

#### **ROCO Saffron**



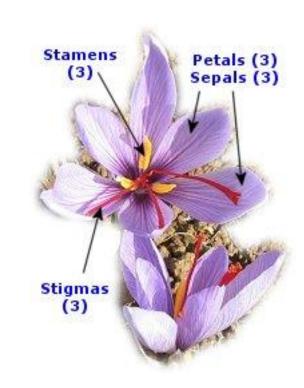
- 4 Generations of Exporting Finest quality flower bulbs worldwide;
- Expertise on Saffron Bulbs (Crocus Sativus);
- Roco Saffron currently contracts approximately 30 Acres of Saffron fields in the Netherlands;
- Fresh cultivation and pre-treated for excellence Saffron performance;
- We don't pick the flowers!







- A delicate highly valued spice, with very interesting medical properties, prescribed in homeopathy
- Saffron provides taste and is a powerful dye
- It is a corm planted at 15-20cm (6-8") depth, multiplying yearly and producing new corms
- Crocus Sativus is a sterile plant, therefore for over 3000 years pure
- Crocus Sativus has a reversed vegetation cycle, leaves come out in September and the plant flowers in October, then dries up in May-June next year
- Saffron flower is composed of 6 purple petals, 3 golden yellow stamens and one red pistil.
- It is this pistil made up of 3 stigmas which when dried up gives the spice saffron



## Why grow Crocus Sativus for Saffron?



- A beautiful flower, creating a beautiful & healthy spice
- Saffron the most expensive spice there is, high value yield
  - Accessible, easy to grow & biologically
  - Very nice family business
  - Low volume yield, high monetary value, low investment required
  - When stored well, Saffron may be kept for many years & even decades
  - Saffron keeps value when stored well, it may offer a way of saving

## How to grow Saffron? 1/2



- Seek well drained soil, heavy clay must be avoided, pH 5-8
- Saffron must be in a sunny place, especially in autumn during flowering
- Prepare the ground by tilling or ploughing (about 20 cm, 8 Inches) and add some compost or manure. If nitrogenous fertilizer is used it may be applied after planting on the surface.
- Plant in rows or beds
- Crocus Sativus corms may be planted 15-20 cm(6-8") deep, with 10-15 cm (4-6")gap between, from July till mid September as 6-7 year crop
  - If frost applies, deeper is better for frost protection
  - crop will move upward over the years, new corms grow on old corms
- Keep the ground weed free; especially after planting
- Keep soil moist, water if dry in September





## How to grow Saffron? 2/2



- Flowering during October month
- Pick and collect in early morning when flower is still closed
  - Try to pick before flowers open to preserve quality
- Picking the stems at the kitchen table
- Drying to obtain marketable product
- Vegetative development during winter and spring
- Provide water for vital corms producing sufficient flowers
- Leaves dry out in May
- Every 5 to 6 years dig up and replant corms





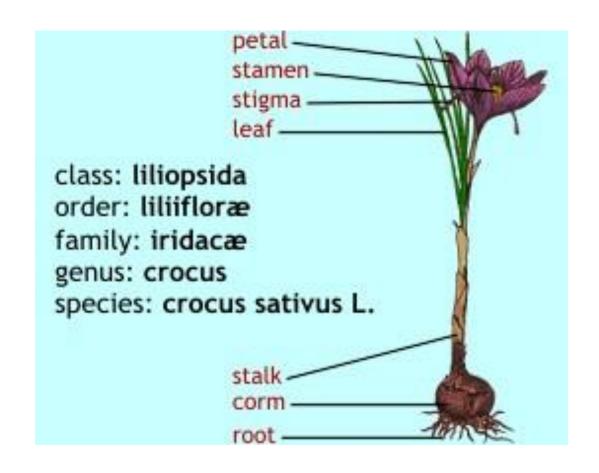




- Crocus sativus is known for its heat and draught resistance and survives extreme climates, however optimal growing conditions provide optimal production and typically to little water is provided in spring.
- Water requirement in September / October will be limited, keep soil at a decent moisture level. The corm will sprout at its own power, not much water will be required here.
- In spring the growth of the leaves will start, March and mainly April and May the crop will require 20-30 mm per week minimal for optimal new corm production.
- Sprinklers are preferred, drip irrigation is in certain areas widely available, this works also. Floating is the last option of choice.









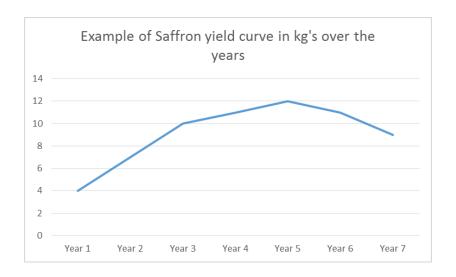
### Precautions - don't worry it's an easy crop

- Predators: wood mice and voles are fond of the corms in winter as well summer. Destroy their tunnels and put traps to limit their number. Rabbits are keen on the leaves and flowers, they may be stopped by a fence.
- Avoiding diseases: by good quality well drained soil
  - Crocus Sativus is not vulnerable for fungus on leaves, virus or lice
  - No chemicals required
- To keep crop healthy one should dig up corms every 6-7 years and replant them all in another fresh field.
- It is better not to use the same field again for 10 years.

#### **Financials**



- Approximately 60 corms per square meter (6 corms per square foot) 15 cm (6 Inches) deep
- Watering during spring when corms are formed
- Conservative estimate 6-10 kg Saffron per hectare (2.5 acres) @ 1500-3000 USD pkg (\*)
- Top growers may reach 15 kg Saffron per hectare
- Best is to plant every year a bit to assure continuous production. Production shows a curve over the years.



<sup>\*</sup> Subject world market situation

## Conclusion



- Red golden Saffron a high value spice
- Straightforward crop no chemicals required BIO
- Not vulnerable for leaf fungus, virus or lice
- Light work, suitable for the full family
- Demand guaranteed
- Saffron keeps value when stored well, it may offer a way of saving



## Fresh Crop



- We don't pick the flowers
- Fresh Crop and yearly cultivated bulbs
  - Improved Saffron Yields
  - Improves quality of the bulbs
- Ideal for a long term Saffron production, Growing Saffron is a long term investment
- Source of the Bulbs is the most important for getting started! What is the history of the Bulb?

## Small Bulb Size vs. Big Bulb Size



- Top size bulbs show better yields first year of harvest
- Re-production Capacity on the long term
- Available bulb sizes from 7/8, 8/9, 9/10 & 10/+ CM
- (Measured by the circumference of the bulb)







## Planting Saffron Bulbs



- Crop Rotation
- Inspection Dutch Department of Agriculture





## **Harvesting Saffron Bulbs**















## Harvesting Saffron Bulbs



- Harvesting the Saffron Bulbs
- Washing the bulbs
- Grading and Sorting
- Pre-Inspection by the Dutch Department of Agriculture
- Drying
- Pre-Treatment in our climate controlled cells
- Ready for Export



#### **Pre-Treatment of Crocus Sativus**



- Climate controlled cells
- Constant Air Movement for storage
- Drying
- Special Temperature treatment after harvesting
- Improved Saffron Yields!





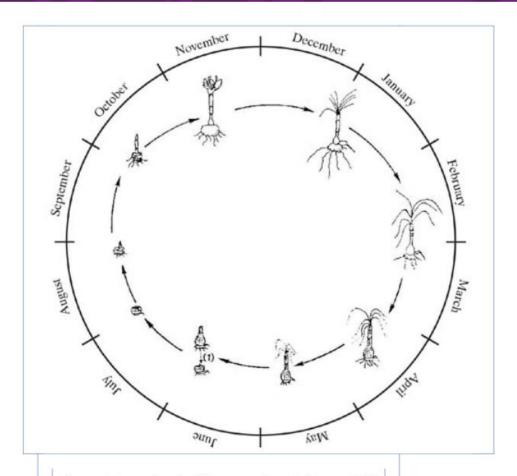
## The Fields in Holland











Picture 1. Annual cycle of Crocus sativus L. (Lopez, 1989)

## **Re-Production of Crocus Sativus**











- Climate controlled cells
- Special Temperature Treatment
- Australia, New Zealand, Chili, South Africa
- Shipping in January February

#### **Current Trends**



- BIO Premium on Organic Grown Saffron
- Co-operations
- Trademark (DOP), This can triple the price of Saffron!
- Increase side products of Saffron
- Increase demand for local grown Products













### **Side Products on Saffron**

















- Saffron essentially contains three active ingredients:
  - crocin, which determines the intensity of the colour,
  - picrocrocin, which determines the power of the flavour,
  - safranal, which determines the strength of the aroma.





## Some brands Roco Saffron supplies

















## **Industries using Saffron**



- Food ingredient industry for coloring
- Flavor and fragrance industry
- Oleoresin industry
- Pharma and Homeopathic industry
- 80-90% used for culinary use

#### Perfumes and Colognes With Saffron







Samad Al Qurashi



Samad Al Qurashi



Roberto Cavalli Gold Edition Roberto Cavalli





Zafferano Tesori d'Oriente



Durga



Joop! Homme Sexy In Pink Joop!





Alchemy



Yaguareté Fueguia 1833



Makkeah Majid Muzaffar

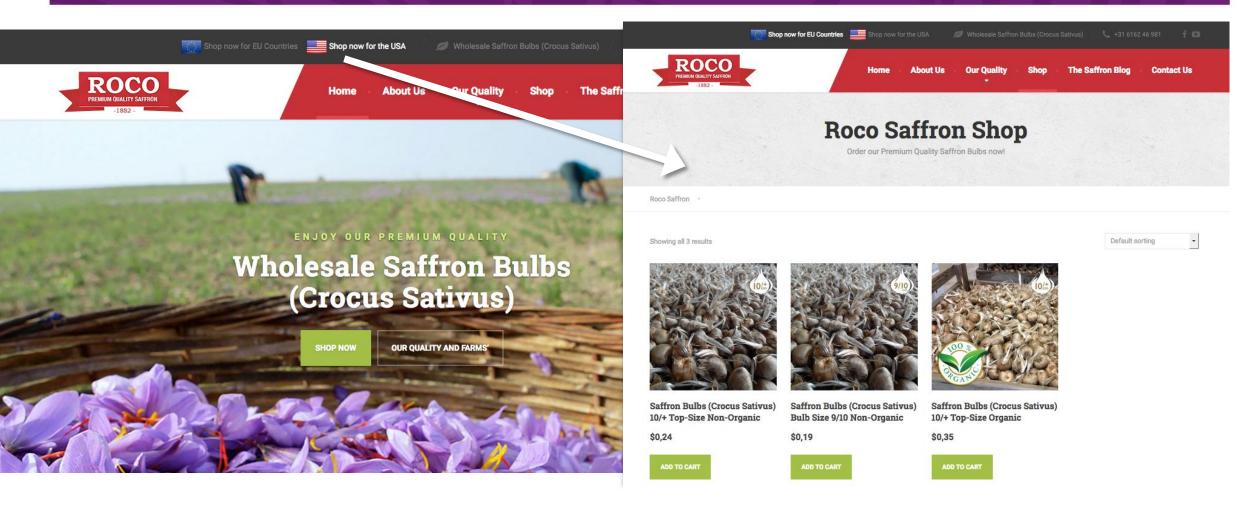




- Currently cultivated more or less intense in:
  - Iran, India, Greece, Spain, Italy, Turkey, France, Switzerland, Israel, Pakistan, Azerbaijan, China, Egypt, Japan, Afgananistan, Iraq the US & Canada
- World production estimated abound 205 Metric tons per annum
- Iran growns more then 80.000 hectares, exporting 137 metric ton of saffron (parvis et al 2004)
- Saffron market is not transparent and different origins and quality have different prices. Currently wholesale market is said to be between 1600 and 2500 Euro per kg. Farmers in Italy make Euro 20.000 on a kg basis by selling with provernance.

## Reserve your bulbs on time!







## 5% Discount for early pre-orders

# DISCOUNT CODE: SATIVUS2018