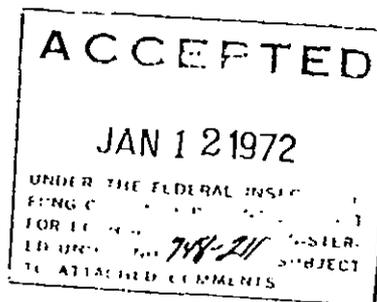


SIDE ONE

Chem Hoe^R for Post Emergent Control of Wild Oats, Volunteer Grains,
and Winter Annual Grasses in Sugar Beets (Major Head)

Weed control is one of the most important of the many factors which affect your sugar beet profits. Weeds compete for light, nutrition, and moisture. They drastically reduce crop stands and yields--a single weed per foot of crop row can cut your yields by tons per acre.

Weed control is important to crop emergence, seedling development, and machine thinning. While most herbicides will effectively control weeds at planting time, they lose their effectiveness for weeds that germinate later in the season. Usually, by thinning time, the winter annual grasses, volunteer grains, and wild oats which are common to the sugar beet producing areas of the Southwest, are already threatening your crop. That's when you need Chem Hoe. Chem Hoe gives excellent post-emergent weed control of these weeds even when they are four to six inches high.



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SIDE TWO

Chem Hoe IPC FL4 and 15G (Major Head)

Weed Control (Minor Head)

Chem Hoe effectively controls volunteer grains (wheat, barley); wild oats; winter annual grasses (rabbit-foot, rye, fox-tail, brome grass, and canary grass); and chickweed

Formulations (Minor Head)

Chem Hoe FL4 is a prewetted, flowable formulation containing four pounds of finely ground, active isopropyl carbanilate (IPC) per gallon. FL4 is packaged in a five-gallon plastic pail. It readily mixes with water and can be premixed or added directly to the spray tank filled with water; however, bypass or mechanical agitation is necessary to maintain a uniform suspension during the mixing and spraying operation.

Chem Hoe 15% Granular is a free-flowing sand-base product of uniform particle size, packaged in 50-pound multiwall paper bags.

Application Schedule (Minor Head)

Usually, any time from November through March, when you see germinating grasses and grains in your sugar beet field you'll know it's time for an application of Chem Hoe. Applications can be made any time after the beets are beyond the two, true-leaf stage or well-rooted. Treatment usually begins after thinning, but, depending upon when the weeds germinate, it may take place until the

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should be made just prior to irrigation.

How to Apply

(Minor Head)

The method of application and formulation will depend on the type of irrigation.

Furrow irrigation: In furrow-irrigated fields, the Chem Hoe FL4 liquid spray solution is applied by ground spray equipment which directs the full broadcast dosage into the water furrow to just above the waterline. In *double-row* beets, every row must be treated and thoroughly watered to leach the herbicide to the center of the beds. In *single-row* beets, every row is usually treated and watered, unless the soil is coarse textured and sandy. On the latter type soil, the chemical can be concentrated in every other furrow and the field thoroughly watered to leach the material throughout the bed to the dry furrow.

A typical ground application spray device is the "skid-rig," equipped with leaf-lifter attachments to ensure the chemical reaches the soil. Spray equipment should be clean of dirt, rust, or oily residues which may affect the suspension qualities, and properly calibrated to ensure uniform distribution during the spraying operation.

Sprinkler irrigation or rainfall conditions: An aerial application of Chem Hoe 15% Granular material can be made before the

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beets reach the swirl stage (four to six inches tall) when there is no danger that granules will hang up in the crown of the beets, or be deflected into the furrow and cause uneven distribution of granules. The application should be made within three days of a planned irrigation or anticipated rainfall.

Proper equipment calibration and overlapping patterns are necessary to obtain uniform distribution. The normal flying pattern is 26- to 33-foot swaths, and 25- to 30-foot altitude, to allow for complete overlap of distribution.

Rates of Application

(Minor Head)

The proper rate of application is determined by factors such as soil types, temperature, time lapse between treatment and irrigation, and stage of weed and beet growth. In general:

Chem Hoe FL4

Use 4 to 6 quarts in 40 or more gallons of water per acre.

Chem Hoe 15% Granular

Apply 27 to 35 pounds of product per acre.

Things to Remember

(Minor Head)

1. Use Chem Hoe FL4 in ground equipment followed with furrow irrigation, and Chem Hoe 15% Granular in aircraft application under rainfall or sprinkler irrigation conditions.
2. The rate of application will vary, depending on temperatures, soil types, time lapse between treatment and irrigation, and the size of weeds and beets at the time of application.

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- 3. The chemical will volatilize more rapidly above 55°F, so make the treatment just prior to the irrigation, preferably beginning irrigation immediately thereafter, or within three days of application.
- 4. The method of irrigation, whether rainfall, sprinkler, or furrow irrigation, will determine the desired type of material and method of application.

PPG Industries, Inc., the seller, warrants that the product conforms to its chemical description and is reasonably fit for the purpose stated on the label when used in accordance with directions under normal conditions of use, but neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, express or implied, extends to the use of this product contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to seller, and buyer assumes the risk of any such use.

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Picture A - Caption

Chem Hoe IPC controlled canarygrass in the row of sugarbeets on the left. Canarygrass grew uncontrolled in untreated row. Photograph was taken in the Imperial Valley, California.

Picture B - Caption

Chem Hoe IPC controlled wild oats, volunteer barley and canary grass in sugar beet field near Tolleson, Arizona. Right side of field was untreated.

Picture C - Caption

Typical "skid" with leaf-lifter attachment used in applying Chem Hoe FL4.

Picture D - Caption

Chem Hoe 15% granules applied by airplane controlled seedling volunteer barley in a young beet field. Untreated area in center of picture was covered with tarp to show comparison. Photograph was taken in San Joaquin Valley, California.

Picture E - Caption

Illustration of Chem Hoe FL4 and 15G containers.

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4000

5000

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CHEM HOE 15-G



SELECTIVE HERBICIDE

CHEM HOE 15-G

15% GRANULAR
IPC (PROPHAM)
SAND CORE BASED

CHEM HOE 15-G
(SAND CORE BASED)

WARNING

NET CONTENTS 50 POUNDS



ACCEPTED

OCT 30 1968

UNDER THE FEDERAL INSECTICIDE
FUNGICIDE AND RODENTICIDE ACT
FOR ECONOMIC POISON REGISTERED
UNDER NO. 748-211

CHEM HOE 15-G

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CHEM HOE 15-G
(SAND CORE BASED)

CHEM HOE 15-G GENERAL DIRECTIONS FOR USE

NOTICE: Use of this product in a manner or at a time or in quantities or on crops other than is accordance with the directions may produce serious plant injury.

GENERAL

The following general directions are supplied for information purposes only. They are believed to be reliable but are in no way guaranteed. While these directions pertain to application under average conditions, insufficient weed control or crop damage may result from differing conditions of soil, temperature, moisture and crop variety. Therefore, before large scale use, this product should be applied on a trial basis under conditions actually encountered. Consult Agronomy Experiment Station Weed Specialists or Agricultural Extension Service Specialists for detailed recommendations of application under various local conditions.

WEEDS CONTROLLED

CHEM HOE 15-G controls many annual grasses and certain annual broadleaf weeds as they germinate. Used according to directions, it will normally give effective control of germinating weeds and young seedlings of the following weeds: Volunteer Corn Cobs, Annual Blue Grass, Annual Ryegrass, Foxtail Barley, Rabbitgrass, Chickweed, Small Flats, Downy Broom (Chenopod), Wild Oats, Retail Fatness and Conyagrass.

In certain areas effective post-emergence control of the above seedling weeds and Chickweed is obtained. Weeds of most control weeds should normally be expected from treatments made after the weeds

are well established. Perennial weeds are not controlled at any stage of growth.

APPLICATION

Application may be made by airplane, helicopter, fertilizer spreader or cyclone spreader. Apply the dry granules as they come from the package. Uniformity of coverage is essential. Before applying CHEM HOE 15-G to a crop area, check your distributor equipment with this specific product. This can be done over tar paper, cloth, a blacking road, or a dark soil area. Do not assume a similar distribution pattern to another granular product which may vary in density, mesh size, or base material. A non-uniform distribution pattern often resulting high and low rates of application may cause crop injury or fail to control weeds.

TEMPERATURE and MOISTURE CONSIDERATIONS

CHEM HOE 15-G breaks down rapidly in warm, moist soil, and therefore has proven most effective when applied during cool weather. One effect of early late plants is through the roots. Entry and activity depend on sufficient moisture to carry the chemical to the root zone. CHEM HOE 15-G also acts on germinating seeds and young seedlings. Therefore, moisture is also needed to encourage seed and germination of a time when maximum CHEM HOE 15-G concentration is present. If rainfall does not occur within two days after application, the field should be irrigated.

This 90 pound bag of CHEM HOE 15-G contains 7.8 pounds of isopropyl N-phenylcarbamate.

CONTAINER STORAGE AND HANDLING

Avoid a contamination of foodstuffs, feeds, fertilizers, seeds, plants, and poultry. Do not reuse container. Destroy by burying in a safe place. Do not store in a dry location. Avoid water or oil soaked floors.

CONDITIONS OF SALE

PPG INDUSTRIES, Inc., the seller, warrants that the product conforms

to its chemical description and is reasonably fit for the purpose stated on the label when used in accordance with directions under normal conditions of use, but neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, express or implied, extends to the use of this product contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to seller, and buyer assumes the risk of any such use.

DIRECTIONS FOR SPECIFIC APPLICATIONS

Use a given rate for over-all coverage except as otherwise indicated. For sticky or hard treated reduce rate of application proportionately.

ALFALFA, LAMARCK CLOVER, WHITE CLOVER, RED CLOVER or CRIMSON CLOVER—Post-emergence—For control of certain annual grasses, uniformly apply 27 to 35 pounds of granules per acre. Make application in winter or early spring after the crop has 3 or more true leaves, preferably. If the weeds are germinating or in the early seedling stage, if rainfall does not occur within 5 days after application, irrigate. Crop foliage should be dry to reduce contact.
FLAX—Post-emergence—For control of certain annual grasses, uni-

formly apply 27 pounds of granules per acre. Make application when the row is 2 to 4 inches high and when the grasses are germinating but before they are over 4 inches high. Flax foliage should be dry to reduce contact. Rainfall or irrigation following application aids control.

SUGAR BEETS—Post-emergence—Uniformly apply 40 pounds of granules per acre when sugar beets are well rooted. Beets foliage should be dry to reduce contact. Irrigate after application.

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