

Illinois Spray Law Discussed At Conference

Nearly 100 agriculture chemicals and equipment dealers and suppliers, industry representatives and agricultural leaders attended the Southern Illinois Fertilizer and Herbicide Conference in late February. The program was jointly sponsored by regional dealers and the plant industries department of Southern Illinois University, Carbondale. Supplier and dealer exhibits were a part of the conference.

Highlights included: updating Illinois Custom Spray Law regulations, by Juett C. Hogancamp of the Illinois Department of Agriculture's plant industries division; a progress report on the Illinois Pollution Control Board proposals for plant nutrient standards, by John Allin, a board member from Chicago; and some suggestions from an area attorney, Dayton Thomas, on keeping out of trouble in handling and using pesticide chemicals.

Provisions of the 1972 Custom Spray Law in Illinois, first revision since the initial regulations were enacted in 1966, cover uses of four main pesticides and provide for two kinds of licenses—the spray operators license and the spray applicators license. It also requires custom applicators and operators to post a \$3,000 performance bond.

Hogancamp noted exceptions to licensing. Exempt from the provisions are: farmers who do their own pesticide spraying as well as for two other persons; power companies and railroads who use their own employees for spraying; certain tree experts spraying trees and shrubs; and pest control operators treating buildings and home sites for insect and rodent pests.

After reviewing briefly the functions of the Illinois Pollution Control Board, Allin presented a progress report on the board's activities toward setting standards for plant nutrient usages in agriculture.

The board, one of three agencies set up under the Illinois Environmental Protection Act, is responsible for setting pollution standards, judging violations, and granting variances.

Allin said the board does not expect to concern itself with regulating pesticides because these are subject to other controls.

Possibilities of negligence suits and credit collections are two areas where dealers, handlers and custom operators dealing with agricultural chemicals can run into difficulties. Suggestions to these people for

"keeping out of jail" were provided by Dayton Thomas, a young Shawneetown, Ill., lawyer and assistant state's attorney, an agriculture college graduate who also has been a farmer and salesman of agricultural chemicals.

He said the Illinois Custom Spray Law provisions are not so stringent that competition between dealers and operators will not provide self-policing. The performance bond required for licensed custom spray operators does not cover negligence.

To avoid negligence suits the dealer and his employees must know

the product thoroughly, read the container labels carefully and abide by the instructions.

Thomas advised dealers to have adequate insurance to cover possible damages and to seek legal counsel immediately if complaints arise.

Other program discussions included attention to new developments in chemical spray application methods to reduce drift problems and improve coverage for pest control. Ralph Jourdan of Hahn, Inc., Evansville, Indiana, spoke about distribution patterns with flood-type spray nozzles.

Mitts & Merrill Brush Chippers For...

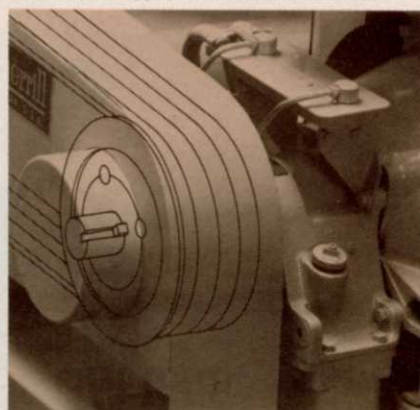


better design... more efficiency

For more than 115 years Mitts & Merrill has been making specialized machinery for industry. A major part of our business is equipment to reduce scrap and waste. This experience is incorporated into design features on our brush chippers that result in higher efficiency and longer, trouble-free service for you. Only Mitts & Merrill brush chippers offer features like these:



Staggered knife pattern for smoother cutting action. Mounted on an all-steel cylinder that, even without an external flywheel, is heaviest in the industry. Each cylinder revolution gives more cuts, produces smaller chips of uniform size. Self-adjusting knives are reversible; give twice the service between sharpening.



Optional torque converter isolates engine and transmission from cutting shock to minimize maintenance. Makes operation virtually fully automatic; increases operator productive time. Available on all models.

Plus...

- **Positive safety-lock pin** for greater operator safety
- **Swing-away, folding feed chute** protects cutting chamber; allows instant access and increases maneuverability
- **Heavy duty construction** includes coil spring, torsion-type suspension, and box tubular steel frame.

mitts & merrill



Dept. WT-65, 109 McCoskry St., Saginaw, Michigan 48601

For More Details Circle (120) on Reply Card

Grade Changes Affect Adjacent Tree Growth

Changing grade levels during construction can damage established trees. The injury causes short annual twig growth, smaller and fewer leaves, early leaf drop, leaf scorch and an unhealthy appearance. These characteristics appear gradually and are noticed two or three years after construction.

Gerald E. Draheim, Michigan State University extension horticultural agent, offers these tips on preparing your landscape plans to avoid possible damage to trees you wish to save:

Try to avoid any change in grade level around trees that are to remain. If a change is necessary and fill is needed, provided rock or tile drainage at the original ground level before fill is added.

If the fill needed should be more than one foot deep, build tree wells before excavation begins. Any excavations to lower the grade levels should be started as far from the tree as possible to avoid root damage. Maintain the original grade level near the trunk of the tree.



A 52 page Specialty Valve catalog describing the specifications, performance charts and installation diagrams for more than 250 models of Rain Bird valves is now available. Rain Bird specialty valves are designed to control liquids in all types of pumping plants where regulation of flow, pressure and surges is required. For more details, circle (726) on the reply card.

Cuts twice as fast as most lawn tractors, hugs the ground for hillside safety



NATIONAL 68-inch Triplex

Mows a 68-inch swath at speeds up to 4 miles per hour, a half acre in 15 minutes.

It's a turf-professional type mower, with three powered, free-floating reels that follow ground contour. It shears grass cleanly; doesn't leave unsightly "tip burn" as rotaries often do.

Reduces trimming time because the reels reach out over curbs, up to obstructions and in other hard-to-cut places.

Built to last—with Timken bearings, automotive-type transmission and a lip on the cutter bar to take years of wear.

Do your lawn job in about half the time and do it better with the all-mower mower, the National Triplex.

Other models from 25 to 84-inch cut.

Write for information.

NATIONAL MOWER COMPANY

660 Raymond Avenue, St. Paul, Minnesota 55114
Phone: 612/646-4079

TELL ME MORE

This page is provided for your convenience. To obtain additional information on new products, trade literature and advertised products in this issue, simply circle the corresponding number on the perforated card below, fill in your name, business address and mail the card. No postage is required.

FOR MORE INFORMATION FILL OUT AND MAIL TODAY!

ADVERTISED PRODUCTS

101	102	103	104	105	106	107	108	109
110	111	112	113	114	115	116	117	118
119	120	121	122	123	124	125	126	127
128	129	130	131	132	133	134	135	136
137	138	139	140	141	142	143	144	145
146	147	148	149	150	151	152	153	154
155	156	157	158	159	160	161	162	163
164	165	166	167	168	169	170	171	172
173	174	175	176	177	178	179	180	181
182	183	184	185	186	187	188	189	190
191	192	193	194	195	196	197	198	199

NEW PRODUCTS

700	701	702	703	704	705	706	707	708
709	710	711	712	713	714	715	716	717
718	719	720	721	722	723	724	725	726
727	728	729	730	731	732	733	734	735
736	737	738	739	740	741	742	743	744

Please send more information on items circled
(Please type or print) 4/72

Name

Position

Company

Street

City

State Zip Code

Please describe your type of business

Note Inquiries serviced until June 20, 1972

Use this convenient card if you wish to receive further information on products and services advertised or described in this issue.



BUSINESS REPLY MAIL

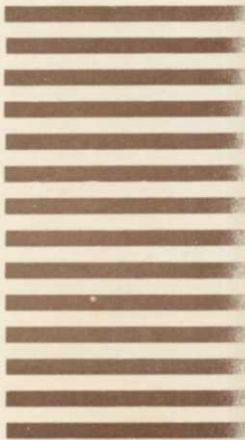
NO POSTAGE STAMP NECESSARY IF MAILED IN THE UNITED STATES

postage will be paid by

**WEEDS
TREES
and TURF**

POST OFFICE BOX 6049
DULUTH, MINNESOTA 55802

FIRST CLASS
PERMIT NO. 665
DULUTH, MINNESOTA



ACCUTROL (from page 18)

cause the air in the air emulsion "expands" the spray mix and replaces part of the water needed for good coverage.

Reports from the field are enthusiastic. Here is what they say:

"When we use the system for ballast work, we estimate that it cuts the amount of water about 20 to 25 percent," says David Mobley, Mobley Company, Inc. Kilgore, Tex. "We also feel our application is more effective. We get better coverage and penetration." He uses Accutrol with MSMA, Banvel and Hyvar X-L with good results.

Bill Crabaugh, systems engineer for Servitron Inc., engineering and maintenance-way representative, Kansas City and Southern Railway, sprays with Accutrol mounted to a high clearance sprayer. He uses Banvel and 2,4-D for vine-type weeds such as red vine, trumpet vine, blueberry and blackberry. On railroad ballast trial work indicated



Heavy droplets penetrate thick brush like this. Accutrol increases chemical action on the plant surface.

Nozzle Patterns With Accutrol Handguns



LS Nozzle — Long Straight stream



XLS Nozzle — Extra Long Straight stream



SS Nozzle — Short Straight stream



F Nozzle — Fan stream



LF Nozzle — Long Fan stream

better coverage with Accutrol, says Crabaugh. "We found we could go twice as far with a tankload. Before we went about 20 track miles to a tank load, but with Accutrol, we went 40 track miles."

Another advantage of the new system is that you can see where you have sprayed. "We had no overlapping," says John Leighton, Eastern Maine Electric, Calais, Maine.

"With conventional application, the applicator would end the tank and tag the brush, load up again and begin six feet back just to make sure coverage was complete. With Accutrol, the spray mix still glistens on the leaves, even though time has elapsed in refilling the tank. It has a different look than conventional spray, and you can definitely see where you have sprayed."

Leighton sprayed about 90 acres with Accutrol in 1971 on distribution rights-of-way. Conservation of spray mix was another feature he liked.

"We went from 400 gallons per acre to 200 gallons per acre," he says. "Part of the difference was the size of trees. With the conventional system in 1970, we were spraying brush that was six to seven feet tall. Last year brush was about half that height. Still I believe we obtained

better coverage with fewer gallons of spray mix per acre."

The Accutrol nozzle is simple in design. It consists basically of four parts: nozzle tip, foam generator, flow control disc and strainer, and pipe adapter. The nozzle works much like the aspirator on the kitchen sink faucet. A vacuum is created in the small chamber in the upper end of the nozzle and air is drawn in through small holes. The product is a mixture of air and water, referred to as the air emulsion. The ratio of air to water in the emulsion is about four to one.

The nozzle tip has large holes which permit the air emulsion to pass. Unlike a conventional system, flow is controlled by the flow control disc; pattern is created by the air emulsion itself with no mechanical part to interfere. This means the tip can be used indefinitely without affecting the spray pattern.

Bob Cloud, district superintendent, Harris County Flood Control District, Houston, Tex., cites another advantage that has sold him on Accutrol. "Foam is being generated at the nozzle," he says. "You can pump the Accutrol a long way, whereas with other systems, about

(continued on page 60)

**SOD
INDUSTRY
SECTION**

American Sod Producers Assn. Stages California Sod Blast

The American Sod Producers Association has become a mature, well established, industry oriented organization. Established at Lansing, Mich., only five years ago with a skeleton group of producers, membership is now nationwide, and includes an impressive group of Canadians. The ASPA '72 conference and field day, just concluded at Anaheim,

Calif., Feb. 21-24, pulled more than 300 persons, the majority being growers.

Few organizations can boast the educational program put together for this session by Executive Secretary Henry Indyk, Rutgers University. Featured on this program were three of the best known turfgrass plant breeders in the industry: Dr.

Victor Younger, University of California, Riverside; Dr. Glenn W. Burton, Georgia Coastal Plains Experiment Station, Tifton, Ga.; and Dr. C. Reed Funk, Rutgers, New Brunswick, N. J.

Supplementing their discussions on plant breeding and new varieties were other national leaders in culture and management of cultivated sod. These included Dr. James Beard, Michigan State, East Lansing, Donald Juchartz, Wayne County, Mich., and Tobias Grether, president of the association and of Cal-Turf, Inc., Camarillo, Calif., host to the event.

Dr. Younger reviewed physiology of the sod plant and briefly discussed the problem of moving sod in hot weather. He said this is a difficult situation at best, and suggested good seedbeds and optimum soil management to encourage quick knitting in of newly installed sod. Maybe, he stated, this is the time to also start a disease control program. The obvious out, of course, he said, is to push as many sod sales during the spring and fall months as is possible.

Both growers and guests were treated to a brief history of warm temperature grass development by Dr. Burton. He reminded the group

(continued on page 56)

Picture Identification: Tobias Grether, president, Cal-Turf, Inc. Camarillo, Calif. and ASPA Convention host; Dr. Henry Indyk, Rutgers University and ASPA executive-secretary; Ralph Daily, Cal-Turf farm manager; Dave Austin, U.S. Borax; Mel Hansen, Tuco-Upjohn; Sam Besse, west coast representative for Elanco.



Tobias Grether



Dr. Henry Indyk



Ralph Daily



Dave Austin



Mel Hansen



Sam Besse

The F133. A big reason he's a turf-care specialist.

Steve Moffett of S.V. Moffett Co., Inc., West Henrietta, New York, knows all about the equipment to take care of your turf. And that's one of the things that make him a turf-care specialist, just like the rest of us Jacobsen Distributors.

So when you come to one of us for a fast maneuverable mower, you don't have far to look. In fact, it's right there in the photo next to Steve.

The Jacobsen F133, five-gang mowing tractor. The best there is.

Jacobsen designed the F133 for parks. Schools. Industrial sites.

Apartment complexes. Cemeteries. Golf courses. With plenty of features that make those tough mowing jobs faster and easier.

According to our customers, the F133 is the champ at getting the job done fast. The 18 H.P. engine powers the F133 at mowing speeds up to 6 M.P.H. while it cuts a wide 11' swath. They can mow 40 to 50 acres in a single 8 hour day.

The F133 has articulated reels that mow ahead of the tractor wheels and follow the contour of the turf. The result?

The F133 always mows a smooth path. Even on slopes.

Our customers tell us that the F133 helps eliminate trimming with a hand mower. Hydrostatic, foot controlled mowing speeds and variable cutting frequencies let the F133 get in tight for the close work. Around bushes. Trees. Or buildings. And that really cuts down mowing time.

The Jacobsen F133. The best in the business.

It helped make us what we are today.

Your Jacobsen Distributors

Before we sell it, we buy it.



For the name of the distributor near you write: Jacobsen Turf Distributor Directory, 1721 Packard Avenue, Racine, Wisconsin 53403

For More Details Circle (103) on Reply Card

ASPA (from page 54)

that in 1936, in the south, most lawns were swept daily because they had no grass. The only grass prevalent at the time was carpet grass which had been spread largely by cattle. The next improvement came with the introduction of centipede grass from China, which, he stated,



Bob Scagnetti, sales manager for Toro's institutional products, demonstrates gang mower.

is still a good one for the South. Then came St. Augustine or "Charleston grass" as it was generally known at the time. In 1946, a breeding program was started for bermudas with selections from golf courses and other areas. Almost 100 bermudas were evaluated in 1947. From these came Tifton 57, which eventually became Tiflawn. Next was Tifgreen 328 which is today the most popular hybrid for golf greens in the South. Tifway bermuda, another in the chain proved to have frost tolerance which made it attractive as a lawngrass. Another selection out of Tifgreen, Tifdwarf became the best and is now being used on greens. Burton listed 18 varieties of improved bermudagrasses, not one of which was available in 1936.

Looking ahead, he expects exciting developments for St. Augustine research now being done in Florida. Right now, Burton said, a total of \$10 million is needed to solve warm season turfgrass problems and to develop new varieties and management programs.

Dr. Funk pointed to the need for breeding disease resistance into new turf grasses. He also said wear tolerance is a factor which needs more study, especially where grasses are



Fumigation, an expensive procedure for sod producers, is in use on Cal-Turf.

being used on athletic fields. With restrictions on chemical use, Funk said insect resistance is becoming a greater factor in the quest for new varieties. No one grass today, Funk stated, serves all purposes. For this reason, he believes that blends have a place in improving performance. The approach to research today in-

(continued on page 58)

NEW FROM PURDUE UNIVERSITY **SODCO KENTUCKY BLUEGRASS**

U.S. Plant Patent 839-731,2,3,4

Dr. W. H. Daniel, Purdue University, devoted 15 years of breeding, observation and comparison of bluegrass selections before the release of SODCO in 1967. Each of the four lines that make up SODCO were granted patents during 1972. SODCO has exceptional eye appeal due to its firm texture and very dark green color.

SODCO KENTUCKY BLUEGRASS has outstanding disease resistance and has received superior disease ratings in tests from major universities and turf organizations for:

- STRIPE AND FLAG SMUT RESISTANCE**
- LEAFSPOT RESISTANCE**
- POWDERY MILDEW RESISTANCE**
- STEM AND LEAF RUST RESISTANCE**

SODCO is a dwarf type variety with low growth profile and slower rate of leaf extension. Shade studies and greenhouse tests have proven SODCO to have **SUPERIOR SHADE TOLERANCE** over other bluegrass varieties.

For information and pricing, write or call:

Agricultural Alumni Seed Improvement Association, Inc.

P.O. Box 158, ROMNEY, INDIANA 47981 / (317) 538-3145

SODCO KENTUCKY BLUEGRASS IS PREFERRED BY THOSE WHO KNOW TURF

Distributor Territories Available

ON TARGET

Foamspray™

YOU CAN SEE THE DIFFERENCE



GROUND BOOM



AERIAL



INDUSTRIAL

Foamspray's foaming adjuvant, for herbicides and pesticides, aids in reducing spray drift and evaporation. Provides better coverage with accurate placement of materials.

IN ADDITION:

Foamspray will *LOAN* you aerial and ground boom foaming nozzles. Easy to install on all conventional sprayers capable of 40 PSI pressure. These nozzles were developed specifically for Foamspray foaming adjuvant.

See your nearest Foamspray Products distributor, or mail in the coupon below, for complete details.

Northwest Occidental Chemical Co., **West** Monterey Chemical Co., **Midwest** Thompson-Hayward Chemical Co., **Northeast** Stauffer Chemical Co., **Southwest—South & Southeast** Helena Chemical Co. (West Helena, Ark., Columbia, S.C., Lubbock, Tex.), Southern Mill Creek Products Company, Inc.

Name _____

Address _____

City _____

State _____ Zip _____

Type of Application _____



**SERVICE
TECHNOLOGY
CORPORATION**

Foamspray™ Products,
Service Technology Corporation, Dept. WTP
2345 W. Mockingbird Ln. Dallas, Texas 75235,
Tel. (214) 350-2792

BROUWER SOD HARVESTER

Will cut, roll and load on pallets up to 1300 sq. yds. per hour with the help of 2 or 3 men. Available in 16", 18", 24".

This harvester is redesigned and has been in use for 3 years.

BROUWER TURF EQUIPMENT LTD.

R.R. 1, Keswick, Ontario, Canada
Tel. (416) 476-2442



For More Details Circle (149) on Reply Card

ASPA (from page 56)

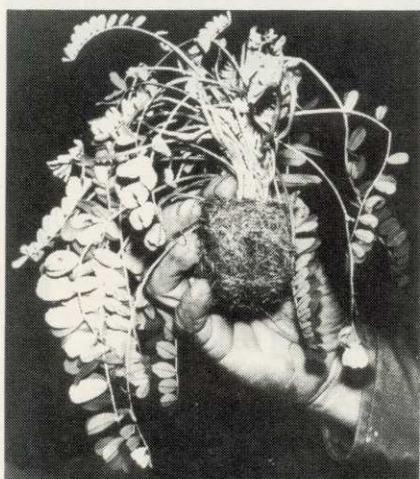
cludes three methods, namely, selection, mutation, and finally, hybridization, he stated.

Juchartz told growers that record-keeping and intensive management study is a must for business success. He said a grower must know operational costs and predetermine his profit. In short, he said, the successful grower today sets a profit goal and then prices accordingly. He

used information adapted from Co-operative Extension Services at Massachusetts and New York in showing the effect of pricing on profits. For example, Juchartz said: To obtain the same gross income, a price increase of 3% means that only 90% of the original volume has to be sold to bring in the same gross income. With increases of 5%, only 83.5% of the original volume of sod has to be sold; with 7¼% only 77% volume; with 10% only 71%; with 15% only 65%; and with a 20% increase in price, only 58% of the

original volume will produce the same gross.

This is well and good, Juchartz said, but he suggested that the group also consider the effect on gross income of a price cut. A 3% price cut requires an additional 13.6% of original volume to produce the same gross income. But a 5% price cut requires that 25% more volume be sold; 7¼% requires 43% more; 10% requires 67% more; 15% requires 150% more; and finally, a 20% price cut requires that an additional (continued on page 64)



When all other methods
of establishing
CROWN VETCH fail,
use our pot-grown plants.

OR — USE THEM FIRST

Penngift or Emerald varieties
fully inoculated
in 2¼ in. plastic pots

15¢ each per 100 or more
12½¢ each per 1000 or more

F.O.B., Nursery packing at cost. Best way
to ship United Parcel Service or Bus.
Minimum order of 120 plants.

PLANTS FOR YOU, INC.

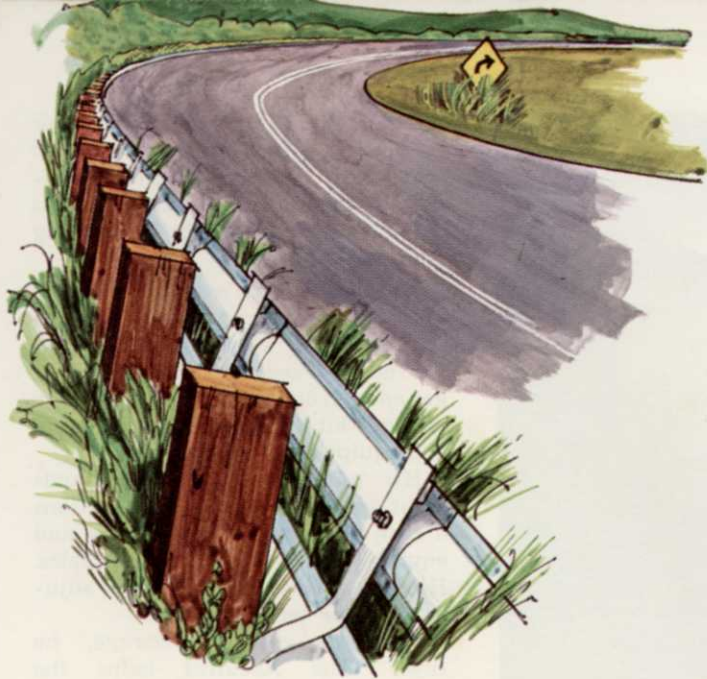
R.R. 3, URBANA, ILLINOIS 61801
Telephone 217/367-7905



Jacobsen gang mower on display at ASPA field day demonstration.



Prior to field demonstrations crowd inspects equipment. Nunes sod harvester is in foreground.



Needless maintenance costs are growing all around you.

Eliminate weeds from your facilities and you'll slash needless maintenance costs. Weeds trap moisture which makes equipment deteriorate faster. They also interfere with work crews...create fire and safety hazards...contribute to air pollution by releasing pollen.

The most effective way to eliminate weeds is a chemical control program based on Du Pont HYVAR bromacil weed killers, or formulated products containing bromacil. Sprayed on early in the spring, a single application of bromacil controls weeds all year long. No need for expensive cutting by hand or machine.

Such a program can be handled by your own maintenance staff. Or, better still, let a professional custom applicator handle the job. He's a weed control expert who will design and implement a program that fits your needs exactly.

Whichever way you go, do-it-yourself or custom application, the cost is much smaller than mechanical or hand-trimming methods.

Starting your program early is important. Call your Du Pont distributor or custom applicator now for complete details on Du Pont industrial weed control products and programs.

With any chemical, follow labeling instructions and warnings carefully.



INDUSTRIAL HERBICIDES

HYVAR® X **HYVAR® X-L** **AMMATE® X**
bromacil weed killer bromacil weed killer weed and brush killer



For More Details Circle (138) on Reply Card



Accutrol droplets remain visible on the leaf surface from 5 to 30 minutes so that the applicator can easily monitor the application.

ACCUTROL (from page 53)

50 feet is as far as you can pump.

"In our work we often have to spray from one street intersection to half a block, then move around to the next cross street and work back. Sometimes we pull as much as 500

feet of hose," he says. "The extra throw is a big help."

Cloud sprays primarily for blood weeds, Johnsongrass and willows. "We try to remove the weeds and grasses and end up with a bermuda turf. We are a public agency, working primarily in a metropolitan area.

If the wind is blowing much over 10 mph, we shut down, even with the foam," he notes. The drift control features of Accutrol help but don't necessarily change a spraying operation much.

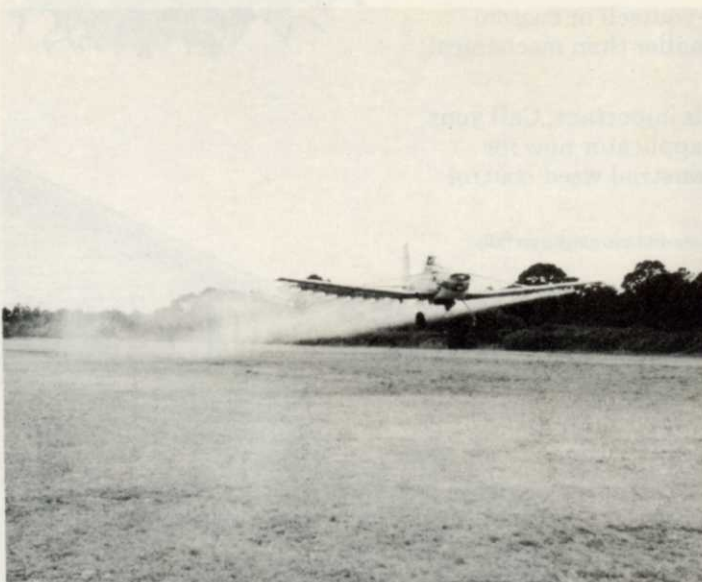
Monroe Otto, a Texas ranch owner near Needville, has brush as tall as 12 feet. Basal spraying in the past has not worked because "you don't get enough on the root system. Lately we have hit upon the right spray mix and equipment," he says.

His pull-type spray rig stands eight or nine feet tall. Otto positions a man on each side of the rig and equips them with Accutrol nozzles. He mixes Banvel and Accutrol adjuvant in the tank.

"Now we get the coverage," he says. "The Accutrol helps the chemical to penetrate better. We have close to 100 percent control."

Velsicol says the Accutrol nozzles can be used in aerial spraying as well. The exterior geometry of an aerial nozzle is different than those used with ground equipment. This is to compensate for drift control and coverage requirements. The Aerial Fine nozzle produces droplets that are small and close together for the most complete coverage. Maximum drift control can be achieved with coarse droplets from the Aerial Medium nozzles combine coverage and drift control ideal for many spraying applications.

The interest in Accutrol system is sufficient to warrant much use this year by the Green Industry. Velsicol believes that the system brings a new dimension to precision spraying, and possibly economies not yet experienced by spray applicators.



Three types of Accutrol aerial nozzles are available: Aerial Fine, Aerial Medium and Aerial Coarse.



John Leighton, Eastern Maine Electric, Calais, Me., inspects a utility rights-of-way sprayed with Accutrol.