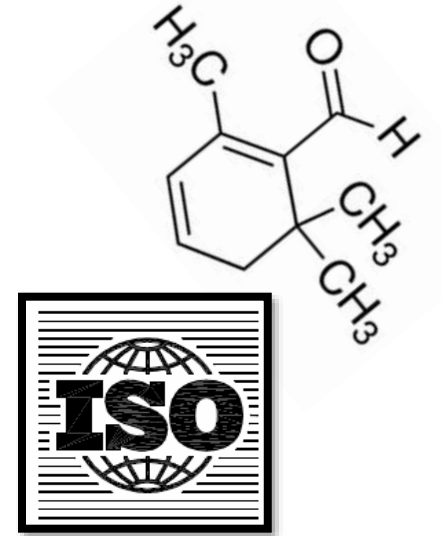


Corms

Saffron Quality



Crocin: Imparts the color
Picrocrocin: Imparts the unique flavor
Safranal: Imparts the aroma



All that Glitters is NOT Gold!

Saffron is the most frequently adulterated spice in the world.

- “Mexican Saffron” is not the real thing.
- It is safflower (*Carthamus tinctorius*), a frequent filler or fraudulent product.





Thanks for your interest



The North American Center for
Saffron Research & Development

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

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Saffron at Cobble Creek Nursery

Monkton, VT

Coldhardiness Zone 4b (Av. Min temp: -25 to -20 °F)

Patti and John Padua

Wholesale growers of trees and shrubs

<https://greenworksvermont.org/members/cobble-creek-nursery/>





Planting

- Purchased and planted 2,500 corms
August 2017



Planting

- Planted two 100-foot long 3 ft wide beds, with a 1.5 ft side aisle between beds
- Beds were slightly raised because soil was a bit heavy
- Planted corms 6 inches deep, 6 inches apart

Planting

- Mulched with wood chips between the beds, with a 1.5 ft side aisle between beds
- Put netting over the rows for rabbit control in the first year



Weed Management: Tools of the Trade



Harvest Time!



- Start mid-October
- End mid-November

- It is best to pick the flowers in the morning
- Best before the flower is totally opened up



One Day's Harvest

- Don't pile up the flowers too deeply in the basket or tray
- Protect them from the sun



Post Harvest Handling

The red stigma is what we're after!



- Lots of time sitting and separating
- Stigmas are put on trays lined with parchment paper
- Dried in a food dehydrator



Check out the video at:

<https://www.youtube.com/watch?v=Mw7Opz1hR0s&feature=youtu.be>

The Fruits of our Labors



We average a yield of 90-100 grams/year

Pure Vermont Grown Saffron!

Winter Care

- Keep an eye out for moles and voles



Summer Weed Management



- Covered beds with a porous ground cover to suppress weeds
- Cover beds in mid-June when corms go dormant
- Remove in late-September before corms begin to grow



Current and Future Directions

- Taking a tip from Arash, we augered the holes for planting this year which made it easier to plant!

Golden Thread Farm

Stowe, Vermont

<https://goldenthreadfarm.com/>







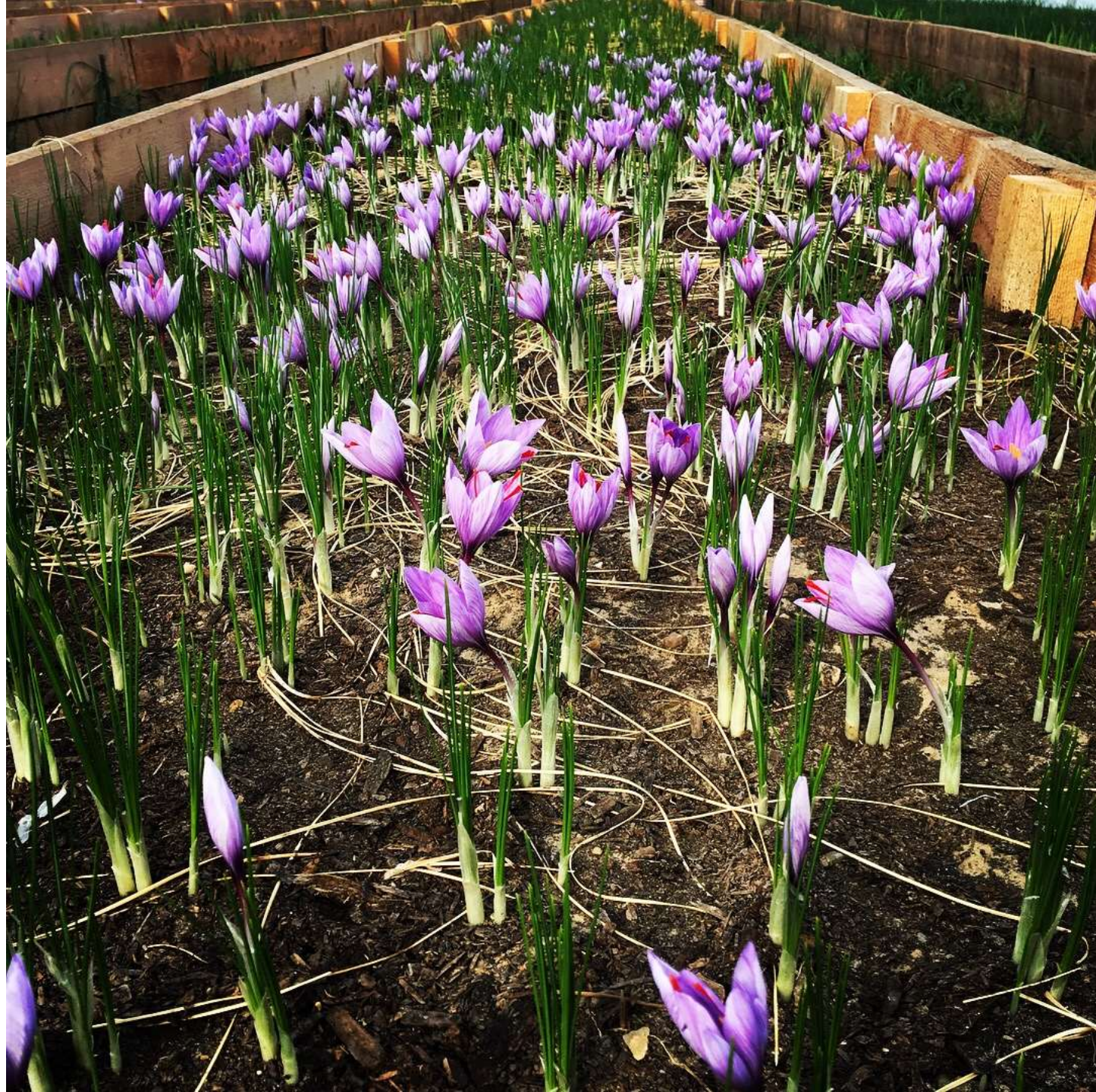
























Question Time!