The Trials of Growing Corn

By Susan Camp

"I'm a terrible corn grower. I just can't raise corn. Something always happens."

Jim has a long, sad history with corn disasters. When he built his raised beds after he retired, he looked forward to planting corn and roasting sweet, juicy ears on the grill with a little olive oil and salt.

The deer got the first crop, leaving nothing for us to enjoy. Jim decided to enclose the beds in a high fence. With the help of a friend, he built a beautiful compound with an entry at either end.

Next came the crows, which ate every developing kernel and sampled the tomatoes and blackberries, too. That summer, we discovered black netting, and Jim ordered shiny foil pinwheels that we stapled to the tops of the fenceposts. I don't know if the pinwheels scared the crows away, but they were colorful and gave the garden a carnival ambiance.

Somewhere along the way, rabbits discovered that they could wiggle through the wire fencing and jump into the beds to nibble on the corn shoots, so Jim added rabbit wire all the way around.

In the meantime, the rest of the garden thrived every year, and we enjoyed fresh tomatoes, cucumbers, squash, zucchini, onions, and okra every summer, and Jim forgot about corn. Until this summer, when he decided to try again.

The corn appeared to be growing well until last week when he discovered the damage to the ears. Something was eating the kernels. Since I am not a vegetable gardener, my default response to vegetation damage is usually, "It must be a borer," so I turned to Google.

Little did I know how many species of borers and other insect pests attack corn crops. When I saw the picture Jim had taken of the critter, I realized that this worm had not bored into the stalk, but had actually set up housekeeping in the ear, safe and snug inside the husk.

The worm in the photo is the corn earworm, the larva of the corn earworm moth (Helicoverpa zea), a significant corn crop pest. It isn't always easy to identify the corn earworm or the corn earworm moth because their colors can vary. The adult corn earworm moth is about 1 ¼ to 1 ¾ inches long and may be tawny brown to dark green with brown scalloped lines at the bottoms of the wings and dark lines and dots on the forewings. The caterpillar can sport various colors, too, from shades of brown to orange or green with colorful black, yellow, or pink markings and a rough, spiny texture. It reaches 1 ¾ inches in length in its final developmental stage, or instar, before pupating.

The adult female moth feeds on nectar at night and lays her eggs in the cornsilk, where they appear as pale green, ridged discs that change to yellowish, then gray before hatching.

During the first instar, the corn earworm will feed on the silk, possibly interfering with pollination, moving on to forage in the kernels at the ear tip. Most of the time, only one larva is found in an ear because the corn earworm is cannibalistic and will consume interlopers.

After about 4 weeks, the caterpillar drops to the ground, burrowing 2 to 4 inches underground to overwinter.

Unfortunately, the corn earworm, also called the tomato fruitworm and cotton bollworm, will also invade tomatoes, beans, peppers, and almost any other vegetable in the garden. It will also damage cotton, sorghum, peanuts, soybeans, and various ornamentals.

Prevention and control include selecting sweet corn cultivars that have ear tips tightly covered by husks. Use of Bacillus thuringiensis (Bt) and introduction of parasitic Trichogramma wasps are biological controls for corn earworm. Till the soil in the fall and spring to kill pupae.

Find more information in VCE Publication 3103-1537 (ENTO-600NP) “Corn Earworm on Vegetables”; several NC State Extension publications under “Corn Earworm”; and the University of Maryland Extension publication “Corn Earworm on Vegetables.”