

Saffron Corm Harvesting

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In the Northern Hemisphere, saffron corms go into dormancy by June or mid-July in most years, though it is weather dependent (Fig. 1). In years with warm, dry springs, or when corms are grown in high tunnels with limited irrigation, corms may reach dormancy earlier. It is safe to assume corms are dormant when the green leaves have dried up and turned yellow or brown. When beginning growers see the saffron leaves shriveling up in the spring, they sometimes become concerned that the corms have died. In fact, this is a natural process. While in dormancy, which lasts until mid-late August, the new corms stop growing. This is a good time to harvest corms for selling or replanting. In the previous fall, the parent corm germinated, produced leaves and potentially flowered. Over the winter and spring that parent corm produced secondary corms, and then shriveled up and died, leaving the secondary corms to provide next year's crop (Fig. 2). Each year the clump of corms gets denser. The secondary corms are produced on top of the parent corm, bringing them closer to the soil surface each year, which can result in corm damage or death in areas with cold winter soil temperatures. Therefore, digging up a saffron bed after 4-5 years is generally recommended. Large commercial saffron corm producers harvest corms with special equipment (Fig. 3), whereas smaller growers can harvest their corms by hand.



Fig. 1. Dormant corms after summer

Below are corm harvesting instructions. You can purchase a soil sieve or make your own. Designs for two simple hand-held sieves are provided.

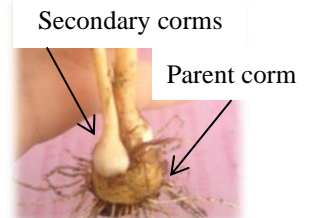


Fig. 2. Actively growing corms.

Tools needed. Round-headed shovel, soil/compost sieve, wheelbarrow, corm sizing template.

1. With a round-headed shovel, carefully slice off the upper 3-4 inch layer of soil, taking care not to disturb the corms, and place to the side of the bed. You should see the brownish leaf tips, but not the corms (Fig. 4).
2. Gently shovel deeper in the bed to unearth corms and soil, and place 1-2 shovel-fulls into the sieve. Take care not to slice the corms in half because that will open the corm to disease.
3. Shake the sieve gently until the soil is removed from the corms (Fig. 5). You may want to do this over a wheelbarrow so you can easily move the discarded soil away.



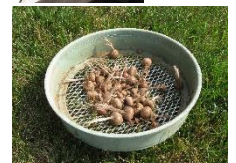
Fig. 3. Mechanized corm harvesting in Holland.



Fig. 4. Left: Slicing the upper layer of soil; right: brown leaf tips (indicated with red arrows).



Fig. 5. Separating corms with soil sieves.



4. Remove the corms and sort by size based on the circumference in centimeters (Fig. 6). The industry uses the metric system.
5. The shriveled parent corm may still be attached at the bottom of the secondary corm. It is not necessary to remove it (Fig. 7). Corms that are damaged during harvesting (Fig. 7) or are soft and show signs of rot or disease should be discarded away from the growing bed. Do not put them in the compost.
6. Dry and store corms at room temperature (~75 °F (~24 °C)). Do not remove the brown husk around the corm. That provides protection from disease infection. Beware of mice and rodents who can feed on corms during drying or storage. Corms can be planted as soon as they are fully dry.
7. In general, corms that are greater than 8 cm in circumference are suitable for planting out, though they may not flower in the first year. Corms that are 6-7 cm or less can be planted densely for harvesting in future years.



Fig. 6. Corm sizing.



Fig. 7. Harvested secondary corms, yellow arrows indicate dead parent corm; red arrow shows a corm damaged during harvesting.

Below are dimensions for two styles of saffron corm harvesting sieves. Adapt the dimensions to meet your needs. Hardware cloth with ½ inch mesh was used. We tested a 1.0-inch mesh size and found it was too big and ¼ inch mesh was too small.



One-person Sieve



Final dimensions and construction details. 18.5 inches square, 3.5 inches tall. Corners reinforced with 2-inch right angle brackets. Hardware cloth (½ inch mesh) is held in place with staples.



Two-person Sieve

Final dimensions and construction details. Wooden frame: 36 inches long, 21.5 inches wide and 5.5 inches tall. Corners reinforced with 3-inch right angle brackets. Hardware cloth (½ inch mesh) is held in place with staples. Handles: 61 inches long (with the end caps): ¾-inch PVC pipe (schedule 40, 480 PSI grade), held on with three 2-hole pipe straps (¾ inch).



These are just two sieve designs. We know there are many other options. Feel free to share your designs with us.

For more information:
<http://www.uvm.edu/~Saffron/>

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