

## Calibrate Sprayers

(from page 10)

determine manpower distribution for spraying programs. This formula calculates the number of acres sprayed in one hour. The formula to determine this factor is as follows:

$$\frac{Y \times MPH}{8.25 \text{ (constant)}} = APH$$

With the symbol Y, representing the boom width in feet, we multiply the ground speed (MPH), divided by the constant 8.25. The product is the APH, or acres sprayed in one hour.

As an example, let us say you are using a Model 308 John Bean Duo-Flex Boom which has 13 nozzles spaced at 20 inches and provides a spray swath of 21 ft. 8 inches or 21.67 ft. You have decided on a spray program which requires a ground speed of 4 MPH. This would be your calculations:

$$\begin{aligned} APH &= \frac{21.67 \times 4}{8.25} \\ &= \frac{86.68}{8.25} \\ &= 10.5 \text{ acres per hour} \end{aligned}$$

Calibrating sprayer equipment is important in your overall operation. Experiment stations and turf advisors should be consulted for their recommendations before a spraying program is started. If their recommendations are followed faithfully, your spraying program will be successful. If not, the best sprayer made cannot do the job for which it was intended.

Another important point to consider is the choice of spraying equipment. Be sure the sprayer has sufficient capacity to carry out your full program. Make sure it has a tank and piping system which are protected against the ravages of modern day chemicals. Be certain it has a good filter or ample capacity; plugged nozzles will upset your rate of application. Be doubly sure it has a pump that can withstand abrasive and corrosive chemicals you will be using. It should have an accurate and reliable pressure gauge and pressure regulator or relief valve. Make sure also that the boom is protected inside against rust and corrosion.

Buy your sprayer from a reliable source, preferably your turf equipment supplier. He has

access to factory warranty and service programs which can be very helpful. Take good care of your spraying equipment; keep it in good condition. Periodically check nozzle capacities. Follow closely the recommendations of your turf advisors, and your spraying program will be successful.

## Pit Scale Control

(from page 22)

ly free from phytotoxicity. Apparently certain environmental stresses on trees such as excess or deficient soil moisture, or root disease, have an important bearing on the likelihood of foliage injury following the application of a spray chemical. None of the trees, however, showed subsequent symptoms of leaf injury when the treatments were made before bud break. Unfortunately, these California trials indicate that applications made between late April to early June, when trees are in a foliated condition, result in more effective pit scale control than applications made in the late dormant stage. As is the case with many scales, maximum control apparently is contingent on application of the insecticide when the insect is in the vulnerable immature stage.

## New Adjuvants

(from page 33)

which may be a 30 or 55 gallon drum.

Development of these application adjuvants when used with the Bi-Vac Inverter have many advantages over straight solutions or conventional emulsion applications. Through the Stull system, the spray mixture becomes a water-in-oil emulsion. The advantages over oil-in-water emulsions include less evaporation, more uniform droplet size, ease of control, and greater leaf penetration. Users also report reductions in run-off, spray drift and application costs.

## Trimmings

**Plaudits to John Gallagher.** Special thanks are due John Gallagher for his time and effort in seeing that technical conference material is made available to the industry. We've attended two major meetings within the last few weeks, the Northeastern Weed Control Conference and the Weed Science Society of America. In both sessions, John, as president of NWCC and public relations committee chairman of WSSA was busy lining up officers and participants for the benefit of the press. Previously, in addition to his duties at Amchem Products, Inc., he, along with his committee members, had spent months in getting technical papers produced for press use. We appreciate this kind of help.

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**The When of Preemergence For Crabgrass.** We've heard a number of opinions on the best time to use preemergence treatment for crabgrass control. Because of the difference in climates and the variation in seasons, we believe the practical approach is that advanced by Dr. L. J. King in his book, "Weeds of the World." The chemical according King is best applied just before or just as the crabgrass begins to germinate. This will be the time between the withering of the flowers of Forsythia and the beginning of the flowering of dogwood. These are both easily recognized events for the sprayman.

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**Lots of Room For Better Golf Courses.** We are amazed at the recent National Golf Foundation report on golf course irrigation. Of 7880 courses surveyed, only 42 percent had irrigated fairways. So, we can expect lots of business for irrigation contractors during the next few years. Another surprising statistic was that Kansas has 116 of 500 sand greens still in use across the country.

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**DED Now In Idaho.** Dutch elm disease continues its trek westward. Dr. Arthur D. Partridge, forestry professor at the University of Idaho, reports that recent laboratory tests confirm findings of the Boise City forestry department. Citizens are being asked to report symptoms to get a further check on the extent of DED in the state.

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**Welcome to the Club.** Delaware turf interests have just organized a new group, the Delaware Turf Grass Association. Purpose, like those in many other states, is to get turfmen together for management sessions and to further and review research. Walter Petroll, Winterthur Gardens, heads up the bylaws committee, and Edgar Downs, Rehoboth Country Club, is the new president.