How to Use the New

Turfgrass COLORING Compounds

GREEN GRASS may turn yellow or brown, for a variety of reasons: natural dormancy, drought, overuse, insect damage, chemical damage, mismanagement, or disease.

When grass browns out, it immediately loses its usefulness. Turf managers faced with any of the above situations may find turf colorants helpful.

This article describes what turf colorants in general are good for, what is involved in application, and the different qualities possessed by each.

At the outset, we should state that turf colorants are not turf management tools in the strict sense of the term. Colorants do not nourish grass, they do not protect grass against pests, and they do not correct soil conditions which often lead to unsightly brown-outs. They simply color lawns, or patches of turf, to make grass look better. Colorants should not be substituted for good cultural practices when true deficiencies are the cause of yellowing, but there is a definite place for artificial turf coloring.

Colorants can be of special value in the South and West. Sub-tropical grass normally planted in these regions enters dormancy when cool weather sets in. The cultural practice used to make these lawns appear green is to overseed or "winter-seed" with inexpensive cool season or temperate zone grasses.

When grass turns brown in the fall, or earlier if attacked by diseases or insects, turf managers will find the new turf colorants useful. They'll open new avenues of profit for the lawn maintenance company, and help the golf course superintendent, etc., avoid complaints!

Research with colorants has shown that application of a specially formulated emulsion paint, which coats the dormant grass blades, does no harm to grass plants, and makes the lawn green for the remainder of the season. The green color of most formulations now available persists until grass grows up from the bottom, and painted blades are removed with a mower. Observers notice no significant difference in color of the properly painted portion of a grass blade and that portion showing new growth after the dormant period. Colored dormant turf must still be watered regularly.

In northern regions, where well-selected grasses do not enter winter dormancy, but thrive in winter, colorants may temporarily cover insect or disease damage, after proper chemical controls have been applied. During drought, grasses may yellow because of neglect, and after proper watering, may need to "green up" quickly for the sake of appearance. Colorants can be used here too, though manufacturers suggest that turf managers use a probe to test soil moisture on turf which has been treated in a drought area; it may look good, but if not watered roots will die. This advice applies to managers in the South and West, too.

Colorants may be used to cover up a mistake or an accident, such as fertilizer or chemical burn, or even dog urine stain. Such treat-

ment requires more skill and a good eye for color, because the applicator must match the natural green as much as possible, if a spot treatment is applied. Otherwise, total treatment is recommended.

Colorants can act as stopgap measures, used before cultural or chemical treatments, depending upon time of year. For instance, a homeowner may call for service to have a lawn treated for browned-out crabgrass in the early fall. Crabgrass dies out in the heat of late summer and leaves brown spots in turf when it goes.

An operator may use a preemergence crabgrass preventive which is best applied in the spring. In the meantime, artificial colorants can be used to cover dead crabgrass spots and give the lawn a good appearance until the following spring when it is treated.

Several manufacturers of colorants state that their products are used on football or baseball fields. Colorants give the turf a better appearance near the end of the season. This impresses spectators and color television audiences, since games appear on nationwide TV with increasing frequency.

A golf course which had a "rough season" may want to color grass for a special occasion. Again golf matches on color television make really green grass imperative.

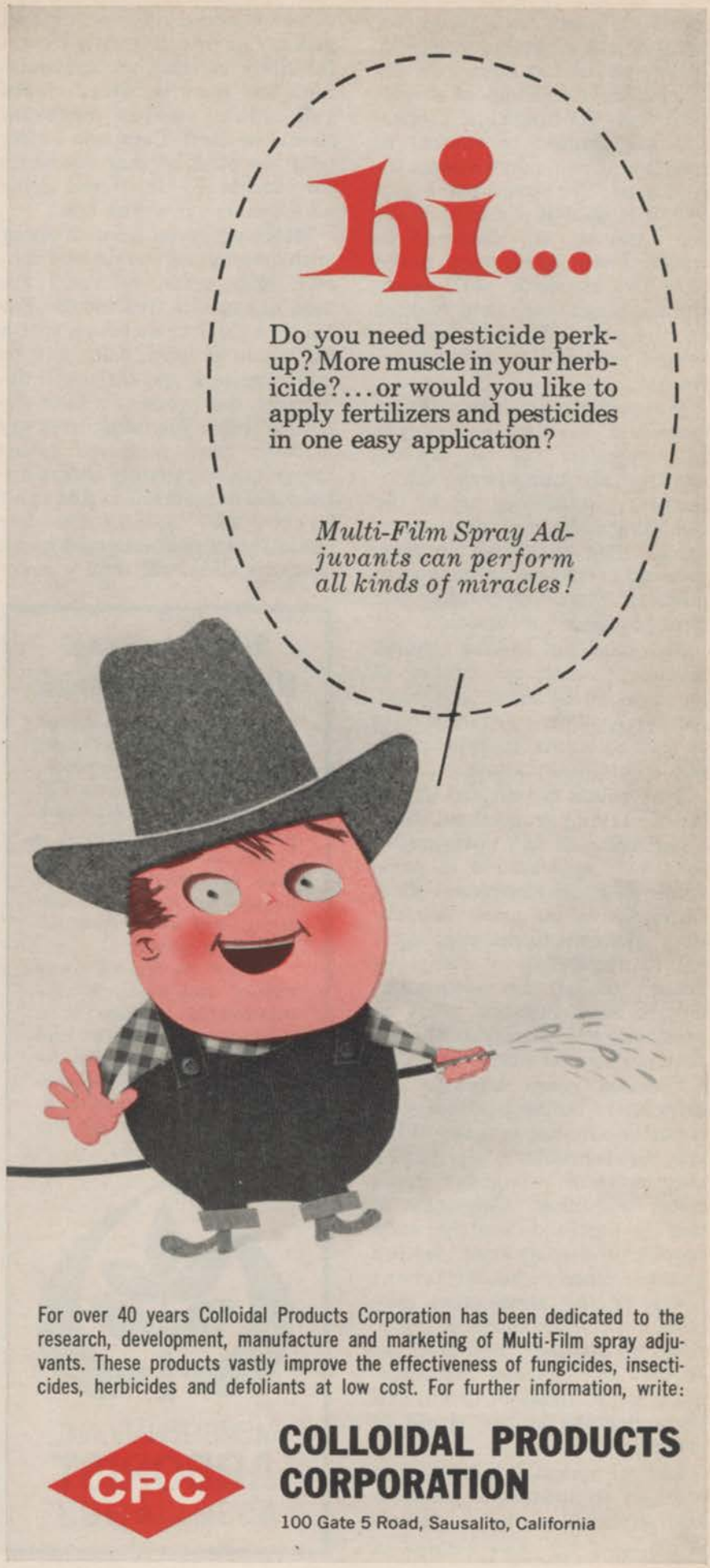
What Are Colorants?

Most colorants consist of an emulsifiable paint pigment, similar to house paints, but with no toxic properties to animals or plants. Pigment mixed with water and sprayed on turf coats grass blades; no grass color beneath shows through because these paints are opaque.

Manufacturers claim tests show paints are fade-resistant, harmless to grass, and permanent on grass; that is, once dried, the green color will not resolubilize nor rub off.

One material is an exception, and it will be well to discuss it here. Auragreen* is a mixture of

*See end of article for list of manufacturers of compounds marked *.



malachite green and crystal violet dyes and auramine fungicide. It may be used at a low rate for a temporary touchup of discolored turf. Its fungicidal properties are limited to control of incipient brown patch disease infestations. For brown patch control, it is used at a rate of ½ oz. per 1,000 sq. ft., dissolved in water. The manufacturer warns that the material will stain clothes, shoes, etc. until it dries on the grass. It also shows a "slight tendency to stain" if rewetted.

Fungicidal properties of Auragreen are not long lasting, but color persists "up to several months," according to the manufacturer, depending upon the use, irrigation, and mowing of grass. The company suggests mowing be suspended as long as possible after application for most "mileage" of the color.

This material can be applied frequently with no danger of harm to turfgrasses. Although Auragreen is in a separate class of turf colorants, it bears study as a special-use material.

Turf paints are diluted in water at varying proportions: from 1 part colorant to 7 parts water, to 1 part colorant to 15 parts water. Dilution directions reflect "strength" of the paint formulation. Most manufacturers say 1 gal. of finished spray will cover about 500 sq. ft. adequately. Others may instruct users to spray twice or three times to get "desired" green intensity.

"Desired green intensity" is difficult to define because color is partly a matter of taste. What may be desirable to one person may seem a repugnant green color to another. Greenness of turf is partly dependent upon regular maintenance which grasses receive, so different lawns of the same grass may have a different shade of green. Also, no standard has been set so that one can say that bluegrass is "x" shade of green, and bermudagrass is "y" shade of green.

Cost of material, important to contract applicators, is reflected both in the dilutions for "desired green intensity" and number of passes necessary for a "desired green." At this time, only a careful study of label recommendations and manufacturers' claims can indicate which material should be used. Companies offer trial samples, so that operators can decide by trial and error which material works best.

Matching green color of spray with green grass should be a concern only when colorants are used as touchup treatments. For an overall treatment of a browned-out lawn, color will be more uniform and taste will determine the proper or most-desirable shade. Manufacturers say to wait until southern lawns brown out completely before application of material so that color on turf will be uniform. For overall treatment on green grass, opaque paints will totally cover all grass and impart uniform coloration, but the consideration here is the high variance of color with a neighbor's lawn or other adjacent turf.

Arborists Adopt National Trademark

A stylized tree, enclosed by an outer spade-shaped shell signifying protection, will identify more than 200 members of the National Arborist Association.

The new symbol will be used in advertising, trade papers, on trucks and uniforms, and will appear on all printed matter.

"This trademark was chosen unanimously by the membership because it is distinctive, modern and identifies our profession instantly with a quality connotation," says Winston E. Parker, president of the association.

MEMBER NATIONAL
ARBORIST
ASSOCIATION

Getting Ready For Green Spray

To prepare an area for coloring spray, one should mow the grass as short as is practicable or recommended, remove clippings, and rake lawn to remove any trash or debris. The shorter the grass, the less material is required to coat the leaf blades to the crown. Grass actually growing should not be clipped closer than customary, however, because food production capability of the roots might be impaired. No more than a third of the leaf blade of healthy grass should be removed at one time. This factor will not enter into the preparation of a dormant lawn since leaf blades are nonproductive. Experience will reveal how much material will treat 1,000 sq. ft. of grass at a certain height.

As we pointed out in the beginning, fall treatments of some athletic fields for the sake of appearance are sometimes requested. More coloring will be needed on such a playing field, because grass is usually left at maximum height.

Since paint pigments are relatively permanent, applicators must be careful not to spray adjacent concrete or wood. Some manufacturers instruct users to wet down surrounding concrete before applying color spray. Then if some paint drifts, or splashes onto concrete, it can be rinsed off quickly with water before it sets. Once dry on concrete, scrub brushes, steel wool and sand-rubbing are recommended to alleviate the "giveaway" green stain.

For the greatest safety, users are advised to mask off surrounding concrete drives, or curbs and foundation walls with paper or tarpaulins so that emergency scrubbing of these stainable surfaces will not be needed.

Clothing, too, may be affected by turf color sprays, since paint which gets on the applicator's clothing and shoes does not read-

(Continued on page 27)

How to Use the New Turf Coloring Compounds

(from page 18)

ily come off. Coveralls, which are expendable or disposable, and rubber boots to protect the sprayman, are advised.

Grass should be dry when color spray is applied; while the turf may be moist, there should be no dew or water droplets on grass blades, since these will prevent color from sticking. Spraying can be performed any time the temperature is above 40°F. In the lower temperature ranges above 40°, drying is slower. Normal drying time averages 15 minutes to ½ hour. Some companies suggest that travel on treated grass be avoided for an extra hour after grasses "feel" dry. Formulations should not be frozen. Gradual thawing without agitation will restore frozen colorants.

How To Spray

Suppliers recommend ordinary hand sprayers for small jobs, and power rigs with booms and hand guns for large jobs. One company produces a special applicator for use with its grass colorant.

Even though power sprayers can be used on large jobs, smaller sprayers might help apply spray to delicate areas along walks and near structures.

For large areas, fine mist spray nozzles are recommended to get uniformity of coverage. In close areas, where misting and drift must be avoided, coarser nozzles or reduced pressure can be used to prevent spray on driveways, etc.

Working pressures for both hand and power sprayers should be from 30 to 60 lbs. psi. One manufacturer suggests that nozzles be mounted on a boom 10 in. apart in opposite directions at 10 to 15 degrees off perpendicular to give desired coverage. The boom should be high enough to be sure all grass blades are sprayed from both sides.

For boom rigs, it is advised that booms be rear-mounted so that wheel marks won't show. Some hand-controlled, small power outfits can be pulled instead of pushed. Spraymen with hand guns should work backward, so they do not track through portions which have just been painted.

Mixing instructions vary with the product. In general, however, most recommend basically 1 gal. of finished spray mix to treat each 250 to 500 sq. ft. Sometimes this recommendation is hidden within the directions. One product label may instruct the user to make up a batch of 16 gal. and, on a hasty reading, the user may get the impression that 16 gal. will treat 16,000 sq. ft. Careful examination of the label tells the reader that 16 gal. will treat 16,000 sq. ft. once, but here again, the "desired green intensity" may not be obtained unless "2 or 3" or even "3 or 4" passes with the spray machine are made. This cuts mileage down considerably. Applicators should consider the greatest amount of greenness per dollar spent. Costs per gallon of spray concentrates range from $5 to over $15 per gallon. Prospective users should read label directions and brochures carefully to be certain they know what they are getting.

Directions for most spray concentrates suggest that users partly fill sprayers before adding concentrates, so that the paint emulsion will not adhere to tank sides. Backflow or recycling mixing is not advised because of excessive foaming, but mechanical agitation is recommended.

Since paint residues may tend to harden in the spray rig after application, producers tell users to rinse equipment quickly after use with either plain water, or in some cases, water with some detergent added. Nozzles should receive special cleaning attention.

For very small jobs, a hose-proportioner device may be used to draw and mix concentrate and water; however, these devices normally do not have the desired fineness of nozzle opening and even coverage will require more spray. Thus there may be some waste with spray penetrating into the soil.

What To Watch Out For

In some latitudes, midwinter warm spells may cause grass to begin growth. If the turf has been painted, and growth begins, then stops and enters dormancy again, the spray job will be ruined. Dormant turf will show its "yellow roots."

Some formulations can be combined with small amounts of phenoxy herbicides, such as 2, 4-D. This may be important to applicators in the South and West where dormant lawns weaken and permit broadleaf winter weeds to invade; 2,4-D in a paint mix will destroy most broadleaf weeds. Do not, however, try to mix fertilizers with paint emulsions, manufacturers warn.

Several colorant producers rec-

Northeast Weed Control Conference's executive committee gathers to begin making plans for its 1966 conclave, planned Jan. 5-7 at the Hotel Astor in New York City. Dr. Gideon D. Hill, (seated center) supervisor of herbicide research for E. I. du Pont de Nemours, Inc., Wilmington, Del., is 1965 president of the Conference. Other committee members are: (standing from left) Dr. R. A. Peters, University of Connecticut, Storrs; John E. Gallagher, Amchem Products, Inc., Ambler, Pa.; Eric W. Ashton, Hooker Chemical Co., Niagara Falls, N.Y.; Dr. John Ahrens, University of Connecticut. Seated from left are: Dr. Homer M. LeBaron, Geigy Chemical Corp., Ardsley, N.Y.; Dr. Richard D. Ilnicki, vice president, Rutgers University, Rutgers, N.J.; Dr. Hill; Dr. John A. Meade, secretary-treasurer, University of Maryland, College Park; and Dr. Arthur Bing, secretary-elect, Cornell University, Farmingdale, N.Y.

ommend their products for use on new or model home lawns to "increase the sales potential." Coloring of lawns in a development will certainly make homes appear more attractive; and the idea seems fine if the grass which is sprayed is quality turf to begin with. However, applicators should avoid collaboration with unscrupulous developers who may want to spray a "lawn" of pasture sod and pass it off as quality grass.

Artificial turf-colorant sprays may be considered as an added service for turf maintenance contractors, but as pointed out earlier, color sprays are not a substitute for good maintenance practices.

List of Suppliers

Following is a list of products, manufacturers and their addresses, for those who wish to inquire further about turf color sprays:

Auragreen*; Mallinckrodt Chemical Works, 2nd & Mallinckrodt Sts., St. Louis, Mo. 63160.

C-9*; Cornell Chemical & Equipment Co., 1115 N. Rolling Rd., Baltimore, Md. 21228

Envy*; S. C. Johnson & Son, Inc., Racine, Wis.

Greenstuff*; Krieger Color & Chemical Co., 6531 Santa Monica Blvd., Hollywood 38, Calif.

Greenzit*; W. A. Cleary Corp., New Brunswick, N. J.

Lawn Tint*; Luminall Paints, Inc., 3850 Westside Avenue, North Bergen, New Jersey.

Nu-Type* Green Lawn Spray; The Gregg Co., Box 149, Riverton, N. J.

Stayz-Green*; O. E. Linck Co., Inc., Jct. Routes 3 & 6, Clifton, N. J. 07015

Winterlawn*; Graniteville Co., Graniteville, S. C.

*Trademark names.

Products made by Graniteville Co., Luminall Paint Div., The Gregg Co., and O. E. Linck Co., have the same patent number: 2,870,037.

New Bolens Husky 1000 has extrawide tires to protect turf, 6 forward and 2 reverse speeds.

Two Unusual New Mowers Unveiled by Bolens Div.

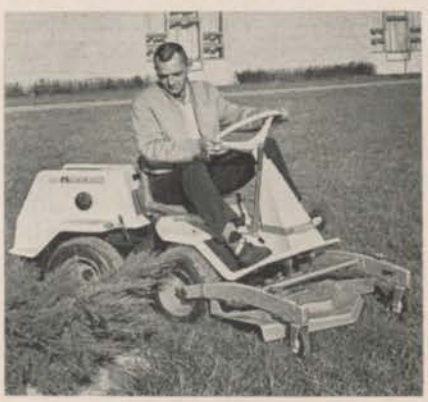
Two new "workhorses" designed for professional turf maintenance have been announced by Bolens Div., FMC.

The new Husky 1000, said to be designed for all-day duty on the largest lawns, park areas, and country-sized gardens, is powered by a 10-hp Wisconsin short-stroke, 4-cycle, industrial-type engine. It has a power range lever with six speeds forward and two reverse, and a Bolens exclusive controlled differential for elimination of wheel spinning on heavy jobs.

The compact Estate Keeper is described by the manufacturer as a radical departure from compact tractor design. It can circle trees and shrubs, cut square corners, and edge up to walks.

For complete details, write Bolens Div., FMC Corp., Dept. 78, 215 South Park St., Port Washington, Wis.

An ideal way for lawn spray firms to offer contract mowing at moderate investment is found in Bolens' Estate Keeper, company says.



Meeting Dates

New York State Nurserymen's Assn. Summer Meeting, Cornell University, Ithaca, June 7-8.

Mississippi State Turfgrass Conference, Mississippi State University, State College, June 14-15.

Missouri Assn. of Nurserymen Convention, Holiday Inn, Columbia, June 20-22.

International Shade Tree Conference Western Chapter, Miramar Hotel, Santa Barbara, Calif., June 20-23.

Hyacinth Control Society, 5th Annual Meeting, Seabreeze Holiday Inn, Palm Beach, Fla., June 28-30.

Indiana Assn. of Nurserymen Summer Meeting, Richmond, Aug. 3-4.

Massachusetts Nurserymen's Assn. Summer Meeting, Mahoney's Rocky Ledge Nursery, Winchester, Aug. 4.

Louisiana Nurserymen's Assn. Meeting, Municipal Auditorium, Lafayette, Aug. 5-7.

Southern Nurserymen's Assn. Meeting, Golden Triangle Motor Hotel, Norfolk, Va., Aug. 8-10.

Midwestern Nurserymen, Summer Seminar, J. V. Bailey Nurseries, St. Paul, Minn., Aug. 9-11.

Michigan Assn. of Nurserymen Annual Conference, Kellogg Center, East Lansing, Aug. 11-12.

Rutgers University Lawn & Utility Turf Field Day, New Brunswick, N.J., Aug. 11.

Rutgers University Golf & Fine Turf Field Day, New Brunswick, N.J., Aug. 12.

Texas Association of Nurserymen, Shamrock Hilton Hotel, Houston, Aug. 15-18.

International Shade Tree Conference Annual Convention, Washington-Hilton Hotel, Washington, D.C., Aug. 15-20.

Midwest Regional Turf Field Days, Purdue University, Lafayette, Ind., Aug. 16-17.

Pennsylvania Grassland Council "Forage Progress Days," Milton Hershey Farms, Hershey, Aug. 27-28.

Arkansas Nurserymen's Assn. Annual Meeting, Arlington Hotel, Hot Springs, Aug. 29-31.

Illinois Turfgrass Field Day, University of Illinois, Urbana, Sept. 10, 13.

Penn State Turfgrass Field Day, on campus, University Park, Pa., Sept. 15-16.

Tennessee Nurserymen's Assn. Convention, Holiday Inn, Nashville, Sept. 19-20.