

CHEMICAL BULLETIN





FOR COMMON CHICKWEED, KNOTWEED, CLOVER:

BANVEL® D 4-S—this versatile herbicide attacks hard-to-kill turf weeds through the leaves and through the roots. Provides excellent control of a wide variety of broadleaf weeds, even the deep rooted varieties. Effective in cool or warm weather—excellent for tough winter annuals. Your supplier has it in 1-gal. polyethylene jugs, 5-gal. drums and 30-gal. drums. Order Banvel D 4-S today!

FOR PLANTAIN, DANDELIONS, HENBIT: BANVEL® D + 2,4-D-an unbeatable combination! Banvel D combined with 2,4-D gives you oneapplication control of a broad range of problem weeds. Controls almost every species found in lawns, turf, and golf fairways, aprons, tees and rough! You save the bother of mixing materials and the time and expense of separate applications. And you get the most thorough, efficient weed control available today. Ask your supplier for Banvel D+ 2,4-D.

Save turf-save time with the Velsicol *complete line* of quality turf chemicals: Velsicol[®] "2-1" and Velsicol[®] Memmi. 8EC for turf disease control; Bandane[®] for crabgrass control; Banvel[®] D 4S and Banvel[®] D+2, 4-D for weed control; Chlordane for insect and crabgrass control; and Velsicol Pestmaster[®] Soil Fumigant-1 for greens renovation. Ask your supplier for them.

ask	VELSICOL CHEMICAL CORPORATION 341 EAST OHIO ST., CHICAGO, ILL. 60611 Please send me your Turf Chemicals catalog.
Velsicol	NAMEORGANIZATIONADDRESS
	CITYSTATEZIPWTT-56

Reach more pest control markets with these HUDSON power sprayers

Peerless* over-the-road sprayer is fast, mobile spray power for PCO's and others needing it. Accessories for day-night travel. New Ten-O-Matic* 10 gpm pump cuts time-wasting stops for service, repairs. No gears, sliding pistons, connecting rods, packing or cups. Almost nothing to wear, break, chip. Pressures to 400 psi. 150 or 200-gallon tanks with stainless steel liners-no rust, scale, corrosion. Other models 100 to 300 gal. tanks.

Porta® spray-pump combines high output performance with unrestricted range in a moderately priced unit. Carry it on your pick-up truck; take it in a boat. Pump from barrels, tanks, or any other type of container. Positive piston pump handles all sprayable materials. Porta spray-pumps are available in models with outputs of 3, 5 and 10 gallons per minute. Pressures to 400 pounds.

Write for these complete catalogs on Hudson power sprayers and dusters: No. 460 and No. 4601.

Peerless compact power sprayer handles any sprayable materials with pressures up to 400 pounds and at five gallons per minute output. Compact size and three wheel design provide exceptional maneuverability; easy to move by hand into places other high output sprayers cannot go. Two-wheel and skid models in 50, 100, 150, and 200-gallon tanks with either stainless steel or Endurall® bonded liners. Also Matador®, 15 to 100 gals.



Porta® mist blower fits comfortably on your back. Padded back rest, straps. Weighs 29¼ lbs empty. Lightweight plastic materials. Goes wherever you can walk or crawl. Lets you spray areas inaccessible to any other type power sprayer. Applies liquid, dust or granules. Easily converted to flame thrower. Finger-tip controls. Wide cone and angle nozzles included. Smaller, lighter model also available.



H. D. HUDSON MANUFACTURING COMPANY

*Trademark

589 E. Illinois St., Chicago, Illinois, U.S.A., 60611



Create weed-free roadside beauty at reduced costs with Amchem's Amino Triazole Weed Killers

Whatever weed eradication problems you may have—on the turnpikes or farm-tomarket roads—Amchem has a proved non-selective herbicide to help lower labor crew costs and boost your right-of-way maintenance efficiency. Compare the benefits of these Amchem amino triazole formulations:

AMCHemi

FIRST NAME IN HERBICIDE RESEARCH

AMIZOL[®] provides outstanding, economical kill of weeds and annual grasses. Applied to growing vegetation, it moves throughout the weeds' system to kill roots. Controls most annual broadleaf weeds and grasses. Very effective on poison ivy, poison oak and many other woody plants. A dry, soluble concentrate formulation.

AMITROL-T gives complete kill-out of deeprooted perennial weeds like Canada thistle, poison ivy, quackgrass, wild blackberry and other weeds and brush. This systemic weed killer moves through sprayed foliage to vital growth centers and completely kills roots—everything! Leaves no residue in soil. A water soluble liquid concentrate.

WEEDAZOL[®] is a soluble powder that gives the same outstanding herbicidal action as Amitrol-T. Dissolves into true solution after one mixing ... no agitation required in tank.

WRITE NOW FOR COMPLETE FACTS ON AMCHEM'S AMIZOL, AMITROL-T & WEEDAZOL.

AMCHEM PRODUCTS, INC. . AMBLER, PENNSYLVANIA







and NEW 8' and 10' seeders

are not FREEbut almost!

The savings on seed alone will often pay for your Brillion landscape seeder in just a few days of use. And that's only the beginning.

A Brillion conditions the seedbed and seeds in one pass — without additional help, equipment, or operations. Its front rollers crush lumps, press down small stones, and pack the soil into a clod-free seedbed — exclusive brush agitators accurately meter out seed even at heavy seeding rates and the smaller rear wheels gently firm the moist earth around the seeds for fast, complete germination and healthier growth. The result: Lush carpets of lawn at half the conventional seeding rate.

So give yourself a Brillion landscape seeder -5'4'', 8' and 10' seeding widths. It pays for itself in a few days of use. Send coupon.



BRILLION IRON WORKS, INC. Dept. LS-59-5, Brillion, Wis. 54110		
Please send information on:		
 □ 5'4" Seeder □ New 10' Seeder □ New 8' Seeder □ Name of nearest Brillion dealer 		
Name		
Address		
City		
StateZip		

WEEDS TREES

FORMERLY WEEDS AND TURF

May 1966 Volume 5, No. 5

Features:

How to Diagnose Tree Diseases By Dr. P. P. Pirone and Dr. Robert S. Halliwell	14
Plants Need Minor Elements By Vernon W. Olney	18
Can Herbicides Be Effectively Impregnated Into Asphalt? By William J. Bowmer and Wayne G. McCully	22
Faulty Construction Is Cause of Problems in Athletic Turf Duich Tells Minnesota Turf Management Short Course By Josephine B. Nelson	24
Performance of Bluegrass Varieties Clipped at Two Heights By A. G. Law	26
What Good Is a Sod Growers Association? By Robert M. Warren	32

Departments:

Editorial: We Wonder at the Wisdom 6
WT&T Mailbox10
Know Your Species: Witchgrass
Meeting Dates
Classified Ads44
Advertisers Index
Trimmings

JAMES A. NELSON Editor and Publisher

MICHAEL I. LAH, JR. Production Manager

D. BUNKIN Circulation Supervisor Advertising Representatives National Headquarters 1900 Euclid Avenue Cleveland, Ohio 44115 Phone: Area Code 216⁺771-4169

Chicago 60601 Peck & Billingslea, Inc. 185 North Wabash Ave., Suite 1809 Phone: 312+DEarborn 2-0292-93

> New York City 10017 Billingslea & Ficke 420 Lexington Avenue Phone: 212+532-1632

WEEDS TREES AND TURF is published monthly by Trade Magazines. Inc. Executive, editorial, and advertising offices: 1900 Euclid Ave., Cleveland, Ohio 44115. Publication office: Corner of East North St. and Cadwallader St., Fostoria, Ohio. Send all correspondence to WEEDS TREES AND TURF, 1900 Euclid Ave., Cleveland, Ohio 44115. Single Copy Price: 50 cents for current issue; all back issues 75 cents each. Foreign \$1.00. Subscription Rates: U.S. and possessions, 1 year \$3.00; 2 years \$5.00. All other foreign subscriptions, 1 year \$4.00; 2 years \$7.00. Change of Address: Three weeks advance notice is necessary for change of address. Both old and new address must be given. Post Office will not forward copies. Third Class postage is paid at Fostoria, Ohio.

Contents of this Issue © Trade Magazines, Inc., 1966

Builds fast, luxuriant turf this new, proven way



one-step HYDRO-MULCHING

seeds or sprigs, fertilizes and mulches, colors and establishes turf faster than any other method . . . using the Bowie Hydro Mulcher. Proven by leading agronomists, coastto-coast and abroad.

Write for "Facts about Hydro-mulching" today!

BOWIE MACHINE WORKS TEXAS DEDERS DEDERS SPECIAL SOLUBLE

FERTILIZERS

Completely chelated all purpose feeds Contain all necessary trace elements in a completely available form. - - Contain very effective color tracers - - Contain effective penetrating agents. - -

Ideal for all types of foliar, turf and root feeding. Compatible with all commonly used spray materials. The finest soluble fertilizers ever made! Try them and see! Inquire from your jobber or write direct to us for further information.

ROBERT B. PETERS CO., INC. 2833 PENNSYLVANIA ST. ALLENTOWN, PA.

We Wonder At The Wisdom

The other day we came across a suggestion that nurserymen and sod growers might find an answer to complaints about rising prices and taxes on land next to cities by taking advantage of those skyrocketing land values and consider their property as an investment that can be sold at a profit.

Since nursery operators grow their crops in moveable containers, and sod growers strip their land, the counselors say these growers don't have to tie up large amounts of money in permanent improvements on their growing grounds. For that reason, the advice is, these growers might well buy land as it starts to increase in value because of city expansion, and plan to sell it a few years later at a handsome profit.

Higher taxes, which go along with rising land values, should not be a serious problem because nurserymen don't need the tremendous acreage and per-acre income is high compared to surrounding farm land, according to R. Bruce Ricks.

Many a nurseryman now feels he must sell when property taxes begin to rise and move to an inexpensive site, the University of California Graduate School of Business staffer commented recently at an industry meeting. Instead, he recommended, nurserymen should buy close-in land which will be converted to urban use more quickly, land which is entering the "predeveloped" stage of rapidly rising values. At first blush this does indeed look like an easy way to make a relatively fast buck. But we wonder.

In the first place, most nurserymen, and sod growers, have a sizeable investment in the cultivation and development of their land. Not all nursery stock is grown in bots, particularly trees and many ornamentals. And sod growers don't vet raise turf on flats. The land on which these growers nurture their crobs requires constant, tender care through fertilization, maintenance of the right balance of chemical elements, and irrigation. They do indeed have a considerable investment in their soil. It isn't always easy to find suitable land on the nearby fringes of promising metropolitan areas, nor to change addresses.

The idea of such land speculation is an intriguing one, but we wonder at the relative costs involved in such maneuvering over the finally-tobe-realized profit a grower would get. And, there is always the risk that property values may drop or that projected population movements may not materialize.

WEEDS TREES AND TURF is the national monthly magazine of urban/industrial vegetation maintenance, including turf management, weed and brush control, and tree care. Readers include "contract applicators," arborists, nurserymen, sod growers, and supervisory personnel with highway departments, railways, utilities, golf courses, and similar areas where vegetation must be enhanced or controlled. While the editors welcome contributions by qualified freelance writers, unsolicited manuscripts, unaccompanied by stamped, self-addressed envelopes, cannot be returned.



Reduce Herbicide Drift the low-cost way with

VISTIK* Hydroxyethyl Cellulose

VISTIK is an economical water-soluble thickening agent which efficiently reduces herbicide spray drift. For example, when spraying herbicide at a rate of 12 gallons per acre, the cost of using VISTIK is only 60¢ per acre. No special or expensive equipment needed. Your present air and ground equipment can be employed to apply VISTIK sprays. More profitably, too, for VISTIK can be used under conditions which ordinary sprays will not tolerate.

Easy to handle and to mix, VISTIK spray solutions can be prepared readily for use in less than 10 minutes. Herbicide potency is unaffected...VISTIK simply thickens the water phase used as a carrier.

A new sound-color movie of an actual VISTIK field trial, available through your local Hercules representative. Just fill out the coupon, and we will be happy to arrange a showing right in your office! CV66-1A See a demonstration for yourself. Contact the Hercules sales office nearest you, or fill out the coupon below. Cellulose and Protein Products Department, Hercules Incorporated, Wilmington, Delaware 19899.

< movie. nformation about VISTI
nformation about VISTI
ZIP CODE

Applications for clearance of Vistik by State and Federal regulatory agencies are currently in progress

*Hercules Trademark

When Writing to Advertisers Please Mention WEEDS TREES AND TURF

Here's How INSECTICIDE CARBARYL

GUARDS trees, plants and turf against insects

Elm leaf beetles, chinch bugs, leafrollers, Japanese beetles, tent caterpillars, sod webworms and many other insect pests of turf, trees and grounds are controlled by powerful SEVIN insecticide sprays. In fact, you can control 160 different insect enemies of plants with long-lasting, economical SEVIN.

GUARDS against residue and drift worries

not contaminate the soil or streams or ponds.





GUARDS plant growth and beauty

You can use SEVIN carbaryl insecticide to protect the charm and beauty of plants wherever maintenance is required. It pays to apply versatile, safer-to-use SEVIN wherever insects attack.

SEVIN is the regsistered trademark of Union Carbide Corporation for carbaryl insecticide.











This year use **SEVIN** carbaryl insecticide!

Don't wait for insects to attack. See your supplier now for SEVIN to guard turf and ornamental plants from insects the better SEVIN way. Union Carbide Agricultural Products, 270 Park Avenue, New York, N. Y. 10017.

UNION



ARBIDE PRODUCTS

AGRICULTURAL

Says It's Safer to Notch Tree

I have just read with interest the article, "Tricks of the Tree Trade," in your Feb. 1966 issue. I certainly wish to take issue with the author, as he is teaching a method of falling a tree that is positively the most dangerous and foolhardy thing a tree cutter could do. Your author calls this a hinge cut and two diagrams and one photo indicate falling a tree with a back cut only. This would get you fired in my organization as a serious violation of safety rules.

It is practical to use a thick hinge to slow the fall of a tree or to make it hang on the stump, but every tree over six inches in diameter should be notched first.

A chain saw operator that attempts to fall a tree with a back cut is placing his person in serious jeopardy. The minute a cut like this is opened, there is the possibility the tree will split up and the butt will shoot back, sometimes at tremendous speed. I know of two fatal accidents in this area that happened in just this fashion.

I would like to suggest as a first-class safety rule: "Never fall a tree over six inches diameter without first cutting a notch."

I enjoy your magazine very much and am very happy to see that it includes articles of interest to the arborist.

James W. Taylor Newburgh, N. Y.

20 20 40

Author Bryan's (Tricks of the Tree Trade, WTT Feb. 1966) first day in any tree crew in this area would be his last day.

Casual reflection brings to mind three men killed in this area by barber chairing of trees or limbs cut by his hinge method. The list of property damage claims from this same cause is fantastic. Our crews can "gentle" a tree down on a properly made hinge incorporated in a felling cut, but our own safety standards absolutely rule out the method described by Bryan.

The unfortunate part of the article is that some person who

is unaware of the danger of Bryan's method might try it since an expert recommended it.

Robert C. Gardner

Manager Abalene Spray Service, Inc. Poughkeepsie, N. Y.

We asked for author Bryan's comments to add to this exchange of ideas covering tree felling practices. He answered:

Concerning the "kickback" hazard mentioned in letters from alert tree men, we too have long been aware of this danger. But it is a hazard not only when the "hinge" is used but also with a "fall cut." A tree which is easily split, such as an old hollow Red Oak, which is leaning against the cut or which is tilted with a "pull," is liable to kick back at the butt. And a fall cut is no insurance against a kickback, though in many cases it may prevent it. But the most dangerous kickback is from a fall cut. because the tree will be falling faster, and the kick-back will be sharper.

We feel our article dealt ade-



On Stream

You're "on stream" when you watch, and learn from, equipment demonstrations like the one on the left, staged at a recent shade tree meeting; and you're also on stream if you turn to WEEDS TREES AND TURF each month for how-to-do-it information in all three phases of vegetation maintenance and control: turf management, tree service, weed and brush control. If you don't get WTT every month, or if you have to borrow a copy from your colleagues, why not subscribe today? One year is \$3, two years for \$5.

WEEDS TREES AND TURF

WEEDS TREES AND TURF 1900 Euclid Avenue Cleveland, Ohio 44115

ORDER NOW!

Please enter my subscription at once so I can count on keeping up to date each month with all that's new in vegetation maintenance and control.

Name	Position
Firm	. Type of Business
Street Address	
City	State ZIP
Check Enclosed	d 🗌 Bill Me