

This 'Feed' Kills Weeds

And provides a money-making, seasonal cash crop, to boot!

JOHN C. MATTINGLY

FORT COLLINS, Colo.—An old-timer once told me that the best way to get rid of bindweed was to find a market for it. There's no doubt he developed an appreciation of the weed's persistence. I used to spend many hours and dollars trying to kill bindweed on my 600 acres in north-central Colorado. That was before I discovered a cheap bindweed "herbicide" that I figure cuts my feed bill by about 10 percent, and provides a seasonal cash crop, too. I fight bindweed with pumpkins and banana squash.

For 18 years I've watched bindweed on my farm, where I raise up to 180 head of cattle and 150 hogs a year. Back in the early '70s, I tried a horrendously expensive spot-spraying program to kill off bindweed. But even high concentrations of 2,4-D, Banvel and triazines didn't solve the problem. If the bindweed didn't return the same year, it either showed up the next or was replaced by a sod-like patch of wild buckwheat or wild lettuce that I couldn't even cultivate. I ended up wishing I had bindweed again.

Then I tried cultivating the bindweed. Bindweed roots clinging to my cultivators usually scattered the patches, and the operations proved impractical. Cutting 8 to 12 inches deep once a week in early spring, in an attempt to starve the root reserves, is expensive and time-consuming, and can seldom be accomplished when it should be. There's too much rain and too much else to do then. Besides, cultivating a wet field gives you problems that will make the bindweed look like a blessing.

Waiting until July for the bindweed to flower, when most of its root reserves are above ground rallying for seed production, can be risky; the weeds don't all flower at the same time. And if bindweed goes to seed because you stay out of a field, or didn't get there in time, you'll have it for the rest of your life. Another shortfall: You can't culti-



vate bindweed in wheat about to boot, or corn about to tassel, or beans that are flowering.

So neither chemicals nor cultivation work for me. But using pumpkins and squash does. It costs nothing, and makes me money.

No Bindweed For 9 Years

Our gravity irrigation canal brings us a constant supply of weed seeds, including bindweed. In 1976, I had 10 acres so lush with bindweed that I couldn't even establish an alfalfa hay crop. That's the year I accidentally discovered the pumpkin solution. At a farm sale, I'd bought a giant bag of pumpkin seed, which gave me the idea of fighting the viny bindweed with the equally viny pumpkin. I had nothing to lose.

First I let the bindweed sprout in spring, and in May, moldboarded it about 12 inches deep. I then harrowed

lightly a couple of times. In June, I took the hoppers and plates off my old, four-row corn planter and planted the pumpkin seeds into very loose soil. Two people sat back on the frame and dropped seeds down alternating seed chutes as fast as they could while I drove. Primitive, yes. But I found that I could plant 10 acres like this in a couple of hours.

I used to seed the pumpkins thickly, spaced about a foot apart in 30-inch rows, but I've since modified my planting to 60-inch rows because my pumpkins were too small. I trickle 32-0-0 into my irrigation water to stimulate leaf and vine growth.

Through the season, the bindweed will regrow despite the late, deep plowing. But within a few weeks, the pumpkin vines will shade out the weed and literally strangle it, preventing it from setting seed. It's the most satisfying thing in the world to see.

After harvesting the pumpkins, I disk down the mass of vines. It seems that there's some chemical in the squash residue that discourages bindweed. If someone extracted it, it might make a non-toxic herbicide, because I haven't had any bindweed in that first pumpkin field for nine years!

I now move my pumpkin patch around the farm, always planting about 10 acres in the areas with the most bindweed. Banana squash works just as well as pumpkins.

Sell 'Em Or Feed 'Em

Pumpkins have since become an integral part of my feeding program. What I don't sell to wholesalers as jack-o-lanterns (at 3 to 5 cents a pound), or locally from the pickup, makes great feed! Cows and pigs love them, and will gain thriftily if fed sufficient alfalfa or grass hay. On a dry matter basis, pumpkins have twice as much crude protein as No. 2 corn (see "A Pie-In-The-Style Feed?"). Everybody knows my cows and calves by their orange mustaches, which they acquire from burrowing deep, to finish off the pumpkin seeds

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first. My hogs become mutinous if not fed their pumpkins by 8 a.m.

One caution: Chewed pumpkin seeds can be sharp and fibrous, so don't feed them free-choice. I introduce the new feed to cows by driving my pickup up to the pasture and rolling out a small load of whole pumpkins. The cows just love to play with them. At first, they'll stand around and look at the odd, orange pile. Maybe a day or so will go by before one cow gets brave enough to walk over and see what it is. If the animals are having trouble with them, they soon learn to push a pumpkin against a fencepost.

Don't cut the pumpkins open, or the animals won't eat the outer skin. They'll just clean out the seeds and wait for you to bring more. Also, you

have to watch to make sure one cow doesn't just dive in and get sick. The pumpkins must be metered out, and the amount *gradually* increased, because their high moisture content can fill the critters with water before they get enough hay. Every day, I give a mature cow on full feed about 15 pounds of alfalfa hay, 5 pounds of whole ear corn, and 5 pounds of pumpkin. I scale this down for smaller animals, of course.

You'll get a good laugh watching hogs start on pumpkins. Their gait will have an odd hiccup, something like the Teaberry Shuffle, until their digestive system adapts to the fiber. My vet says it won't hurt them. Hogs do extremely well on free-choice whole corn and triticale when fed four to five medium-sized pumpkins per head a

A Pie-In-The-Sty Feed?

No doubt about it: Pumpkins make great feed—if animals will eat enough of them. But in many cases, feeding them "might help to use up the pumpkins, but it may not be adding much nutrition" to the total ration, suspects Beef Specialist Dennis Lamm of the Colorado State Extension Service. That's because a mature, 1,000-pound cow's daily ration that includes 10 percent pumpkin (dry matter basis) would have to contain 21.8 pounds of fresh pumpkin, 4 pounds of ear corn and 13.76 pounds of alfalfa/brome hay, Lamm explains. "It's questionable that she would be able to eat all this," Lamm says. "You might need to cut back the amount of pumpkin, but then if pumpkin proves to be a cheap source of feed, you could cut back on the corn or hay roughage."

Same goes for hogs, says Swine Specialist Ralph Wilson, also of Colorado State. Pigs weighing less than 100 to 120 pounds could not digest several pumpkins a day, notes Wilson. And larger animals consuming ensiled pumpkins would still require plenty of supplemental protein to gain weight quickly.

Still, University of California studies found that pumpkins can make a nutritious addition to livestock rations. On a dry matter basis, they contain 9 percent dry matter, 85 percent Total Digestible Nutrients (TDN), 16.2 percent crude protein (corn provides about 8 percent, soybean meal about 40 per-

cent, and alfalfa hay from 8 percent to 17 percent), 14.2 percent crude fiber, 0.24 percent calcium, 0.43 percent phosphorus and 8.9 percent fat.

"What this means is that once you get the water out, pumpkin makes good feed," says Les Burdette, Pennsylvania State University Extension beef specialist. "My grandfather used to feed pumpkins to the cows, about 4 or 5 pounds a day," recalls Burdette. "But that's not a whole lot of dry matter—only about a half pound. If (Mattingly) is feeding his cows 15 pounds of alfalfa plus 5 pounds of ear corn, he doesn't need the pumpkin. He's probably over-feeding," particularly because Colorado's irrigated alfalfa is generally of higher quality than Pennsylvania's dry-land hay.

Colorado's Lamm feels that the high fiber content of pumpkin seeds should not be a problem for cows. Animals are more apt to encounter problems when suddenly fed *less* fiber, such as when they're switched from roughage to grains, he points out.

And as for the hogs' Teaberry Shuffle-like gait: Wilson suspects a more accurate term might be the Seagram's Stagger. The high sugar content of pumpkins allows quick, easy fermentation of the material to alcohol.

"Or, it could just be the animals stepping over the pumpkins," he adds. □

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day. I can take some 40-pound feeders up to 240 pounds in 90 days on this ration, though slower-growing hogs may take another two weeks before they're ready for market. The fat of squashed hogs will have a yellow tinge, but the coloring doesn't affect the quality of the meat.

Pit Storage Best

I store my pumpkins outside in a pile. At first, the pumpkins are 80 percent to 90 percent water, but after they freeze and shrink, their feed value actually increases because of better dry matter per unit volume. Starting with the first hard freeze, they just shrivel up like a popped balloon. By the time they're finished shrinking, they're only about 20 percent to 30 percent water. They'll ferment slightly in a pile, which produces an intoxicatingly good flavor. If your region's temperatures dip below zero, the pile may freeze into an unloadable mess, so a pit covered with straw is a good idea.

Another application: Add pumpkins to the top of corn or hay silage in a pit silo. Just drive over them and press them into the top of the silage. Then grind some corn, barley or oats, and cover the squashed material with 6

inches of ground grain. When you load, you'll come up through the pile and get a good distribution of all the ingredients. We don't have many upright silos here in Colorado, so I don't know if pumpkins would store well in them. But I suspect a straw-covered pit is the best storage for cold regions.

Harvesting is the hard part. I know of no way to mechanically harvest a 10-acre pumpkin patch. You want to maintain the vines in a fairly even distribution over the field, so you can't windrow them with a front-mounted wedge. I go through the field with either a sharp hoe or a longbladed machete and chop the stems from the vines. Help from four or five people makes the job more pleasant. As you chop through the field, gently kick the separated pumpkins into a loose windrow you can later drive along with a wagon. Creative and imaginative farmers can probably come up with efficient alternatives to this harvesting method.

After comparing the costs and returns with those of spraying or cultivation, I'm convinced that the bottom line for my pumpkins vs. bindweed method is the right color—particularly when you consider that you'll be rid of bindweed for an extended period. □

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