

WAR on Clover

By Mel Larson

CLOVER has been taking a physical beating for the past two years at the University of Minnesota golf course in St. Paul. And the beater-upper is ammonium sulphate, applied with a spray.

Art Anderson, greenkeeper at the Gopher course, is engineering this effort to wipe out all of the clover in the 40 acres of fairway on the course. And although he has been using it for only a year and a half, some results are already beginning to show up.

Art would like to put the ammonium sulphate on the fairways at least five times every summer. Last summer he applied it four times, but a dry fall kept him from adding the final blow. "As soon as weather conditions are favorable," he said, "I like to put it on. The ideal time is right after a spell of rain. Then the grass will be able to take care of itself in recuperating from the shock of the chemical."

Overdosing Does It

The principle behind the application by spray is a simple one. Clover, being a legumous body, takes nitrogen out of the air very efficiently. Grass, on the other hand, has its stomach in the blade, and so doesn't absorb as much of the nitrogen present in the air. So the clover, once it does get started, tends to crowd out the grass, and if not checked, does succeed. When the ammonium sulphate is applied, it naturally catches the wide petals of clover and hits them exceptionally hard. The blade of the grass is also hit, and in order for it to live it calls on its stored-up energy. The clover, meanwhile, chokes from the overdose of nitrogen contained in the sulphate, and takes a longer time to recover.

This process is repeated as often as the grass can stand it. When it recovers sufficiently, in goes another shot at the ailing clover. "If we get in about five shots a year," Art said, "the clover will start on the way out and the grass will replace it. It's simple; the grass gets the benefit of the nitrogen in the ammonium, the clover just can't take all that it gets." There are approximately 40 acres of fairway on the University course, and Anderson uses about 100 lbs. of ammonium sulphate per acre. A 100-gal. tank is used, 50 lbs. of

Minnesota course fighting fairway clover with ammonium sulphate

ammonium being dissolved in each tank.

The sprayer used is 5 ft. high, has two large steel wheels and is pulled by one of two tractors owned by the club. It has 12 outlets, and the pressure gauge is generally at 150 lbs. varying with the speed of the tractor inasmuch as the sprayer wheels operate the pump. Two men easily handle the job each time the chemical is applied. They collaborate on the mixing, then one drives the tractor while the other regulates the sprays and amount of pressure.

Any excess scorching of the grass is minimized by careful application, though every now and then Art has a good chuckle when players stop him to remark how "tough the fairways look and how dry they've gotten even though we've had plenty of rain."

The experiment started two summers ago and two doses were applied in 1938. Four shots were put on this past summer, and Art intends to continue it this year. The pleasing thing is that the clover has started to recede even after one year of concerted effort, and the Gopher school authorities think that they are on their way to "clover-less fairways."

Death Claims Veteran Greenkeeper—Golf lost one of its veteran, outstanding greenkeepers last October 2 when death took Denis Crowley, 64, greens superintendent for the past 18 years at the Wollaston GC, Quincy, Mass. A native of County Kerry, Ireland, he had been a greenkeeper for 32 years, and prior to his job at the Wollaston club spent five years at Tatnuck CC, Worcester, Mass., and 9 years at the North Adams (Mass.) CC. Mr. Crowley was the father of two pro golfers, Robert Crowley, professional at Norfolk GC, Islington, Mass., and Denis Crowley, Jr., of the Nahant (Mass.) GC.

Darrah Gets Twin Blessing—John Darrah, greenkeeper at Beverly CC (Chicago district) and sec.-treas. of the Midwest Greenkeepers Assn., was two-timed November 28 when he became the happy daddy of twin daughters. Mrs. Darrah and the new team were attended by twin doctors, Paul and Richard Lawler, and by twin nurses. Mother and the babies are doing great. John has almost recovered.