



## Harvesting and Processing Saffron Flowers

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Saffron, *Crocus sativus*, is a fall-blooming crocus that generally flowers from October – November. First of all, the flower is made up of the three parts that must be separated before drying: the red threads (stigmas), yellow center (stamen), and purple petals. Each of these parts may have monetary value. The stigmas are the saffron, the stamens and petals are sometimes used as a dye. Growers may want to dry all of the parts, or just the stigmas and stamens, which have the highest value. Picking the flowers and separating them is the first step of the harvesting process, and requires special handling to maximize on time and quality.

**At what stage should the flowers be picked?** It is generally recommended to pick flowers in when the flower is fully elongated and just as they are beginning to open up (Fig. 1). If you pick them when the flowers are still closed and short, the stigmas may not have time to fully develop, and will not be as long. Considering that each stigma weighs a fraction of an ounce, length matters. If you wait until the flower has wilted, it is harder to pick them, or the stigmas shrivel up or get dirty.

**When should you pick the flowers?** It is generally recommended to pick flowers in the morning. In Iran they prefer to pick them before the sun comes up. This may be partly because the laborers want to be out of the field when it gets too hot. It also may be because exposure to the sun degrades the quality of the flower. In New England sometimes we can have heavy dew, rain, or even snow while the flowers are blooming (Fig. 2). Therefore, it may be best to wait a few hours until the flower is fully dry before picking them. If it is raining, you may want to wait a day until the rain stops. Early in the flowering season, only a few flowers may be ready to harvest. It is possible to pick every other day without reducing quality. Generally, it is best not to delay flower picking more than 2-3 days.



**Fig. 1.** Saffron flowers at different stages of development. **Yellow arrow:** flower is not yet open and not ready to pick; **Red arrows:** flower is just opening and is ready to pick. **Blue arrows:** flowers are wilted and should have been harvested sooner.



**Fig. 2.** Saffron crocuses in the snow.



**Fig. 3.** Flower picking in Iran.

**How should you handle the flowers after they are picked?** It is best to place the flowers after you pick them on a tray or into a wide basket (Fig. 3). It is best not to pile them up too deeply because the weight of the flowers on top will mash down the flowers below. Also condensation may form around the flowers, which is not good for the saffron.

**When should you process the flowers?** Separation of the stigmas from the petals and stamens should be done as soon after picking as possible. When the flowers begin to get limp

or wilt, it is harder to pick out the stigmas from the other parts. Most people pick the flowers, bring them inside and then separate them. However, a few pick the stigmas out of the flowers in the field with tweezers and leave the other bits (Fig. 4). That seems like more bending over, but if you only want the stigmas, it might be quicker. If you aren't able to process the flowers immediately after harvesting, you should spread the flowers out on a paper towel on a tray, and store them in the refrigerator.



**Fig. 4.** Harvesting stigmas in the field.



**The fruits of our labors!**

The information provided above is based on our experiences over the past three years, and is considered a work in progress. As our research advances, we may develop other suggested methods that are more effective, time efficient and ensure high quality saffron. We hope that growers throughout North America and beyond will share their knowledge so we can continue to improve on saffron production. This will enhance the quality of the product offered on the market.

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