

PICKING PEPPERS PERENNIALLY

By Stuart McMillan



The first time I saw it, I was amazed. It was not a pepper plant. It could only be described as a pepper bush. The plant was 3½-ft (1-m) wide with fat woody stems, abundant foliage, and a heavy crop of perfect orange habanero peppers. It was a two-year-old plant growing in a fifteen-gallon pot.

Years earlier, I had acquired some old seeds that I was told were from a Peruvian Tree Pepper, but later found out were *Capsicum pubescens* (called rocoto in Argentina). The seeds were small and black, undoubtedly the most unusual pepper seeds I had ever seen. I managed to coax two of them to germinate. I grew one of them for 24 months by bringing the potted plant in over winter and taking it outside the following spring. I brought it inside again in the fall.

The first winter it looked sad, but over the second winter, it looked even worse. To top it all off, the plant became infested with aphids and spider mites. I tried (unsuccessfully) to eliminate the problem—first with homemade garlic and cayenne solution and then with pyrethrum spray. In the end, the only thing I killed was the plant and not the insects. Since then, I haven't really thought about perennial peppers until I saw that habanero. Then I knew I had to try to turn an annual pepper into a perennial.

While peppers are treated as annuals in Canada, they frequently grow beyond one season in the tropics. To make things more confusing, not all



Jimmy Nardello, a sweet banana pepper, ripens in the September sun.

Photo: K. Wright

Your pick of peppers

- Capsicum annuum* – sweet green/red/yellow bell, jalapeño, ancho, chilli
- C. frutescens* – tabasco, piri piri
- C. chinense* – habanero, scotch bonnet
- C. baccatum* – aji or Peruvian hot
- C. pubescens* – rocoto (locoto, canario, peron)

peppers are the same species. Depending who you ask, there are 20–27 different species of peppers in the genus *Capsicum*, but only five are cultivated to any extent. Of those five, *C. pubescens*, *C. frutescens*, *C. chinense* and *C. baccatum* are true perennials unless weather kills them off. Only *C. annuum*, which produces bell peppers among others, is considered an annual.

All peppers are native to South and Central America, but have been adapted to every part of the world over the past five hundred years. The species, and even varieties within a species, vary in their tolerance to cold weather but none has foliage that can withstand a hard frost.



Bell peppers, C. annuum, are less suitable for overwintering than other Capsicum species.

For some growers, the first perennial pepper occurs by accident. Perhaps they left a plant in the poly-tunnel or hoop house just to see what would happen, and then found it shooting out new growth the next spring. Or, they brought a potted plant inside before the first frost was expected to allow it to finish fruiting, but then found the plant kept going all winter long.

As with my first, my second attempt to overwinter a pepper had mixed results. It was a Thai Chilli (*C. annuum*) from seed I had saved myself. The plant was in a one-gallon pot, with fruits in formation but still flowering. It was not a runt, but neither was it a big robust plant. From October to December, the plant kept growing and I kept picking fruits.

In January, everything started to change. The plant hadn't been maintained and watered in late December as regularly as it should have been. The leaves started to get limp, signs of fungal infection

appeared, and then aphids arrived. I thought that I could control the aphids with strong water, but it only served to lower the aphid numbers temporarily. Then leaves started falling off. Since I wanted the plant to enter a state of dormancy or reduced growth, I did not want to provide nutrients or exposure to strong light, or stimulate growth in any way. I theorized that if I allowed it to go dormant, the aphids would die, and then in spring it would regenerate.

I called my friend with the habanero that got the whole thing started. He explained his habanero plant had been gnawed by puppies down to a stump, after which it had been neglected and left in a cool corner of the greenhouse, and the plant still sprung back into life the following spring. By the end of January my plant had entered what I hoped was a state of dormancy, however, it never revived in spring when I put it out with hope and eagerness.

Without a doubt, the plant was dead; the experiment failed.

Overwintering options

There are two basic schools of thought when it comes to overwintering peppers: 1) keep them protected and actively growing, or 2) allow the plants to die back to the roots and regenerate the following season.

Protecting the growing plant

The first method requires shielding the plant from freezing temperatures. Rocoto peppers are said to withstand a few degrees below freezing, but I have not verified this. For most Canadian growers, avoiding freezing temperatures means potted plants brought indoors. For a lucky few in warmer regions, plants can be overwintered in greenhouses or cold frames. This method also faces the challenge of a wide array of pests and diseases, as I found out. Some types of peppers, such as *C. pubescens* and *C. chinense* may be more suited to this method.

The smaller, hotter peppers are more suitable for overwintering than large sweet peppers.

Dave Hanson is the owner and co-manager of Sage Garden Herbs in frosty Winnipeg, Manitoba. His seed catalogue specifically mentions pepper varieties that are suited to overwintering. He has found that the smaller, hotter peppers are more suitable for overwintering than large sweet peppers. Many of the ornamental

peppers also overwinter well.

Hanson suggests that growers start by overwintering container-grown plants. This way, the plant is spared the shock of being dug up and potted, as well as the stress of moving to an indoor environment. He recommends providing lots of light, either a warm sunny window or full spectrum lighting. A warm location is key since he has had plants freeze and die even though they were near a sunny (but chilly) window.

A logical first step is to ensure the plants chosen to come inside are healthy and free from pests.

Regular rinsing of the leaves is recommended. Rinsing washes off small aphids and spores, and removes dust that inhibits respiration. As well, this regular mild disturbance keeps the plant growing actively and prevents it from entering dormancy. Picking the fruits as they ripen keeps the plant active as well.

Hanson has found that monthly fertilizing with a balanced organic liquid fertilizer is key to good health. With proper fertility, the plants start rejuvenating as light levels increase in January and February. The alternative would be to replot in the fall and incorporate sufficient compost to provide enough fertility over the winter. Repotting should occur in late winter a couple of months before the plants are ready to go outside. This allows the plant to recover from transplanting shock, resume regular growth, and be

fully prepared to take advantage of the warm sunny outdoors.

Increasing the pot size by roughly two inches (5 cm) with each repotting is recommended.



He suggests starting with a 6–8 inch (15–20 cm) pot; this allows a plant to be repotted a number of times without becoming an unruly bush. This size is also large enough to allow a plant to be productive and healthy for overwintering. If a plant is still growing well and one cannot increase the pot size any further, root pruning and repotting in the same pot also works.

Dieback and regenerate

The second method of overwintering involves protecting a pepper plant from the arrival of cold weather as long as possible. Once the hard frost comes, many growers prune as much as 50–70% of the plant. A thick mulch will insulate the ground and limit the freezing of the roots. Do whatever you can to keep the plant as warm as possible. Mulch should be used if the temperature plunges. In areas where the winter temperatures generally stay above -10°C , it is possible to keep many types of peppers growing in the ground for a few years.

All plants die eventually. Rocoto peppers are known to live more than ten years in more southerly climates. However, most types of peppers don't live beyond

three to five years and are considered to be short-lived perennials. It does seem that, in general, *C. annuum* is trickier to overwinter successfully, but it is possible. Growers can experiment with the different types to see which is best suited to their region and which strategy works best for them.

In every mistake, something can be learned. This winter I will try to keep the soil moist and prevent the dry indoor environment from sucking out the moisture. I will try to rinse the foliage regularly along with light fertilization.

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The only varieties I am bringing inside this winter are both *C. annuum* (Gaza Finger of Fire and Black Hungarian). Perhaps if this winter's experiment doesn't work, a new species is required and I should stick to the peppers that are regularly considered perennials. Regardless, I know I am not content to go back to treating peppers as annuals.

Stuart McMillan, a contributing editor to TCOG, works as an organic inspector in the eastern prairies. He is available for comments and questions by email at organicsp@gmail.com.