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PROGRESSIVE FORAGE GROWER

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Proactive gopher prevention pays dividends

By Ted Bruesch

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Ted Bruesch for *Progressive Forage Grower*

Since farmers began growing alfalfa, controlling pocket gophers has been one of the biggest challenges to maximize the value from each stand. If present in alfalfa fields in high numbers, pocket gophers can reduce productivity by 20 to 50 percent, resulting in significant lost revenue and increased expenses. These losses are most often attributed to decreases in yield, quality and stand life combined with increased costs due to equipment damage, loss of irrigation water and increased weed presence.

Instead of waiting for a pocket gopher infestation, researchers and growers across the country are discovering the benefits of proactive gopher prevention. Experience has proven that effort and investment up-front can reap big rewards at harvest time.

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Utilizing research

Dr. Roger Baldwin, an assistant cooperative extension specialist with the University of California – Davis, worked for five years as a cooperative extension adviser for the UC statewide Integrated Pest Management (IPM) Program, researching pocket gophers and their impact on alfalfa fields and profits. Baldwin says when it comes to dealing with pocket gophers, prevention is crucial and growers should aim for a zero-gopher policy.

"Lots of growers like to focus once a year on gopher prevention and not worry about it again until the following year. With this strategy, they might get lucky and eliminate up to 70 percent of a population, but by the time they get around to treating next year, the gophers will have reproduced to the same or higher level they were at the year before. Then it becomes a vicious cycle of continued crop damage and investment," says Baldwin.

Since gophers can produce litters of three to seven pups up to three times a year, Baldwin recommends continuous monitoring and implementing control methods after every cutting. He says an IPM program focuses on long-term prevention by combining several management approaches (i.e., scouting, baiting, trapping, etc.) for greater effectiveness.

In the long run, prevention costs will be far less than losses due to reduced stand life, quality and yield, increased weeds, loss of irrigation water or chewed drip lines, and damage to harvest equipment.

Maximizing stand life

As pocket gophers feed on alfalfa roots, the lifespan and productivity of each stand is greatly reduced. This year Roy Wright, an alfalfa farmer on the Oregon-California border, will be harvesting fields that have been in place for 10 years, thanks to ongoing pocket gopher protection. "If we weren't diligent about protecting our fields from pocket gophers, we would be lucky to get four years out of them," says Wright, who's tried just about everything from baiting and trapping to fumigants.

Today, Wright has found the best management program for his farm is a combination of different tactics at different times of the year, with the majority of his control efforts relying on hand baiting and gas tablets. Wright arms himself with a hand baiter at all times, so he can promptly react to any sign of gopher activity while taking care of other duties, and utilizes the gas tablets between cuttings. He also baits his fields in the fall utilizing a burrow-builder machine, which makes artificial burrows and drops bait every few feet.

As soon as the ground has thawed in the spring, Wright hires two full-time trappers for cleanup, after the fields have been harrowed. Wright invests $400 to $500 on new traps at the beginning of each season, and while he admits the labor is expensive and the method is time-consuming, he knows it's effective when he sees the physical results.

"In this business, you reap what you sow, and at the end of the day all of our investment and efforts have paid off not just with stand life, but also in quality and yield," says Wright, who sends five to six thousand tons of alfalfa to Japan every year.

Eliminating more pests than one

In Sheridan County, Nebraska, Wayne Dreyer farms over 2,000 acres of alfalfa, wheat and oats. In his part of the country, pocket gopher infestations bring along several other pests, such as weeds and badgers. As the pocket gophers push up soil and eat out crops and pasture grass, it results in perfect conditions for weeds to take over. The pocket gophers are also a natural food source for badgers, which cause substantial damage to fields as they dig even larger holes hunting the pocket gophers. When this occurs, the holes and dirt in his field makes for a slower and dirtier harvest.

Today, Dreyer invests roughly $60 per acre on gopher prevention methods. "One gopher can tear up a lot of area, so it pays to take care of them in advance,"

"Burrow-builder border treatments provide effective gopher prevention."
-Billy Wolfe

Determining gopher tunnel depth will ensure proper burrow-builder calibration.

Photos courtesy of Liphatech.

says Dreyer. Due to the size of his operation and high gopher population in the region, Dreyer utilizes a burrow-builder machine with an anticoagulant bait, with the active ingredient chlorophacinone. Dreyer makes two to three rows with the burrow-builder around the perimeter of his field in the spring and again in summer, spacing the rows every 14 to 30 feet apart. This creates a protective barrier. New gophers that investigate consume the bait and die before they can enter and cause damage to his fields.

Still, he remains vigilant by scouting his fields in case one or two gophers get by these barriers. Should this happen, he promptly crisscrosses any new gopher mounds with curative burrow-builder applications, and that does the trick. Dreyer has found this to be the least time-consuming and most cost-effective option for his farm. His efforts have greatly reduced gophers and weeds, and without gophers, the badgers have moved on as well. "It makes cutting hay a lot easier and faster when the gopher mounds and badger holes aren't slowing harvest by plugging up equipment heads. I've also seen quite a bit of difference in hay quality, yield and stand life," says Dreyer.

Protecting a reputation

Billy Wolfe is a fourth-generation farmer in Grand View, Idaho, whose high-quality hay has earned him a high-quality reputation in the valuable export market. In order to take advantage of the higher-priced export markets, Wolfe Brothers Inc. has to have clean hay. "In this business, your reputation will make you wealthy; you can't play in the export market if you aren't preventing gophers and keeping your hay clean," says Wolfe.

Wolfe utilizes four burrow-builder machines year-round to maintain several thousand acres gopher-free. He also starts with preventative border treatments every 20 to 25 feet, then treats his fields again after cuttings, and also does prompt spot treatments at the first sign of any gopher activity.

When he first started getting aggressive with his gopher problems in severely infested fields, Wolfe tried trapping, but it didn't go far enough. "There was no way to stay ahead of them," he says. Wolfe invested in two burrow-builder machines and initially utilized up to two pallets of bait a year. As he's dramatically reduced the gopher populations and shifted into prevention mode, he now uses less than one pallet a year – all while protecting over 4,000 more acres than when he started.

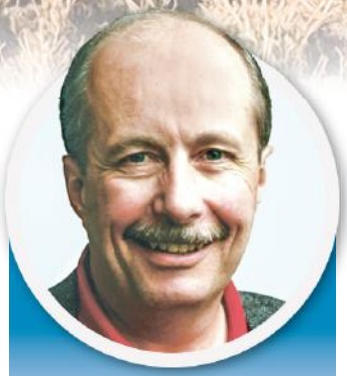
Wolfe estimates his costs for running the burrow builders at $10 to $12 per acre. Having already spent $200 to $300 per acre to put in the stand, he considers this a small investment to protect the maximum potential life and yield of each stand, not to mention his reputation in the export market.

"People need to look past the up-front expense and see the bigger financial picture, especially if dirty hay is keeping them from taking advantage of higher-priced markets," he says.

Making cents of it all

It can be hard for many growers to add another production cost to the ledger, but the numbers are worth examining. A recent study by Baldwin in California estimated average losses in revenue of 8.8 percent when pocket gophers are present in alfalfa. If you can increase your yield or improve quality, while reducing added expenses from pocket gopher damage, the impact on your bottom line could be significant.

Talk to your pest control adviser or an extension agent today to help evaluate the situation on your farm, and put together a management program that's right for you. ***FG***



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