GEORGESON BOTANICAL GARDEN

UNIVERSITY OF ALASKA FAIRBANKS

University of Alaska Fairbanks
School of Natural Resources and Extension

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Weeds in the Garden

by
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During the summer months, the one thing we always need help with is weeding. Some volunteers love weeding, and other people are overwhelmed by how fast weeds grow and how many generations appear in our short growing season. We use two approaches to weed control: hand weeding and herbicides. Although we would like to eliminate all chemical pest control, it is not possible without a huge army of volunteers working full time to keep ahead of the fast-growing weeds. We spray for general weed control with glyphosate. It works well as long as we spray every time anything green appears. Glyphosate kills all actively growing tissues, and once the leaves start opening on the perennials, it was hard to prevent damage to our plants by airborne spray drift. We also put trifluralin granules on the growing beds to keep new weed seeds from germinating. It works quite well for the first three or four weeks in spring. Grant says it cuts weeding time in half. Then manual weeding is necessary to keep things under control.

Picture of Knotweed from https://gobotany.newenglandwild.org

Knotweed (*Polygonum aviculare*)

This annual weed is easy to spot. The reddish plant usually hugs the ground, and the stems radiate outward like the spokes of a wheel. When it is small, the seedlings are easy to pull out. As it grows, it seems to dig in. The roots are extensive and hold onto the soil tenaciously. It frequents the walkways around the garden and invades newly tilled soils. My knuckles get sore from the rocks when I work on pulling it out from around the entrance kiosk.

Chickweed (*Stellaria media*)

Chickweed

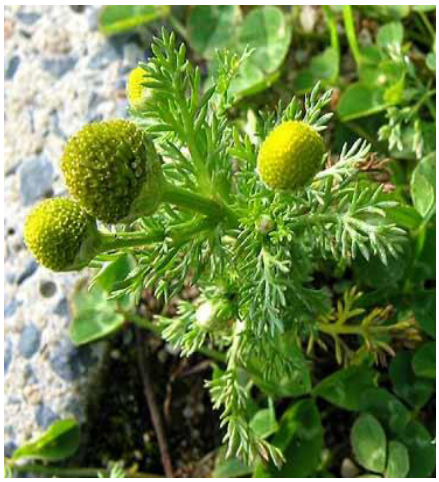
This annual weed is no stranger to most gardeners. It sets seed prolifically, and can take over a garden in masses of light green leaves and succulent stems. It does not grow in areas where people walk, so it is usually in the plant beds or just at the walkway edges. Chickweed does especially well in the vegetable plots and is extremely difficult to remove from seedling beds such as the baby greens plots last year. Unfortunately, the seeds can last for years, so once chickweed gets started, it's there seemingly forever!

Several years ago we conducted experiments with annual wildflower seed mixes that were either direct seeded into the garden or transplanted as clumps of mixed wildflower seedlings. We found out quickly that chickweed would take up residence beneath the taller wildflowers and happily dump seeds without us knowing they were even there! The problem became so bad, we had to abandon the wildflower experiments. The only control in planted beds is hand weeding. Connoisseurs of wild greens will also point out that the young seedlings are edible and delicious, but there simply is not a salad bowl big enough to handle all the chickweed in our garden!

Shepherd's Purse (*Capsella bursa-pastoris*)

This winter and summer annual weed is second only to grass as a problem in the perennial garden. The little heart-shaped seed pods are so distinctive, it is easy to identify. Trifluralin does not kill germinating seeds of this plant, so we find this weed everywhere by the billions. Shepherd's purse is a medicinal herb and I think we could probably harvest the world's supply of this weed in the Garden with not much trouble. The flat rosettes of leaves are hard to remove except by hoe. Once the flowering stems appear, they make hand pulling easier. But there are always so many of them!

Picture of Shepard's Purse courtesy of http://medicinalherbinfo.org



Picture of Pineappleweed courtesy of http://2.bp.blogspot.com

Pineappleweed (*Matricaria matricarioides*)

The sweet-smelling pineappleweed is an annual weed mostly of waste places and newly tilled soils. If a weed can be pleasant, I'd say this is the one to have in the garden because it smells so nice. Many people harvest the flowers as a substitute in chamomile tea. It is most notorious for looking just like carrots when both are germinating in the garden. They are easy to pull by hand and to control with herbicides.

Volunteer Weeds

A weed is just a plant growing where we don't want it, and a plant that self propagates where we don't want it is a volunteer. Even though the shoofly plant is one of my favorites, it can sow itself all over the garden! Pansies, violas, nicotiana, calendula, onions, and shoofly plant can all provide interesting surprises in the garden or be a nuisance that needs to be pulled out. The easiest method of control is to prevent the seeds from forming and avoid tilling seed pods into the garden in fall.

Lambsquarter

Lambsquarter (*Chenopodium album*)

This annual weed grows to be a huge plant if left alone. It will also produce seeds on a tiny half-inch tall plant, so it needs constant attention. This plant has a survival instinct that rivals all others. Pull the plant out, leave it to wilt and die in the hot sun, and the very next day you will notice the leafy top bent toward the sky, and the roots bending into the soil. Surely they have nine lives! If picked early, the leaves make good salad greens. We have people who come to the Garden just to harvest them for that purpose. They are killed by Preen® and Roundup® and are easily weeded by hand when young. When they become woody miniature trees, Hercules may be needed to tug them out of the ground.

Grasses

We have several weedy perennial grasses in the garden. The most notable one is quackgrass (*Elytrigia repens*). It spreads by tough underground rhizomes and is difficult to eradicate. Some plots have been invaded by bromegrass (*Bromus inermis*) that was planted years ago as a hay crop. It, like quackgrass, spreads by rhizomes and is difficult to control. They can be distinguished easily when the plants bloom. Quackgrass flowers form straight, unbranched spikes, whereas bromegrass has open, droopy flowers. Neither can be eradicated by hand weeding alone. The perennial beds also are frequently invaded by lawn grasses (*Poa pratensis* and *Festuca rubra*) that grow into the beds beneath, and sometimes over, the plastic edging from the grassy walkways. These lawn invaders are usually dug out by hand because Roundup® will damage large patches of grass, even the grass in the walkways we want to keep. We have a mechanical edger to help limit the spread of these grasses beneath the plastic edging.

Picture of Dandelions courtesy of http://indianapublicmedia.org

Dandelions (*Taraxacum* sp.)

Last, but certainly not least, is the scourge of the perennial garden! A couple of years after the garden was begun, the cows were permanently removed from the lower pasture west of the garden below the railroad tracks. The following spring,

the pasture was brilliant gold with dandelions. The cheap gold was quickly followed by huge clouds of seeds that drifted and found a good home in the perennial trial plots. The effect was instantaneous – dandelions in every nook and cranny of our garden, and we have been fighting them ever since. It is really embarrassing when tourists tell you your giant dandelions rival the giant cabbages in size! Despite gallons of Roundup®, and massive digging by volunteers, we always seem to have mountains of dandelions in the garden. One year during a children's day event at the Garden, we held a contest to see which child could dig out the biggest dandelion root. The winner was 17 inches long. The children were excited with their efforts and ready to dig more! Now all we need to do is entice about 1000 children to keep the same level of excitement for about a week, and we might make a dent in the population.

The population became so bad a few years ago, an entomologist in our program actually discovered a fly that lays eggs in the dandelion flowers and prevents seeds from developing. We urged him to begin rearing flies in his research lab, to help us out, but to no avail. What makes dandelions worse is their ability to set seed without pollination. Seeds begin to develop almost as soon as the flowers is open, and they spread everywhere.

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