

cases requesting such service.

Educational program expanded. Arlington session highly successful. New publication, *Turf Culture*, successfully begun with 3 numbers, with material on weed control, turf grasses and fertilizers.

Newer strains at Arlington receive greenkeepers' approval. Enlargement of experimental work on grasses at Arlington, and on 32 new experimental greens of 19 strains of bent, installed in various

parts of the country.

Work on fertilizers, weed control, disease control and soil improvement at Arlington station summarized as revealing increasingly valuable results.

Intercollegiate Affairs—National Collegiate AA now sponsoring the National Intercollegiate championship, in cooperation with USGA. The 1939 Intercollegiate drew a record field of 181 competitors from 47 colleges.



## WE'RE WINNING OUR CRAB GRASS FIGHT

By Mac Taylor

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THOSE clubs whose labor budget cannot, and does not, include money for hand-weeding, or those whose greens are so infested with crab grass that hand-weeding is out of the question, are in line for chemical weed control. The use of sodium arsenite is justified when the infestation is so large that hand-weeding will be too expensive and destructive.

There is also this to be said about the use of sodium arsenite. The greenkeeper, his chairman and his members must become reconciled to brown, spotty greens for three to four weeks—brown and spotty but withal, true and dry. Before going into means and methods, I would like to explain how we came to use sodium arsenite at this course. When I came here last March I didn't know how much crab I had in my greens and the 'Jersey bent' got beyond our control. So I asked my chairman for an emergency appropriation to put caddies to work weeding one of our worst greens. I had told him about the arsenite treatment, but I couldn't tell him anything from experience for I had never used it. We were both a bit afraid

of it, so we went to work hand-weeding.

Eight caddies put in 144 man hours and completed only 1,500 square feet of green! That breaks down into 8.8 sq. ft. per hour per man! That gives a rough idea how infested the greens were, for the boys were careful and thorough, getting each individual plant.

It also gives an idea how expensive hand-weeding would be for an entire course. When they got through (we stopped before they did the entire green), that piece of turf looked as though a barrage had hit it.

It was then we decided on sodium arsenite. Whatever the results might be—they couldn't be any worse than the results of hand-weeding.

### How Quantity Was Decided

We put the sodium arsenite on wet, using a barrel sprayer, hand-operated; one hose line from the water outlet at the green, another line from the pump to the fan nozzle. To find the amount of solution needed to cover 1,000 sq. ft., we made a test using only water and found that 30 gals. would give adequate coverage at 45 lbs. pressure without using the water line. The efficacy of sodium arsenite depends on a number of elements. Humidity, temperature, permeability of the soil, age of the crab grass plant and dryness of the leaves, all govern. Having nothing to go on except other men's experience, and having conditions at hand peculiar to this course, we pooled the resources of our knowledge and went to work, thus:

We first plotted each green into sec-

tions of 1,000 sq. ft., or fractions thereof. To 30 gals. of water we added 4 oz. of sodium arsenite. (A word of caution: use surgeons' masks over nose and mouth when working with the stuff. Also wash the hands thoroughly before putting them to your mouth to smoke, etc. These precautions are printed on the can of packaged sodium arsenite.) We connected the line from the green outlet to the pump and maintaining about 45 lbs. pressure sprayed the solution thoroughly over each plot. Each section took 30 gals. of solution but I have no way of measuring the amount of water which went with it from the water line.

### Estimate 80% Kill

One operation at this proportion was enough for chickweed and yarrow leaves (not the whole plant), but not the crab. Neither was the second shot. The second shot took care of the clover in good shape. So we did 3 operations, 6 days apart. Evidence of burn shows up after 48 hours. The interval of 6 days gives the bent a chance to recover before the next shot. At an inspection by Fred Grau of the Penn State agricultural extension service, after the whole job was done, he estimated that we had about an 80% kill of the crab grass and 15% burn of the bent. This proportion will not kill silver crab nor yarrow plants.

On two greens which were more infested than the others, we cast caution to the winds and burned everything. After 10-days we reseeded with a Darmil seeder, got germination in 7 days, cut on the 12th day and opened both greens for play in 3 weeks. The other greens were reseeded with the Darmil, topdressed, fertilized and watered daily throughout germination and left in play during the entire treatment. There is a possibility that I didn't get at the crab grass early enough. It is thought that the best time would be at the two-and three-leaf stage of the crab and if done at that time the solution could contain considerably less sodium arsenite. Some of the crab appeared to be seeding when we hit it, so there may be some germination next year. However, we think we got enough so that routine hand-weeding will keep the greens clean next season.

There are two or three rules which it is advisable to follow in using the arsenite. It works best when the temperature is below 75 degrees F.; on a cloudy day; when the grass leaves are dry; when

the grass is not cut or watered for 48 hours after each application. Always use a mask and wash thoroughly after using. In reseeded I can't recommend too highly the use of the Darmil seeder. It puts the seed in the ground where it belongs. A light topdressing with fertilizer mixed with it, and light sprinkling daily until the new grass is well up, and you'll have turf of which you can be proud.

Now this method of treatment suited my immediate needs perfectly, but it might not work for somebody else. In fact, when I wrote Fred Grau that I had used 4 oz. three times, he hot-footed it down here from Penn State expecting to find me completely burned out, but he was pleasantly surprised and gave me a clean bill of health. As I said before, I wouldn't recommend the use of sodium arsenite for a weak infestation, but for a heavy one it's the most economical and efficient of any method I know. I tried spot treatment on dandelions using the same proportions and it worked fine. I used an oil can and pushed the snout into the crown and squirted. Next day—no more dandelion.

The best technical source of information on this subject that I know of is in 'Turf Culture', Vol. 1, No. 1, January, 1939, published by the USGA Green Section.

## Women's Western Urges Pros to Back Its Junior Meet

**W**OMEN'S Western Golf Association wants the cooperation of pros in making the 1940 WW Juniors' tournament the greatest tournament of juniors ever held.

The event will be played at South Bend (Ind.) CC, July 8 to 11. All girls under 18 are eligible. There is no handicap limit, nor is it necessary for a contestant to be a member of a club. Entrants not accompanied by mothers or chaperons are guaranteed free billeting, breakfasts and transportation to and from the club.

Many pros have girl pupils whom they believe would shine and delight in this event, so the Women's Western officials ask that the pros advise the youngsters' mothers of the competition and suggest attendance.

Miss Edna Lennox, publicity chairman, WWGA, 510 N. Euclid Ave., Oak Park, Ill., will gladly supply any additional information desired, to pros or parents of prospective entrants.