



Can you identify this plant?

Yes? Then you're probably wrong, because this is not what you're thinking; it is "potentilla recta," the sulfur cinquefoil—and this is bad, bad news.

What is it?

The sulfur cinquefoil is native to Eurasia, but it first appeared in Canada about a hundred years ago. From there it spread. It's not much of a problem in the east, but once it reached the high, dry plains, it blasted off. It is now a major problem plant in Montana and Idaho, and already has appeared in great quantities in northeastern Oregon.

Now, we're inundated with exotic plants that don't really belong in Oregon, but this one is particularly worthy of note for two reasons:

1. Sulfur cinquefoil is very aggressive. Once it gets established, it crowds out everything else. After a few years, you have a field of nothing but sulfur cinquefoil.

2. Sulfur cinquefoil is just getting a foothold in the Applegate area. If we wipe it out now, we can prevent this ugly weed from taking over.

Cinquefoil is so successful because it can tolerate a wide range of environments. I have found it in open pastures (grazing animals won't touch it because it contains tannin, which also is bad for the soil). I have found it hiding at the edge of bushes. I have found it close by a running creek. It seems especially fond of any place where wild strawberries grow (the two species are distantly related). There are only two places where I have never seen cinquefoil: (1) in wet or marshy soil and (2) on the floor of a well-established conifer forest.

A healthy, happy cinquefoil will get up to about 18 inches and its flower stalk can reach 24 inches. It has pale yellow flowers with five petals during its flowering season in June through August. Although the plant itself is hard to notice among all the grasses, those flowers are easy to see from 10 meters away.

Cinquefoil is a perennial; as it grows it stores energy in its root system. It propagates both through root growth and seed generation. In the fall the plant dies back but the roots remain alive. In early spring it sprouts again. If you want to kill the plant, you must kill the roots.

My nasty experience

BY CHRIS CRAWFORD

I did not realize it at first, but I had one of the earliest infestations of the sulfur cinquefoil weed in Jackson County. Official records show only one infestation of cinquefoil in south-central Oregon, in the northeast part of Jackson County. But when we moved into our new place in the Applegate in 1996, there already was an infestation—we just didn't realize what it was. By 1998, it had taken over an acre of land and I knew there was something wrong. I called at the Jackson County Agricultural Extension and left a message describing the weed, but nobody ever returned my call—they probably thought I was crazy because sulfur cinquefoil had never been reported within a hundred miles.

By 1999 I realized that I had to do something drastic, so I loaded up my backpack sprayer with a load of glyphosate (the trade name is "Roundup®") and went to work. I sprayed more than an acre of solid cinquefoil, but I did a rather rough-and-ready job of it. It seemed to kill off the stuff, so I left it at that.

But in 2000 it came back—nowhere near as strong as it had been, but there were still a lot of cinquefoil weeds. This time I pulled out the sprayer and hit each weed individually. That seemed to do the trick.

In 2001 I was suspicious, and started looking for cinquefoil in March. Sure enough, I found plenty of infant plants. The soil was soft from the rains, so I started pulling them out. Over the years, I have developed a method for quickly and effectively pulling out cinquefoil. I use a broad knife about two inches wide. You could use a narrow hand spade to do the same thing. I plunge the knife almost straight down into the soil about two inches away from the plant. When it has penetrated four inches or so, I flip the knife back, popping

up a divot containing most of the root mass. I work my fingers underneath the main root ball and pull it out.

If the cinquefoil you're attacking is a first-year seedling, you don't even need to pop the divot. Loosening the soil is enough to permit you to pull the plant up from the top and get the root out. However, if your target has already survived a year, the root mass will be much larger and you have to dig it out. With practice and soft soil, it's not so difficult.

However, that's not the end of your problems. Cinquefoil is smart enough to stagger its sprouting period over months. You can come through in March and wipe out everything, only to come back in April and find a new crop. Different plants will sprout at any time between March and July. That means that you have to keep coming back to the same area at least once a month.

The soil starts hardening in May, after which you must rely on herbicides to kill it off. What works? There have been large-scale tests by agronomists spraying entire areas. They have found picloram (sold as "Tordon®" or "Grazon™") to be at least three times more effective than glyphosate. I very much doubt that you have an infestation large enough to require area-wide spraying; you will probably get more done, using less herbicide, by spot spraying. At this point, I'd like to digress with a little lecture on herbicide effectiveness.

Why is this weed so persistent?

There are three possible explanations:

1. Cinquefoil seeds remain potent for many years and I'm fighting the newly germinated seeds. This can be only part of the answer, because when I dig up the weeds about 40% of them have extended root masses, meaning that

they germinated in previous years. The scientists say that cinquefoil seeds remain viable in the ground for up to four years. I think that's an average figure; I believe that some seeds remain viable for many more years.

2. My low-dose approach is stupid: it kills the plant above ground, but not the roots, so the plant comes back the next year. This is also only part of the answer, because I am seeing a steady decline in the number of plants, even in areas that I have marked off as poison only.

3. I miss some every year. This is likely; the plants can be hard to notice when you're marching along a grid.

What you should do

The most important thing is to keep your eyes open for sulfur cinquefoil. If you find any sulfur cinquefoil on your land, I suggest that you treat the infestation as a very serious situation. This stuff spreads fast; putting off an hour's work this year will only set you up for many hours of work next year. Dig it out or poison it as soon as possible. If you see one plant, examine closely all the ground within ten feet of it—there are probably more. Also, make a mental note of the location of every plant you find so that you can come back to that spot next year looking for new sprouts.

The good news is that you really can wipe out this species. I already have eliminated it from a number of locations on my land where it was just starting to get established. I discovered a small infestation on my neighbor's land about three years ago. With his permission, I have been patrolling those areas closely each year and this year I found only about a dozen plants. I believe that I will have eliminated the last of my cinquefoil in maybe five more years.

Chris Crawford, Applegate landowner
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Got starthistle?

BY BARBARA MUMBLO

It's that time of year when you start to notice star thistle's abundant yellow blossoms in the Applegate. On national forest lands in the Applegate (especially around Applegate Lake) you'll notice much less of this plant. This is due to all the hard work by the Jackson County Community Justice crews over the last 8 years. They have spent many hot days pulling and bagging yellow starthistle for the Forest Service in the Applegate and all their efforts are really proving worthwhile. Hopefully you don't have starthistle or (as many of you have told me) you've gotten rid of yours or are on the way to that goal. But there may be a few of you who still don't know what this plant is.

What is yellow starthistle?: Starthistle is that spiny yellow-flowering plant along roadsides and in dry open areas. It is a winter-hardy annual that normally begins growth in the fall but is most noticeable when blooming in July–September. It is a native of the Mediterranean region. It can cause "chewing" disease, a type of poisoning in horses that can cause paralysis of the esophagus.

Ways to prevent getting it:

Starthistle is often introduced by infested seed, soil, gravel, or hay/straw. Heavy equipment can bring it in from seeds or plants that are on the equipment. Infestations have been spread along roads by road maintenance activities when infested soil is moved from one location to another. Ask that equipment being used on your property is clean of soil and plants before being brought there and ask for noxious weed-free seed/materials. Oregon has started a certification process for noxious weed-free hay and straw.

There's no one easy way to get rid of this. The method you choose depends on your site and what you feel comfortable with. I think that hand pulling is the most effective method but is very time consuming. If the site is irrigated and other plants are growing you could probably out-compete the starthistle. If you want to use chemicals I suggest you use them when the plants are small and spot spray individual plants. Roundup will work and I hear a new chemical—Milestone—is effective.

If you've found a good method, let me know and I'll pass that information



Yellow starthistle (*Centaurea solstitialis*)

along. Give me a call at 899-3855 (Barb Mumblo).

We're lucky that yellow starthistle is our main noxious weed of concern. It really is easier to get rid of than some of the other noxious weeds out there.

To find out more about other weeds in our vicinity—check out the Jackson County CWMA website (www.jswcd.org/CWMA/) or Oregon Department of Agriculture's website (www.oregon.gov/ODA/PLANT/Weeds/).

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