

62719-370

3-13-2003

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

MAR 13 2003

OFFICE OF  
PREVENTION, PESTICIDES  
AND TOXIC SUBSTANCES

Ms. Barbara J. Kaminski  
Dow AgroSciences, LLC  
9330 Zionsville Road  
Indianapolis, IN 46268

Dear Ms. Kaminski:

Subject: Surpass 20G (Revise First Aid Statements and Other Changes)  
EPA Registration No. 62719-370  
Your Application Dated December 16, 2002

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act as amended is acceptable provided you make the following changes before you release the product for shipment.

1. At the beginning of the list of Personal Protective Equipment (PPE) within the Precautionary Statements, add the statements, "Some of the materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category A on an EPA chemical-resistance category selection chart." In addition, revise the requirement for "waterproof gloves" to a requirement for "chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride.
2. Within the list of PPE for early re-entry in the Agricultural Use Requirements box, revise the requirement for "waterproof gloves" to a requirement for "waterproof gloves made of any waterproof material."
3. Add "Pesticide" to "Storage" to read "Pesticide Storage".

Please submit three(3) copies of your final printed labeling incorporating the above changes before you release the product for shipment. Amended labeling supercedes all previously accepted ones. A stamped copy of labeling is enclosed for your records.

Sincerely,

*James A. Tompkins*  
James A. Tompkins  
Product Manger 25  
Herbicide Branch  
Registration Division (7505C)

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(Base label)

**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.

(logo) Dow AgroSciences

# Surpass\* 20G

**A selective herbicide for the preemergence control of annual grasses and broadleaf weeds.**

Active Ingredient:

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

Inert Ingredients..... 80%

Total..... 100%

ACCEPTED  
with COMMENTS  
In EPA Letter Dated:  
MAR 13 2003

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 62719-370

**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.)

### Precautionary Statements

#### Hazards to Humans and Domestic Animals

**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.

#### Engineering Controls

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.

**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 or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**If in eyes:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**If swallowed:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

**If inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-992-5994 for emergency medical treatment information.

**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 flame.**

[Editor's note: If label is printed on the product container (bag), omit the following "Agricultural Use Requirements" referral box and substitute the following back panel referral statement: (Refer to back panel for Directions for Use, including Agricultural Use Requirements and Storage and Disposal.)]

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**Agricultural Use Requirements**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

**Refer to label booklet for additional precautionary information including Personal Protective Equipment (PPE), User Safety Recommendations and Directions for Use including Storage and Disposal.**

**Notice:** Read the entire label. Use only according to label directions. **Before using this product, read Warranty Disclaimer, Inherent Risks of Use and Limitation of Remedies at end of label. If terms are not acceptable, return at once unopened.**

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994. If you wish to obtain additional product information, visit our web site at [www.dowagro.com](http://www.dowagro.com).

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

EPA Reg. No. 62719-370

EPA Est. No. 407-IA-2

\*Trademark of Dow AgroSciences LLC

**Dow AgroSciences LLC Indianapolis, IN 46268 U.S.A.**

**Granular Herbicide**

**Net Wt \_\_ lb**

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(Label booklet cover):

**[Editor's note: If label is printed in booklet form, start at booklet cover. If printed on the product container (bag), omit label booklet cover, Table of Contents, and Precautionary Statements and begin back panel at directions for use header.]**

**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.

(logo) Dow AgroSciences

# Surpass\* 20G

**For weed control on field corn, production seed corn, silage corn and popcorn**

Active Ingredient:

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

Inert Ingredients ..... 80%

Total ..... 100%

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**Dow AgroSciences LLC Indianapolis, IN 46268 U.S.A.**

## Granular Herbicide

**Net Wt \_\_ lb**

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(Page 1 through end):

[Editor's note: Omit "Table of Contents" section if Directions for Use are printed on back of bag.]

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**Precautionary Statements**

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**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

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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 flame.**

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### Directions for Use

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It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read all Directions for Use carefully before applying.

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 protective 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



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### 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 Information

Surpass\* 20G herbicide 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 tillth. Dry weather following application of Surpass 20G may reduce its effectiveness. Shallowly 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 inch to ½ inch is sufficient to activate this product. Excessive rainfall (intensity/amount) or irrigation after application may reduce control.

Surpass 20G will not control emerged weed seedlings.

### General Use Precautions and 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.
- The maximum use rate for Surpass 20G is 15 lb (3 lb active ingredient) per acre per year
- **Chemigation:** Do not apply this product through any type of irrigation system.
- Do not use flood irrigation to apply or incorporate this product.
- Do not apply this product using aerial application equipment.
- 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

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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.

- Product must be used in a manner that will prevent back siphoning in wells, spills or improper disposal of excess pesticide, spray mixtures or rinsates.
- Do not apply under conditions that favor runoff or wind erosion of soil containing this 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 1/2 inch of rainfall has occurred between application and the first irrigation.
- Do not apply when wind conditions favor drift to non-target sites.

**Rotational Crop Restrictions:**

Rotational Crop(1)	Timing or Interval
corn	0 months after application
sorghum, soybeans, tobacco	Spring following application
wheat	4 months after application

Numbers within parentheses (-) in the table refer to Specific Rotational Crop Requirements below.

(1) If crop treated with Surpass 20G is lost, corn may be replanted immediately. Do not make a second application of Surpass 20G. Do not rotate to crops other than corn, soybeans, sorghum, tobacco and wheat.

**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	Silt	Sandy clay
Loamy sand	Silt loam	Silty clay
Sandy loam	Loam	Silty clay loam
	Sandy clay loam	Sandy clay 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 20G at Recommended Use Rates**

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Grasses and Sedges	C = Control PC = Partial Control	Broadleaves	C = Control PC = Partial Control
barnyardgrass	C	beggarweed, Florida	C
crabgrass spp.	C	carpetweed	C
crowfootgrass	C	galinsoga	C
cupgrass, prairie	C	kochia	PC
cupgrass, southwestern	C	lambsquarters, common (2)	C
cupgrass, woolly	PC	nightshade, black	C
foxtail, bristly	C	nightshade, hairy	C
foxtail, giant	C	pigweed	C
foxtail, green	C	purslane, common	C
foxtail, robust (purple, white)	C	pusley, Florida	C
foxtail, yellow	C	ragweed, common	C
goosegrass	C	sida, prickly	C
johnsongrass, seedling	PC	smartweed spp.	C
millet, foxtail	C	waterhemp, tall	C
millet, wild proso	PC	waterhemp, common	C
nutsedge, yellow (1)	C		
panicum, browntop	C		
panicum, fall	C		
panicum, Texas (3)	C		
rice, red	C		
sandbur, field	PC		
shattercane	PC		
signalgrass, broadleaf (3)	C		
sprangletop, red	C		
witchgrass	C		

- (1) Yellow nutsedge requires a minimum of 2.5 lb/acre of Surpass 20G. Incorporation is required for control.
- (2) Light to moderate infestations will be controlled. Heavy infestations may require a tank mixture or sequential herbicide.
- (3) Best control is achieved when Surpass 20G 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 (PC):** Field sandbur, seedling johnsongrass, shattercane, wild proso millet and woolly cupgrass. Control of these weeds can be erratic due in part to variable weather conditions. Control may be improved by adhering to the following cultural practices:

1. **Thoroughly till moist soil** to destroy germinating and emerged weeds. If Surpass 20G is to be applied preplant incorporated, this tillage may be used to incorporate Surpass 20G if uniform 2-inch incorporation is achieved as recommended under "Application Procedures".
2. Plant crop into moist soil **immediately after tillage**. If Surpass 20G 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.

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## Corn (Field, Popcorn, Silage, Production Seed)

For control of annual grasses and broadleaf weeds listed under the "General Application Directions" section, apply Surpass 20G either preplant surface, preplant incorporated or preemergence to corn before weeds emerge. For extended control of annual weeds, Surpass 20G may be applied to weed free soil at the time of the last cultivation (lay-by application) as either a surface or shallow incorporated treatment.

**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 20G 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 lb/A on coarse soils not more than 2 weeks before planting. If weeds are present at the time of treatment, apply a labeled burndown herbicide such as Glyphomax Plus herbicide, Gramoxone Extra herbicide or Roundup UltraMax herbicide. Observe the directions for use, precautions, and restrictions on the label of the burndown 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 20G 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 labeled broadleaf and/or grass weed herbicide can be used. 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 20G to the soil and incorporate into the top 2 inches of soil within 14 days before planting using a finishing disc, 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 20G after bed formation unless specified otherwise.

**Preemergence:** Band or broadcast apply Surpass 20G 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.

**Fall Application - For use in IA; IL (North of Route 136); NE (North of Route 20); MN, ND, SD; WI:** Following soybean harvest, apply to soybean stubble after October 15, when the sustained soil temperature at 4-inch depth is less than 50°F, but before ground freezes. Use on medium and fine textured soils with greater than 2.5% organic matter. Only corn may be planted the following spring.

Ground may be tilled before or after application. Do not exceed 2-inch incorporation depth if tilled after application.

If a spring application is made, the total rate of the fall plus spring application must not exceed the maximum labeled rate for corn grown on that soil.

**Lay-by (Cultivation) Application:** Apply the appropriate rate of Surpass 20G from Table 2 on a broadcast basis at lay-by. Applications should be made before the corn plants exceed 11 inches in height. The soil should be free of weeds at the time of application, and the granules either left on the surface or shallowly incorporated into the soil. Use an application method that will not allow granules to get into the corn whorl. This application of Surpass 20G may follow any preplant or preemergence herbicide application including those made with Surpass 20G or Surpass EC, Surpass 100, Topnotch herbicide or Doubleplay herbicide. Do not exceed 3 lb ai/acre/year of Acetochlor in corn, regardless of the acetochlor product used.

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**Table 2: Surpass 20G - Corn**

Soil Texture	Broadcast Rate Per Acre		
	Less than 3% Organic Matter	3-7% Organic Matter	Greater than 7% Organic Matter
<b>Coarse:</b> Sand, loamy sand, sandy loam	6-8 lb	8 lb	10 lb
<b>Medium:</b> Loam, silt loam, silt	8-10 lb	8-10 lb	12 lb
<b>Fine:</b> Silty clay loam, sandy clay loam, silty clay, sandy clay, clay loam, clay	8-10 lb	10-12 lb	13-15 lb

- Surpass 20G may be used up to 15 lb/acre, broadcast basis, on soils having an organic matter content between 6 and 20%.
  - Surpass 20G may be used sequentially in place of Surpass EC or Topnotch with AAtrex, AAtrex plus Lorox herbicide, AAtrex or Princep herbicide, plus Prowl herbicide, or Banvel applied at the tank mix rate specified on the respective product labels.
- Note:** Do not apply more than the equivalent of 15 lb of Surpass 20G/A during any one year, or illegal residues may result. This includes both Surpass 20G and Surpass EC or Topnotch (1 pt of Surpass EC or 1 qt of Topnotch is equivalent to 4 lb of Surpass 20G).

### **Application Procedures**

Surpass 20G may be applied either broadcast or banded. Do not apply Surpass 20G 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 20G alone):** Surpass 20G may be applied through pneumatic dry fertilizer applicators that are equipped with special on-board herbicide metering bins. These metering units must be properly calibrated with Surpass 20G 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 20G should not be blended with other granular pesticide formulations for application through on-board metering bins. Surpass 20G should never be blender-mixed with dry fertilizer materials for broadcast pneumatic application unless uniform blending can be achieved and no segregation of the Surpass 20G and dry fertilizer blend will occur between mixing and application.

**Broadcast Application ("Cyclone" or "Spinner" Type Spreaders):** Surpass 20G 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 20G with other pesticides or fertilizers. Always calibrate the device with Surpass 20G prior to use.

**Band Treatment:** Surpass 20G 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.

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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.**

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

$$\frac{\text{Band width in inches}}{\text{Row spacing in inches}} \times \text{Broadcast rate per acre} = \text{Band rate of Surpass 20G per acre}$$

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

$$\frac{14}{30} \times 16 = 7.5 \text{ lb of Surpass 20G granules needed for each acre that is to be treated}$$

**Table 3: Gauge Settings for Surpass 20G 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 lb	8 lb	10 lb	12 lb	15 lb
Gandy (one opening) <sup>†</sup>	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	2/1
International Harvester (Old)	4	1/3	1/4	1/6	1/7	1/9
	5	1/4	1/6	1/7	1/8	2/1
	6	1/5	1/7	1/8	2/0	2/3
	7	1/6	1/8	2/0	2/1	2/5
	8	1/7	2/0	2/1	2/3	2/7

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<b>John Deere (Even)</b> (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
<b>John Deere (Odd)</b> (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
<b>John Deere</b> (MaxEmerge)	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
<b>Kinze</b>	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
<b>White 5100</b>	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
<b>White 6100</b>	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 20G 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 20G.
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 foot 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.

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6. Repeat this procedure for each granular applicator box.

**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 lb	1.6 fl oz	1.3 oz
8 lb	2.2 fl oz	1.7 oz
10 lb	2.8 fl oz	2.2 oz
12 lb	3.2 fl oz	2.6 oz
16 lb	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 20G in Table 2 as follows:

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

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

- $\frac{14 \text{ inches}}{10 \text{ inches}} \times 500 = 700 \text{ ft}$
- 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 20G 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.
- Uniform applications in the field are necessary to assure good results.



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**Table 5: Approved Dry Bulk Fertilizer Ingredients for Use with Surpass 20G 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.

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