

US ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF PESTICIDES PROGRAMS
REGISTRATION DIVISION (75-767)
WASHINGTON, DC 20460

EPA REGISTRATION NO.

10182-407

DATE OF ISSUANCE

1/30/96

TERM OF ISSUANCE

NOTICE OF PESTICIDE: REGISTRATION
 REREGISTRATION
(Under the Federal Insecticide, Fungicide,
and Rodenticide Act, as amended)

NAME OF PESTICIDE PRODUCT
Surpass 20-G Granular
Herbicide

NAME AND ADDRESS OF REGISTRANT (Include ZIP code)

Ms. Barbara J. Kaminski
Zenca Ag Products
1800 Concorn Pike
P.O. Box 10182-407
Wilmington, DE 19850-5459

PM 25 10182-407

1 of 20

NOTE: Changes in labeling formula differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above U.S. EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby Registered/Reregistered under the Federal Insecticide, Fungicide, and Rodenticide Act.

A copy of the labeling accepted in connection with this Registration/Reregistration is returned herewith.

Registration is in no way to be construed as an indorsement or approval of this product by this Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA sec. 5(c)(7)(A) provided that you:

1. Submit within 90 days of registration or reregistration a copy of your product under FIFRA sec. 5(c)(7)(A) to the Agency and all registrants of similar products to submit such data.
2. Submit three (3) copies of your final printed labeling before you release the product for shipment.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of this label is enclosed for your records.

VKW

ATTACHMENT IS APPLICABLE

SIGNATURE OF APPROVING OFFICIAL

Robert J. Taylor

DATE

1/30/96

2420

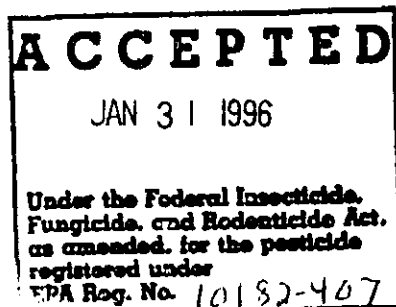
RESTRICTED USE PESTICIDE

Due to Oncogenicity

For retail sale to and use only by Certified Applicators, or persons under their direct supervision, and only for those uses covered by the certified Applicator's certification.

**SURPASS 20-G
Granular Herbicide**

For weed control on Field Corn, Production Seed Corn, Silage Corn and Popcorn



COMPLETE DIRECTIONS FOR USE

**CONDITIONS OF SALE
AND LIMITATION OF WARRANTY AND LIABILITY**

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product should be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of ZENECA or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold ZENECA and Seller harmless for any claims relating to such factors.

ZENECA warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or ZENECA, and Buyer and User assume the risk of any such use. ZENECA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.



5 of 70

In no event shall ZENECA or Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF ZENECA AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF ZENECA OR SELLER, THE REPLACEMENT OF THE PRODUCT.

ZENECA and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of sale and limitations of warranty and of liability, which may not be modified except by written agreement signed by a duly authorized representative of ZENECA.

Made in U.S.A.
ZENECA Ag Products
ZENECA Inc.
Wilmington, DE 19850-5458

4.7.20

KEEP OUT OF REACH OF CHILDREN

WARNING - AVISO

**Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
(If you do not understand the label, find someone to explain it to you in detail.)**

ACTIVE INGREDIENT:

Acetochlor: 2-chloro-2'-methyl-6'-ethyl-N-ethoxymethylacetanilide 20%

INERT INGREDIENTS: 80%

Total 100.0%

EPA Reg. No. 10182-407
EPA Est. No. 407-IA-2

STATEMENT OF PRACTICAL TREATMENT

FIRST AID: Immediately start the procedures below. If further treatment is required, contact a Poison Control Center, a physician or the nearest hospital.

IF ON SKIN: Wash immediately with plenty of soap and water. Remove contaminated clothing and wash before reuse. Get medical attention if irritation occurs.

IN EYES: Immediately flush eyes with plenty of water for at least 15 minutes. Have eyes examined by medical personnel.

IF SWALLOWED: Call a physician or Poison Control Center. Do not induce vomiting. Drink promptly a large quantity of milk, egg whites, gelatin solution, or if these are not available, drink large quantities of water. Avoid alcohol.

IF INHALED: Remove victim to fresh air. Get medical attention if respiratory irritation occurs or if breathing becomes difficult.

**FOR 24-HOUR EMERGENCY MEDICAL ASSISTANCE, CALL 1-800-F-A-S-T-M-E-D
(327-8633)**

**FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident call
CHEMTREC 1-800-424-9300.**

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

WARNING

CAUSES SUBSTANTIAL BUT TEMPORARY EYE INJURY. HARMFUL IF SWALLOWED OR ABSORBED THROUGH SKIN. Avoid contact with skin, eyes or clothing.

PERSONAL PROTECTIVE EQUIPMENT

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants.
- Waterproof gloves.
- Shoes plus socks.
- Protective eyewear.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This product is toxic to fish. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

This chemical demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the groundwater is shallow, may result in groundwater contamination.

Acetochlor has properties that may result in surface water contamination via dissolved runoff and runoff erosion. Practices should be followed to minimize the potential for dissolved runoff and/or runoff erosion.

PHYSICAL AND CHEMICAL HAZARDS

Do not use or store near heat or open flames.

GENERAL INFORMATION

SURPASS 20-G will control many annual grasses and certain broadleaf weeds in field corn, production seed corn, silage corn and popcorn. It should be applied prior to the emergence of weeds. It may be preplant surface-applied or incorporated into the surface 1-2 inches of soil before planting or left on the soil surface during or after planting. Except for minimum or conservation tillage systems, the seedbed should be in good tilth. Dry weather following application of SURPASS 20-G may reduce its effectiveness. Shallow cultivate if weeds develop or if tillage is necessary to improve the physical condition of the soil.

Performance will be improved if rainfall or irrigation is received within 7 to 10 days after application. The amount of rainfall required depends on the amount of soil moisture in the weed germination zone at application, soil type, and organic matter. Generally ¼" to ½" is sufficient to activate this product. Excessive rainfall (intensity/amount) or irrigation after application may reduce control.

SURPASS 20-G will not control emerged weed seedlings.

USE RESTRICTIONS

- Do not apply to the following soils if groundwater depth is 30 feet or less: sand with less than 3% organic matter; loamy sand with less than 2% organic matter; or sandy loam with less than 1% organic matter.
- This product may not be mixed or loaded within 50 feet of any wells (including abandoned wells and drainage wells), sink holes, perennial or intermittent streams and rivers, and natural or impounded lakes and reservoirs. This setback does not apply to properly capped or plugged abandoned wells and does not apply to impervious pad or properly diked mixing/loading areas.
- Operations that involve mixing, loading, rinsing, or washing of this product into or from pesticide handling or application equipment or containers within 50 feet of any well are prohibited unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or washwater, and rainwater that may fall on the pad. Surface water shall not be allowed to either flow over or from the pad, which means the pad must be self contained. The pad shall be sloped to facilitate material removal. An unroofed pad shall be of sufficient capacity to contain at a minimum 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment capacity of 100% of the capacity of the largest pesticide container or application equipment on the pad. Containment capacities as described above shall be maintained at all times. The above specified minimum containment capacities do not apply to vehicles when delivering pesticide shipments to the mixing/loading site. States may have in effect additional requirements regarding wellhead setbacks and operational containment.
- Do not apply this product through any type of irrigation system.

7420

- Do not use flood irrigation to apply or incorporate this product.
- Product must be used in a manner which will prevent back siphoning in wells, spray mixtures or rinsates.
- Do not apply under conditions which favor runoff or wind erosion of soil containing product to non-target areas. To prevent off-site movement due to runoff or wind erosion:
 - Avoid treating powdery dry or light sandy soils when conditions are favorable for wind erosion. Under these conditions, the soil surface must first be settled by rainfall or irrigation.
 - Do not apply to impervious substrates such as paved or highly compacted surfaces or frozen or snow covered soils.
 - Do not use tailwater from the first flood or furrow irrigation of treated fields to treat non-target crops unless at least ½ inch of rainfall has occurred between application and the first irrigation.
- Do not apply this product using aerial application equipment.
- Do not apply when wind conditions favor drift to non-target sites.

GENERAL USE PRECAUTIONS

Read all label directions before using.

- Do not use SURPASS 20-G on any crop other than corn.
- Do not allow SURPASS 20-G to contaminate feed or food.
- SURPASS 20-G should not be stored near seeds or fertilizers.
- All containers of SURPASS 20-G should be kept tightly closed when not in use.
- Do not overdose or use rates higher than specified on this label.
- If crop treated with SURPASS 20-G is lost, corn may be replanted immediately. Do not make a second application of SURPASS 20-G.
- ROTATIONAL CROPS: Corn, soybeans, sorghum or tobacco may be planted the spring following application. Wheat may be planted 4 months after application.
- Do not rotate to crops other than corn, soybeans, sorghum, tobacco, or wheat.

8/20

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labelling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protection equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

Exception: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls.
 - Waterproof gloves.
 - Shoes plus socks.
 - Protective eyewear.
-

9/20

STORAGE AND DISPOSAL

PROHIBITIONS: Do not contaminate water, food or feed by storage or disposal. Open dumping is prohibited. Keep away from heat and flame.

STORAGE: Keep container tightly closed when not in use. Do not store near seeds, fertilizers, or food stuffs. Can be stored at temperatures as low as minus 50°F.

PESTICIDE DISPOSAL: Waste resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

GENERAL APPLICATION DIRECTIONS

Soil Textures and Herbicide Rates

Rates are based on coarse-, medium-, or fine-textured soils. Soil texture classes are generally categorized as follows:

COARSE	MEDIUM	FINE
Sand	Sandy clay loam	Sandy clay
Loamy sand	Silt	Silty clay
Sandy loam	Silt loam	Silty clay loam
	Loam	Clay loam
		Clay

Within rate ranges in the rate tables and elsewhere on this label, use the lower rate on soils relatively coarse-textured or low in organic matter; use the higher rate on soils relatively fine-textured or high in organic matter.

Application of other products referenced in this label are permitted only in those states where the referenced product is registered.

TABLE 1
Weeds Controlled or Partially Controlled by SURPASS 20-G at Recommended Use Rates

COMMON NAMES	WEED TYPE ¹	SCIENTIFIC NAME	C = CONTROL PC = PARTIAL CONTROL
Black nightshade	B	<i>Solanum nigrum</i>	C
Carpenterweed	B	<i>Mollugo verticillata</i>	C
Common ragweed	B	<i>Ambrosia elatior</i>	C
Florida beggarweed	B	<i>Desmodium tortuosum</i>	PC
Florida pusley	B	<i>Richardia scabra</i>	C
Galinsoga	B	<i>Galinsoga parviflora</i>	C
Hairy nightshade	B	<i>Solanum sarachoides</i>	C

COMMON NAMES	WEED TYPE ¹	SCIENTIFIC NAME	C = CONTROL PC = PARTIAL CONTROL
Kochia	B	<i>Kochia scoparia</i>	PC
Lambsquarters, common	B	<i>Chenopodium album</i>	C ³
Pigweed	B	<i>Amaranthus spp.</i>	C
Prickly sida	B	<i>Sida spinosa</i>	PC
Purslane, common	B	<i>Portulaca oleracea</i>	C
Smartweed spp.	B	<i>Polygonum spp</i>	PC
Tall waterhemp	B	<i>Amaranthus tuberculatos</i>	C
Barnyardgrass	G	<i>Echinochloa crus-galli</i>	C
Bristly foxtail	G	<i>Setaria verticillata</i>	C
Broadleaf signalgrass	G	<i>Brachiaria platyphylla</i>	C ⁴
Browntop panicum	G	<i>Panicum fasciculatum</i>	C
Crabgrass	G	<i>Digitaria spp</i>	C
Crowfootgrass	G	<i>Dactyloctenium aegyptium</i>	C
Fall panicum	G	<i>Panicum dichotomiflorum</i>	C
Field sandbur	G	<i>Cenchrus pauciflorus</i>	PC
Foxtail millet	G	<i>Setaria italica</i>	C
Giant foxtail	G	<i>Setaria faberi</i>	C
Goosegrass	G	<i>Eleusine indica</i>	C
Green foxtail	G	<i>Setaria viridis</i>	C
Prairie cupgrass	G	<i>Eriochloa contracta</i>	C
Red rice	G	<i>Oryza sativa</i>	C
Red sprangletop	G	<i>Leptochloa filiformis</i>	C
Robust foxtail (purple, white)	G	<i>Setaria spp.</i>	C
Seedling johnsongrass	G	<i>Sorghum halepense</i>	PC
Shattercane	G	<i>Sorghum vulgare</i>	PC
Southern sandbur	G	<i>Cenchrus echinatus</i>	C

COMMON NAMES	WEED TYPE ¹	SCIENTIFIC NAME	C = CONTROL PC = PARTIAL CONTROL
Southwestern cupgrass	G	<i>Eriochloa gracilis</i>	C
Texas panicum	G	<i>Panicum texanum</i>	C ⁴
Wild proso millet	G	<i>Panicum miliaceum</i>	PC
Witchgrass	G	<i>Panicum capillare</i>	C
Woolly cupgrass	G	<i>Eriochloa villosa</i>	PC
Yellow foxtail	G	<i>Setaria lutescens</i>	C
Yellow nutsedge ²	S	<i>Cyperus esculentus</i>	C

¹ B = Broadleaf, G = Grass, S = Sedge

² Yellow nutsedge requires a minimum of 10 lbs/acre. Incorporation is required for control.

³ Light to moderate infestations will be controlled. Heavy infestations may require a tank mixture or sequential herbicide.

⁴ Best control is achieved when SURPASS 20-G is applied within 5 days of planting and rainfall occurs shortly after application or mechanical incorporation is used to activate the herbicide. If it does not rain within 7 days, shallow cultivation will enhance the activity. Excessive rainfall after application may reduce control.

Weeds Partially Controlled*: Field sandbur, seedling johnsongrass, shattercane, wild proso millet and woolly cupgrass.

*Control of these weeds can be erratic due partially to variable weather conditions. Control may be improved by following these suggested procedures:

1. Thoroughly till moist soil to destroy germinating and emerged weeds. If SURPASS 20-G is to be applied preplant incorporated, this tillage may be used to incorporate SURPASS 20-G if uniform 2-inch incorporation is achieved as recommended under "Application Procedures".
2. Plant crop into moist soil immediately after tillage. If SURPASS 20-G is to be used preemergence, apply at planting or immediately after planting.
3. If available, sprinkler irrigate within 5 days after application. Apply ¼ - ½ inch of water. Use lower water volume (¼ inch) on coarse-textured soils and higher volume (½ inch) on finer-textured soils.
4. If irrigation is not possible and rain does not occur within 5 days after planting and application, weed control may be decreased. Under these conditions, a uniform, shallow cultivation is recommended as soon as weeds emerge.

13820

CORN (Field, Popcorn, Silage, Production Seed)

For control of annual grasses and broadleaf weeds listed under the "General Application Directions" section, apply SURPASS 20-G either preplant surface, preplant incorporated or preemergence to corn before weeds emerge.

Preplant Surface-Applied: Use on medium - and fine-textured soils with minimum-tillage or no tillage systems in CO, IA, IL, IN, KS, KY, MN, MO, MT, ND, NE, SD, TN, WI, and WY. Apply 2/3 of the recommended broadcast rate of SURPASS 20-G from Table 2 as a split treatment 30-45 days before planting and the remainder immediately before planting, or at planting. Applications less than 30 days before planting may be made either as a split or as a single treatment. Apply 8 lbs/A on coarse soils not more than 2 weeks before planting. If weeds are present at the time of treatment, apply a labelled contact herbicide such as GRAMOXONE® Extra or Roundup®. Observe the directions for use, precautions, and restrictions on the label of the contact herbicide. To the extent possible, do not move treated soil out of the row or move untreated soil to the surface during planting, or weed control will be diminished. To avoid reduced weed control, do not apply to frozen soil as rainfall may change the pattern of the SURPASS 20-G granules.

On medium- and fine-textured soils with minimum- or no-tillage systems in DE, MD, MI, NJ, PA, VA, and WV, preplant surface applications may be applied following the directions for use above. If the amount of rainfall results in unsatisfactory length of weed control following the earlier treatment, a postemergence application of an appropriately labelled broadleaf and/or grass weed herbicide could be used, i.e. AAtrex®, 2,4-D, Banvel®, Basagran®, or bromoxynil (Buctril®). Observe all directions for use, precautions and limitations on the label of the postemergence herbicide.

Preplant Incorporated: Using the rate from Table 2, apply SURPASS 20-G to the soil and incorporate into the top 2 inches of soil within 14 days before planting using a finishing disk, harrow, rolling cultivator, or similar implement capable of providing uniform 2-inch incorporation. Use a preplant incorporated application if furrow irrigation is used or when a period of dry weather after application is expected. If crop will be planted on beds, apply and incorporate SURPASS 20-G after bed formation unless specified otherwise.

Preemergence: Band or broadcast SURPASS 20-G to the soil surface during or after planting and before weeds emerge using the appropriate rate from Table 2. For band treatment, apply granules behind the press wheel.

TABLE 2
SURPASS 20-G - Corn

Soil Texture	Broadcast Rate Per Acre		
	Less than 3% Organic Matter	3-7% Organic Matter	Greater than 7% Organic Matter
COARSE Sand, loamy sand, sandy loam	6-8 lbs	8 lbs	10 lbs
MEDIUM Loam, silt loam, silt	8-10 lbs	8-10 lbs	12 lbs
FINE Silty clay loam, sandy clay loam, silty clay, sandy clay, clay loam, clay	8-10 lbs	10-12 lbs	13-15 lbs

*SURPASS 20-G may be used up to 15 lbs./acre, broadcast basis, on soils having an organic matter content between 6 and 20%.

** SURPASS 20-G may be used sequentially in place of SURPASS EC or TOPNOTCH with AAtrex, AAtrex plus LoroX®, AAtrex or Princep®, plus Prowl®, Bladex®, or Banvel® applied at the tankmix rate specified on the respective product labels.

Note: Do not apply more than the equivalent of 15 lbs. of SURPASS 20-G/A during any one year, or illegal residues may result. This includes both SURPASS 20-G and SURPASS EC or TOPNOTCH (1 pt of SURPASS EC or 1 qt of TOPNOTCH is equivalent to 4 lbs. of SURPASS 20-G).

15.3.20

APPLICATION PROCEDURES

SURPASS 20-G may be applied either broadcast or banded. Do not apply SURPASS 20-G during periods of high winds. Wind may disrupt placement of the granules and reduce weed control. Locate granular diffusers as close to the ground as possible. Windshield attachments are advisable in high winds.

Pneumatic (Compressed Air) Broadcast Application (SURPASS 20-G alone): SURPASS 20-G may be applied through pneumatic dry fertilizer applicators which are equipped with special on-board herbicide metering bins. These metering units must be properly calibrated with SURPASS 20-G prior to use. The placement of the granules in the applicator's distribution system should be designed to minimize segregation of the granules from the dry fertilizer materials.

Precautions: SURPASS 20-G should never be blended with other pesticide formulations for application through on-board metering bins. SURPASS 20-G should never be blender-mixed with liquid or dry fertilizer materials for broadcast pneumatic application.

Broadcast Application ("Cyclone" or "Spinner" Type Spreaders): SURPASS 20-G may be applied with a broadcast type (spinner) granular applicator or with a cyclone type spreader. Use applicators and techniques that will apply the granules uniformly to the soil. Do not blend SURPASS 20-G with other pesticides or fertilizers. Always calibrate the device with SURPASS 20-G prior to use.

Band Treatment: SURPASS 20-G may be applied with any standard granular applicator capable of uniformly distributing a predetermined amount of granules to a desired area. Band treatment made at seeding should only be applied behind the press wheel.

Note: Soil tillage should not follow the use of band applications unless it is adapted so as not to displace the band and hence reduce weed control in the band.

Applicator settings are given for band applications in Table 3. These settings were determined under laboratory conditions to $\pm 5\%$ accuracy. Note that the settings may differ depending on speed of application, as well as rate per acre. **It is important that the user calibrate each individual granular applicator before its use. Since the actual setting for each individual granular applicator may vary, the settings shown should serve only as guidelines for calibration.**

16 of 20

Calculate the amount of SURPASS 20-G needed for band treatment as follows:

<u>Band width in inches</u>		Broadcast		Band rate
Row spacing in inches	x	rate per acre	=	per acre

Example: If 16 lbs. per acre is recommended for broadcast application and you wish to treat a band 14 inches wide in crop rows spaced 30 inches apart:

$$\frac{14}{30} \times 16 = 7.5 \text{ lbs of granules needed for each acre that is to be treated}$$

TABLE 3
Gauge Settings for SURPASS 20-G Granular Herbicide
30" Row Spacing 14" Herbicide Band

Applicator	Speed mph	Rate for 14" Band Width Per 1,000 Linear Feet				
		2.6 oz	3.4 oz	4.3 oz	5.1 oz	6.4 oz
		Equivalent Broadcast Rate Per Acre				
		6 lbs	8 lbs	10 lbs	12 lbs	15 lbs
Gandy (one opening)*	4	11	12	14	16	18
	5	12	14	16	18	20
	6	13	16	18	20	22
	7	15	17	19	21	24
	8	17	19	21	23	26
International Harvester (New)	4	1/0	1/0	1/2	1/3	1/4
	5	1/1	1/2	1/3	1/4	1/6
	6	1/1.5	1/3	1/4	1/5	1/7
	7	1/2	1/4	1/5	1/6	1/9
	8	1/3	1/5	1/6	1/8	2/11
International Harvester (Old)	4	1/3	1/4	1/6	1/7	1/9
	5	1/4	1/6	1/7	1/8	2/11
	6	1/5	1/7	1/8	2/10	2/13
	7	1/6	1/8	2/10	2/11	2/15
	8	1/7	2/10	2/11	2/13	2/17
John Deere (Even) (0-10-20-30-40)	4	6	7	8	9	11
	5	7	8	9	11	13
	6	8	9	11	14	15
	7	9	11	14	15	18
	8	11	13	15	16	19
John Deere (Odd) (5-15-25-35-45)	4	5	6	7	8	10
	5	6	7	8	10	12
	6	7	8	10	12	14
	7	8	10	12	14	16
	8	9	12	14	15	17
John Deere (Max Emerge®)	4	10	12	14	16	18
	5	12	14	16	18	21
	6	13	16	18	20	24
	7	15	17	20	22	27
	8	16	18	22	25	31

Kinze	4	6	7	8	9	11
	5	7	8	10	11	13
	6	7	9	11	13	15
	7	8	10	12	14	18
	8	10	12	14	16	19
White 5100	4	4	5	6	7	8
	5	5	6	7	8	9
	6	6	7	8	9	11
	7	7	8	9	10	12
	8	8	9	10	12	14
White 6100	4	5	6	8	9	11
	5	6	7	9	10	13
	6	7	9	11	12	15
	7	8	10	12	14	16
	8	10	12	14	15	17

*For two openings, divide by 2

NOTE: These settings should be used as starting points only. Continually check the amount of SURPASS 20-G used against a known length of row or acreage and make further adjustments accordingly. Also check calibration occasionally to make sure equipment wear, changing conditions, etc. have not caused a change in flow rate.

Calibration of Band Applicators

To calibrate a granular applicator for a standard 14-inch band, a sample has to be collected while the applicator is either running or simulating a run over a distance of 500 feet.

Procedure:

1. Fill applicator box with SURPASS 20-G.
2. Refer to Table 3 and adjust the setting on your applicator to correspond to the desired rate per acre.
3. Attach a plastic bag or similar container to the applicator spout after detaching the delivery tube.
4. Make the 500-ft. run at planting speed.
Speed/Time required to cover 500 feet:
4 mph = 1 min. 25 sec.
5 mph = 1 min. 8 sec.
6 mph = 57 sec.
5. Weigh granules collected (or measure volume) and, if necessary, adjust and make successive runs until the setting delivers the correct number of ounces per 500 ft. of row, as shown in Table 4.
6. Repeat this procedure for each granular applicator box.

19 of 20

TABLE 4
The Equivalent Broadcast Rate Per Acre in Volume and Weight
for 500 Feet on the Basis of a 14-Inch Band

Broadcast Rate Per Acre	Volume Collected In 14-inch Band 500 Linear Feet	Weight Collected In 14-inch Band 500 Linear Feet
6 lbs	1.6 fl oz	1.3 oz
8 lbs	2.2 fl oz	1.7 oz
10 lbs	2.8 fl oz	2.2 oz
12 lbs	3.2 fl oz	2.6 oz
16 lbs	4.5 fl oz	3.5 oz

For band widths other than 14 inches, the calibration distance will differ from 500 ft.

For other band widths, calculate the relative calibration distance in which to collect the corresponding weight or volume of SURPASS 20-G in Chart 2 as follows:

$$\frac{14 \text{ Inches}}{\text{Desired Band Width (Inches)}} \times 500 = \text{Calibration distance in feet}$$

Example: A band width of 10 inches is to be used, instead of 14 inches, to apply SURPASS 20-G at an equivalent rate of 10 lbs./broadcast acre.

- a. $\frac{14 \text{ Inches}}{10 \text{ Inches}} \times 500 = 700 \text{ ft.}$
- b. Collect 2.8 fl. oz. by volume or 2.15 oz. by weight for the newly calculated calibration distance of 700 ft. or a 10-inch band.

APPENDIX I

Blending with Dry Bulk Fertilizers

- SURPASS 20-G may be mixed with dry bulk fertilizer using pneumatic dry fertilizer applicators equipped with on-board herbicide metering bins.
- All individual state regulations relating to dry bulk fertilizer blending, registration, labeling, and application are the responsibility of the individual and/or company selling the herbicide and fertilizer mixtures.

TABLE 5
Approved Dry Bulk Fertilizer Ingredients for Use with
SURPASS 20-G Alone

FERTILIZER INGREDIENT	N	P	K
Ammonium phosphate-sulfate	21	0	0
Diammonium phosphate	18	46	0
Potassium chloride	0	0	60
Potassium sulfate	0	0	52
Single Super-phosphate	0	20	0
Triple Super-phosphate	0	46	0
Urea*	45	0	0
Ammonium phosphate-sulfate	16	20	0
K-Mag/Sul-Po-Mag	0	0	21
Monoammonium phosphate	11	48	0

*Some ureas may be phytotoxic when high rates are applied to corn. Use only urea rates known to be safe for corn application.

- Uniform applications in the field are necessary to assure good results.

©1995. Zeneca Inc.

SURPASS®, DOUBLEPLAY™, GRAMOXONE®, and TOPNOTCH™ are trademarks of a Zeneca Group Company.

AAtrex® and Princep® are trademarks of Ciba.

Banvel® is a trademark of Sandoz Crop Protection Corporation.

Basagran® is a trademark of BASF.

Bladex® and Lorox® are trademarks of E. I. du Pont de Nemours & Co. (Inc.).

Buctril® is a trademark of Rhone-Poulenc Ag Company.

MaxEmerge® is a trademark of John Deere Company.

Prowl® is a trademark of American Cyanamid Company.

Roundup® is a trademark of Monsanto.