

11-JUN-2010 Sub. No. 2009-4164

DATAPAK

GROUP	<b>3</b>	HERBICIDE
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## **BONANZA 10G GRANULAR HERBICIDE**

For Pre-Emergence Control of Grass and Broadleaved Weeds in a Number of Field Crops.

COMMERCIAL

READ THE LABEL BEFORE USING  
POTENTIAL SKIN SENSITIZER.

REGISTRATION NO.: 22744  
PEST CONTROL PRODUCTS ACT

GUARANTEE: TRIFLURALIN 10%

IN CASE OF EMERGENCY DUE TO A MAJOR SPILL, FIRE OR  
POISONING INVOLVING THIS PRODUCT CALL DAY OR NIGHT,  
1-800-561-8273

LOVELAND PRODUCTS CANADA INC.  
789 Donnybrook Drive  
Dorchester, Ontario  
N0L 1G5  
1-800-328-4678

NET CONTENTS: 22.7 kg

12/11

## GENERAL INFORMATION

### REGISTERED CROPS

BONANZA 10G GRANULAR HERBICIDE is a specially formulated herbicide for the control of certain annual grassy and broadleaved weeds in Rapeseed (Canola), Barley (fall application only), Flax (summer and fall application only), Sunflowers, Mustard, Lentils (fall application only), Peas (field and canning), Faba beans, Soybeans, Drybeans, Alfalfa Establishment (Flax and Canola cover crops only).

BONANZA 10G GRANULAR HERBICIDE MUST NOT BE USED ON ANY CROP FOR WHICH IT IS NOT REGISTERED.

FAILURE TO FOLLOW LABEL INSTRUCTIONS MAY RESULT IN ERRATIC WEED CONTROL OR CROP DAMAGE.

### RESISTANCE MANAGEMENT RECOMMENDATIONS:

For resistance management, BONANZA 10G GRANULAR HERBICIDE is a Group 3 herbicide. Any weed population may contain or develop plants naturally resistant to BONANZA 10G GRANULAR HERBICIDE and other Group 3 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Other resistance mechanisms that are not linked to site of action, but specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

To delay herbicide resistance:

- Where possible, rotate the use of BONANZA 10G GRANULAR HERBICIDE or other Group 3 herbicides with different herbicide groups that control the same weeds in a field.
- Use tank mixtures with herbicides from a different group when such use is permitted.
- Herbicide use should be based on an IPM program that includes scouting, historical information related to herbicide use and crop rotation, and considers tillage, cultural, biological and other chemical control practices.
- Monitor treated weed populations for resistance development.
- Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment and planting clean seed.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact Technical Service at 1-800-328-4678 or at [www.uap.ca](http://www.uap.ca).

## **FALL APPLICATIONS OF PRE-EMERGENCE HERBICIDES**

For reasons of soil conservation it is not recommended to use the fall application of BONANZA 10G GRANULAR HERBICIDE to soils which are subject to erosion by wind, water, or other factors. Fall application to summer fallow under certain conditions may predispose the field to wind and/or water erosion and is not recommended.

Read all directions carefully before applying BONANZA 10G GRANULAR HERBICIDE.

### **DIRECTIONS FOR USE IN ALL CROPS**

- Do not apply to soils which contain more than 15% organic matter such as peat or muck soils (maximum 10% organic matter on Barley).
- Do not apply to wet soils that are subject to flooding.
- Do not apply to soils that are extremely lumpy, cloddy or in poor working condition.
- For maximum weed control and crop tolerance, follow label directions at all times. Read all directions before applying BONANZA 10G GRANULAR HERBICIDE.

### **CAUTION**

Populations of green foxtail tolerant to trifluralin have developed in a number of fields in Western Canada which have had a long history of repeated trifluralin use. Trifluralin or ethalfluralin containing products (i.e. ADVANCE, BONANZA, HERITAGE, RIVAL, TREFLAN, TRIFLUREX, FORTRESS, and EDGE) will not control trifluralin tolerant green foxtail. To delay selection or reduce the spread of trifluralin tolerant green foxtail, avoid use of these products repeatedly in the same field, or use a separate herbicide application for control of trifluralin tolerant green foxtail.

Application of BONANZA 10G GRANULAR HERBICIDE to soils that are subject to flooding (standing water for more than 3-5 days) may result in reduced weed control. This reduction in weed control may occur if the soils are flooded between the time of BONANZA 10G GRANULAR HERBICIDE application and crop maturity (harvest). If the soils are flooded for a considerable period of time (3 weeks or more) the results may be no weed control at all.

Do not apply to fields spread with manure within the last 12 months. Ensure after this period the manure has been thoroughly disintegrated and mixed into the soil to a depth of 10-15 cm.

When used according to label directions, BONANZA 10G GRANULAR HERBICIDE will not damage the treated crop. Factors such as deep planting, excessive moisture, cold temperatures, seedling disease, poor soil fertility,

drought and saline soils may increase the risk of damage from BONANZA 10G GRANULAR HERBICIDE resulting in delay in crop maturity and/or reduced yields.

Highly sensitive crops such as tame oats, sugarbeets and small seeded annual grasses (Timothy, Canary grass and Creeping red fescue) should not be grown in rotation the year following BONANZA 10G GRANULAR HERBICIDE application.

DO NOT apply this product in a way that will contact workers or other persons, either directly or indirectly or through drift. Only protected handlers may be in the area during application.

Discard clothing or other absorbent materials that have been heavily contaminated with this product. DO NOT reuse them.

Users should remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

DO NOT apply this product directly to freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs, ditches and wetlands), estuaries or marine habitats.

DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

To minimize the release of trifluralin into the environment due to volatilization, trifluralin should only be applied on cool mornings and evenings when air temperatures are 15 degrees C or lower. To further reduce volatilization to the atmosphere, incorporation into the soil should occur concurrently with application.

### **SPECIAL INSTRUCTIONS FOR CROP ROTATIONS**

- The rate of breakdown of BONANZA 10G GRANULAR HERBICIDE is influenced by environmental factors which occur during the year of control and those of the following spring i.e. May 1-May 1. If precipitation during this period is below normal, the level of carryover into the following growing season will be increased.
- Crop injury may result to rotation crops (e.g. wheat) if grown in the second year of a crop rotation following dry soil conditions during the first crop year after BONANZA 10G GRANULAR HERBICIDE application. To reduce injury to rotational crops seed the crops shallowly into a warm, moist seedbed.

## **CAUTION**

DO NOT GRAZE THE TREATED CROPS OR CUT FOR HAY; THERE ARE NOT SUFFICIENT DATA AVAILABLE TO SUPPORT SUCH USE.

## **DIRECTIONS FOR USE IN OILSEED CROPS, SPECIAL CROPS AND BARLEY**

### **SUSCEPTIBLE WEEDS**

**ANNUAL GRASSES:** Wild oats, Green and Yellow foxtail (Wild millet), Barnyard grass, Persian dandelion, Annual bluegrass, Crabgrass, Stinkgrass, Bromegrass, Cheat and Goosegrass.

**ANNUAL BROADLEAVED WEEDS:** Pigweed, Lamb's-quarters, Chickweed, Carpetweed, Knotweed, Purslane, Cow cockle and Wild buckwheat. The above weeds will be controlled when BONANZA 10G GRANULAR HERBICIDE is applied at recommended rates and used as directed. Ensure that all incorporation directions are followed. Some Wild oats and Wild buckwheat may escape the BONANZA 10G GRANULAR HERBICIDE herbicidal action, however the crop competition will effectively suppress the escaped weeds so that little or no competition results with the crop.

### **TIME OF APPLICATION**

BONANZA 10G GRANULAR HERBICIDE is applied before the crop is planted and before weed emergence. It is incorporated thoroughly into the soil to provide herbicidal action that will control all susceptible weeds. BONANZA 10G GRANULAR HERBICIDE does not control susceptible weeds that have already emerged through the soil at the time of application. It only controls susceptible weeds as they germinate.

### **LAND PREPARATION**

Before applying BONANZA 10G GRANULAR HERBICIDE, ensure that all emerged and existing weeds have been eliminated through discing, cultivation or by chemical control.

BONANZA 10G GRANULAR HERBICIDE can be applied to stubble or trashy soils; however, heavy trash soils should be thoroughly disced prior to BONANZA 10G GRANULAR HERBICIDE application in order to allow product penetration into the soil surface. Ensure that all large soil clods are broken before BONANZA 10G GRANULAR HERBICIDE application.

If manure has been applied to the field, ensure that it is thoroughly mixed into the soil with at least two tillage operations prior to BONANZA 10G GRANULAR HERBICIDE application.

If the field has been burned in order to remove previous crop residue (straw, trash, etc.) ensure that the field is tilled at least once prior to BONANZA 10G application.

NOTE: DO NOT PLOW (MOLDBOARD) LAND PRIOR TO BONANZA 10G GRANULAR HERBICIDE APPLICATION.

### **METHOD OF APPLICATION**

Apply BONANZA 10G GRANULAR HERBICIDE uniformly to the soil surface using a properly calibrated granular applicator. Using the equipment guidelines provided in this label or by the equipment manufacturer, adjust the applicator to provide the required amount of BONANZA 10G GRANULAR HERBICIDE. These guidelines should only be used as starting points for equipment calibration and each applicator should be checked frequently to ensure that the correct rate of BONANZA 10G GRANULAR HERBICIDE is being applied. Ensure that the BONANZA 10G GRANULAR HERBICIDE is applied uniformly to the entire soil surface and avoid concentration of granules in narrow bands, etc. Incorporate BONANZA 10G GRANULAR HERBICIDE in the same direction as the application and within 24 hours of application. Ensure that all soil clods and lumps are broken during incorporation. Susceptible crops in rotation will not be damaged if BONANZA 10G GRANULAR HERBICIDE is applied uniformly. Avoid overlapping application.

NOTE: DO NOT APPLY BONANZA 10G GRANULAR HERBICIDE BY AIRCRAFT.

### **INCORPORATION**

Incorporate with disc implements or cultivators only. Deep tillage cultivators are not recommended. A tandem disc is recommended for the first incorporation. Do not delay the first incorporation more than 24 hours after BONANZA 10G GRANULAR HERBICIDE application. Both incorporations should be to the depth of 8-10 cm (3-4 inches). The second incorporation must be at right angles to the first. Disc implements should be operated at 6-10 km/h (4-6 mph) and cultivators at 10-13 km/h (6-8 mph).

NOTE:

- Incorporate BONANZA 10G GRANULAR HERBICIDE to a depth of 8-10 cm (3-4 inches) only for maximum weed control and crop tolerance.
- Use a disc implement when incorporating BONANZA 10G GRANULAR HERBICIDE on stubble or trashy soils.
- Cultivators should be used for BONANZA 10G GRANULAR HERBICIDE incorporation when soils are in good working condition.
- To allow greater release of BONANZA 10G GRANULAR HERBICIDE and more effective weed control, delay the second incorporation at least 5 days.

### **INSTRUCTIONS FOR SUMMER APPLICATION**

For weed control in flax, rapeseed (canola), or fababeans in the following year, apply BONANZA 10G GRANULAR HERBICIDE to summerfallow between June 1 and September 1 using the summer rate and incorporate within 24 hours after application of BONANZA 10G GRANULAR HERBICIDE. All subsequent incorporations may be done whenever resistant weed growth occurs for the

remainder of the fallow season. A shallow tillage is required once the soil has warmed prior to planting the following spring. This is required for seedbed preparation and is best done with a vibrashank cultivator or disc implement cutting to a depth of 5-8 cm (2-3 inches).

### INSTRUCTIONS FOR FALL APPLICATION

For weed control in the following year, apply BONANZA 10G GRANULAR HERBICIDE in the fall between September 1 and soil freeze-up, using fall rates and following incorporation instructions. Do not delay initial incorporation more than 24 hours after application. The second incorporation to the recommended depth may be done in the spring at the time of seedbed preparation. If both incorporations are done in the fall, a shallow tillage in the following spring and prior to seeding is required. This shallow tillage is best done with a vibrashank cultivator or disc implement cutting to a depth of 5-8 cm (2-3 inches). It is preferred if both incorporations are done in the fall. For application of BONANZA 10G GRANULAR HERBICIDE to Barley and to Lentils and Flax refer to the special sections on these crops respectively.

#### NOTE:

Following summer or fall application of BONANZA 10G GRANULAR HERBICIDE and prior to seeding, ensure a spring tillage operation is completed to a depth of 5-8 cm (2-3 inches) with either a disc implement or vibrashank cultivator. This should be done when the soil is warm enough to promote germination. Ensure weed seedlings are destroyed and not transplanted during the operation. Seed into a weed-free and well prepared seedbed.

### BONANZA 10% GRANULES

All crops except Barley, Wheat, Flax and Lentils  
 Recommended Rates (Product) in Kilograms/Hectare (Pounds/Acre)  
 Hectares (Acres) per Bag

Season and Crop	Soil Texture, Soil Organic Matter, and Soil Zone			
	Light Sand, Sandy Loam		Medium or Heavy Loam, Silt Loam, Silt, Sandy Clay Loam, Silty Clay Loam, Silty Clay, Clay	
	2-6% O.M.	6-15% O.M.	2-6% O.M.	6-15% O.M.
	Brown, Dark Brown, Black and Grey Wooded Soil Zones	Dark Brown, Black, Deep Black Soil Zones	Brown, Dark Brown, Black and Grey Wooded Soil Zones	Black, Deep Black Soil Zones
FALL APPLICATION Rapeseed (Canola), Peas (Field and Processing), Mustard, Sunflowers, Fababeans,	11 kg (24 lbs)  2.1 hectares/bag	14 kg (31 lbs)  1.6 hectares/bag	14 kg (31 lbs)  1.6 hectares/bag	14-17 kg (31-38 lbs)  1.3-1.6 hectares/bag

Soybeans, Drybeans, Use the higher rate for Alfalfa Establishment heavy wild oat infestations.	(5 acres/bag)	(4 acres/bag)	(4 acres/bag)	(3.3-4 acres/bag)
	Remarks: Apply BONANZA 10G GRANULAR HERBICIDE between Sept. 1 and up to freeze up. The first incorporation must be within 24 hours of application.			
SUMMER APPLICATION Rapeseed (Canola), Fababeans	17 kg (38lbs) 1.3 hectares/bag (3.3 acres/bag)	17 kg (38lbs) 1.3 hectares/bag (3.3 acres/bag)	17 kg (38lbs) 1.3 hectares/bag (3.3 acres/bag)	17 kg (38lbs) 1.3 hectares/bag (3.3 acres/bag)
	Remarks: Apply BONANZA 10G GRANULAR HERBICIDE between June 1 and Sept. 1. The first incorporation must be within 24 hours of application.			

### BONANZA 10% GRANULES FOR LENTILS AND FLAX

Fall and Summer Application Only Recommended Rates (Product) in  
Kilograms/Hectare (Pounds/Acre) Hectares (Acres) per Bag

Season and Crop	Soil Texture, Soil Organic Matter, and Soil Zone			
	Light Sand, Sandy Loam		Medium or Heavy Loam, Silt Loam, Silt, Sandy Clay Loam, Silty Clay Loam, Silty Clay, Clay	
	2-6% O.M.	6-15% O.M.	2-6% O.M.	6-15% O.M.
	Brown, Dark Brown, Black and Grey Wooded Soil Zones	Dark Brown, Black, Deep Black Soil Zones	Brown, Dark Brown, Black and Grey Wooded Soil Zones	Black, Deep Black Soil Zones
FALL APPLICATION Lentils and Flax	11 kg (24 lbs)	14 kg (31 lbs)	11 kg (24 lbs)	14-17 kg (31-38 lbs)
	2.1 hectares/bag (5 acres/bag)	1.6 hectares/bag (4 acres/bag)	2.1 hectares/bag (5 acres/bag)	1.3-1.6 hectares/bag (3.3-4 acres/bag) Use the higher rate for heavy wild oat infestations.
Remarks: Apply BONANZA 10G GRANULAR HERBICIDE between Sept. 1 and up to freeze up. The first incorporation must be within 24 hours of application.				
SUMMER APPLICATION Flax only	17 kg (38lbs) 1.3	17 kg (38lbs) 1.3	17 kg (38lbs) 1.3	17 kg (38lbs) 1.3



	hectares/bag (3.3 acres/bag)	hectares/bag (3.3 acres/bag)	hectares/bag (3.3 acres/bag)	hectares/bag (3.3 acres/bag)
Remarks: Apply BONANZA 10G GRANULAR HERBICIDE between June 1 and Sept. 1. The first incorporation must be within 24 hours of application.				

**SPECIAL INSTRUCTIONS FOR FLAX AND LENTILS**

Application of BONANZA 10G GRANULAR HERBICIDE to flax may be made in summer or fall.

Apply to lentils in fall only.

Both incorporations should be done in the fall (summer) prior to seeding flax or lentils in the spring.

To ensure a firm seedbed and maintain a constant depth of planting, a shallow tillage and a packed seedbed in the spring is recommended.

Seed with a drill to a depth of 2-4 cm. (3/4-1 1/2 inches) into a moist and firm seedbed.

Seed flax and lentils when soil temperatures are warm and greater than 6° C (42°F). This is usually after mid-May.

Environmental factors that are referred to in the “DIRECTIONS FOR USE IN ALL CROPS” section may cause crop injury and reduced yields.

**BONANZA 10% GRANULES FOR BARLEY**

Fall Application Only - September 1 to Freeze up Recommended Rates (Product) in Kilograms/Hectare (Pounds/Acre) Hectares (Acres) per Bag

Season and Crop	Soil Texture, Soil Organic Matter, and Soil Zone			
	Light	Medium or Heavy		
	All soils with 2 to 4% organic matter	All soil textures with 4 to 6% organic matter	Sand and Sandy Loam with 6 to 10% organic matter	Loam, Silt Loam, Silt, Silty Clay. Loam, Clay Loam, Sandy Clay Loam, Silty Clay, Clay with 6 to 10% organic matter
	Brown, Dark Brown, Black and Grey Wooded Soil Zones	Brown, Dark Brown, Black and Grey Wooded Soil Zones	Brown, Dark Brown, Black Soil Zones	Black, Deep Black Soil Zones
FALL APPLICATION Barley	8.5 kg (19 lbs)	11 kg (24 lbs)	11 kg (24 lbs)	14kg (31 lbs)

	2.7 hectares/bag (7 acres/bag)	2.1 hectares/bag (5 acres/bag)	2.1 hectares/bag (5 acres/bag)	1.6 hectares/bag (4 acres/bag) Use the higher rate for heavy wild oat infestations.
Remarks: Apply BONANZA 10G GRANULAR HERBICIDE between Sept. 1 and up to freeze up. The first incorporation must be within 24 hours of application.				

### **SPECIAL INSTRUCTIONS FOR BARLEY**

- Application of BONANZA 10G GRANULAR HERBICIDE to barley is recommended as a fall treatment only.
- Barley is a fast-emerging, fast-growing cereal that has great natural competitive ability once established. DO NOT USE BARLEY RATES OF APPLICATION IN OTHER REGISTERED CROPS. SEE THE RATE OF APPLICATION SECTIONS FOR OILSEED AND SPECIAL CROPS AND FOR LENTILS AND FLAX WHEN USING BONANZA 10G GRANULAR HERBICIDE ON THESE CROPS RESPECTIVELY.
- Initial incorporation must be within 24 hours of BONANZA 10G GRANULAR HERBICIDE application and to a depth of 8-10 cm (3-4 inches). The second incorporation should also be done in the fall at right angles to the first. For maximum effectiveness delay the second incorporation for 5 days.
- When using the lower rate of BONANZA 10G GRANULAR HERBICIDE some wild oats and wild buckwheat may escape the herbicidal action. Lower areas of fields with high wild oat populations should be tilled prior to seeding the barley in order to reduce the wild oat density.
- Use the higher rate of BONANZA 10G GRANULAR HERBICIDE on all soils with 6-10% organic matter except sand and sandy loam.
- Do not apply BONANZA 10G GRANULAR HERBICIDE for barley on land treated with ADVANCE, BONANZA, TRIFLUREX, TREFLAN, EDGE, HERITAGE, FORTRESS or RIVAL since June 1 of the previous year.
- Do not apply to soils containing less than 2% organic matter.
- Seeding should be done with drills and into a moist, warm seedbed. Do not seed when soil conditions are cold. If seeding with a discer or air seeder avoid variable seeding depth and ensure a firm seedbed by packing after seeding.
- Do not seed early when soil conditions are cold.
- Some early season effects may be noticed on the barley, however these effects are only temporary and the crop will recover to full yield potential.
- Application to severely eroded knolls may result in reduced crop stand.
- Application to fields with wide variances in soil organic matter or soil texture can result in reduced crop tolerance and variable weed control.

- See the above chart for correct application rates of BONANZA 10G GRANULAR HERBICIDE on barley.

**FALL APPLICATION TO STUBBLE OR SUMMER FALLOW FOR CONTROL OF GREEN FOXTAIL IN WHEAT.**

**CROPS REGISTERED**

Spring Wheat (includes Semi-Dwarf)

Durum Wheat

**WEED CONTROLLED IN CROP YEAR**

Green foxtail\* (Wild Millet)

During the crop year, BONANZA 10G GRANULAR HERBICIDE will provide commercially acceptable control of Green foxtail.

\*BONANZA 10G GRANULAR HERBICIDE will not control trifluralin tolerant Green foxtail. See specific recommendations in WARNING section of this label.

**RECOMMENDED RATES OF BONANZA 10G GRANULAR HERBICIDE PER HECTARE**

(Fall Application)

Soils between 2% and 8% organic matter

Date of Application

Rate of product per hectare

September 1 to freeze-up

5.5 kg/ha

**WARNING**

Application to severely eroded knolls may result in reduced crop stand. 5.5 kg/ha is the maximum rate for wheat. Do not use higher rates for wheat as crop injury may result.

**CAUTION**

Do not apply BONANZA 10G GRANULAR HERBICIDE on stubble in the fall for wheat when the crop harvested in the current calendar year was treated with BONANZA 10G GRANULAR HERBICIDE, HERITAGE, (or another trifluralin product) or EDGE (an ethalfluralin product). This includes application made in the previous summer or fall.

**LAND PREPARATION**

BONANZA 10G GRANULAR HERBICIDE may be fall applied to summerfallow, and to standing or pre-worked stubble, provided trash is not so heavy as to prevent soil mixing due to plugging of the implement. BONANZA 10G GRANULAR HERBICIDE may be applied over top of moderate green growth (not affecting soil mixing). If green growth is heavy (interfering with soil mixing), destroy existing growth before application of BONANZA 10G GRANULAR HERBICIDE either by cultivating or with the application of a recommended

herbicide. If the swath is removed by burning, cultivate once to remove charcoal layer prior to application of BONANZA 10G GRANULAR HERBICIDE.

### **APPLICATION**

BONANZA 10G GRANULAR HERBICIDE can be applied in the fall between September 1 and prior to soil freeze-up for Green foxtail control the following year. Apply with a properly calibrated granular herbicide applicator that will apply the granules uniformly. Calibrate the applicator according to manufacturer's directions and check frequently during application to ensure the equipment is working properly. Avoid concentration of the material in narrow bands or strips. Apply BONANZA 10G GRANULAR HERBICIDE to the soil surface and incorporate in the same operation if possible. Ensure that large clods are broken. Do not delay incorporation more than 24 hours after application. When applied as directed, BONANZA 10G GRANULAR HERBICIDE will not harm crops that follow in rotation; however, an over application caused by overlapping, improper calibration, non-uniform application, etc., may reduce stands or crops that follow in rotation.

### **INCORPORATION**

Incorporate BONANZA 10G GRANULAR HERBICIDE into the soil in two different directions using a field cultivator, deep tillage cultivator or disc implement operated at 8-10km/hr and set to work 5-8 cm deep. The second working should be done in a cross direction at the same depth.

To conserve trash cover throughout the winter, one incorporation may be completed in the fall with the second incorporation done in spring at the time of seedbed preparation.

Both incorporations may be completed in the fall. If so, it is recommended that the second working be delayed at least 3 days following the first. This allows time for greater release of BONANZA 10G GRANULAR HERBICIDE onto the soil particles and assures more uniform distribution in the soil. The second incorporation should be done in a cross direction to the first and at the same depth.

BONANZA 10G GRANULAR HERBICIDE should not be incorporated with a field cultivator when the soil is crusted, lumpy, or too wet for good mixing action.

Incorporation with implements set to cut less than 5 cm deep or more than 8 cm deep may result in erratic weed control or crop damage.

Rod weeders, harrows, or hoe drills, will not properly incorporate BONANZA 10G GRANULAR HERBICIDE.

### **SPRING TILLAGE FOR SEEDBED PREPARATION**

All spring tillage following fall application of BONANZA 10G GRANULAR HERBICIDE should be done when the soil is warm enough to promote germination.

When only one incorporation is completed in the fall to conserve trash cover, the spring tillage should be done at an angle or cross direction to the fall incorporation with the implement operated at a 5-8 cm depth. When both

incorporations are completed in the fall, shallow spring tillage (no deeper than fall incorporation) could be completed with a cultivator or disc implement.

Avoid transplanting weed seedlings.

Seed into a firm, moist, weed-free seedbed using a double disc press drill or hoe drill set to seed 3-6 cm deep.

If a discer or air seeder is used for seeding, separate spring tillage may not be necessary. However, care must be exercised, such that the discer or air seeder is set to uniformly place the seed 3-6 cm deep and the seedbed should be firmly packed or harrowed after seeding to promote good germination.

WHEAT: to reduce risk of wheat injury, use quality seed and agronomic practices which will promote good growing conditions. Avoid deep seeding, loose seedbeds, and seeding into cold soils.

SEMI-DWARF WHEAT: when seeding semi-dwarf wheat, special care should be taken to ensure shallow seedling. Check local recommendations for proper seeding depth.

### **BONANZA 10G GRANULAR HERBICIDE DIRECTIONS FOR USE ON SUMMERFALLOW**

BONANZA 10G GRANULAR HERBICIDE is a pre-emergence herbicide which is blended (mixed into the soil) to provide control of several annual grasses and annual broadleaf weeds during both years of the summerfallow-wheat rotation. BONANZA 10G GRANULAR HERBICIDE CONTROLS SUSCEPTIBLE WEEDS BY KILLING SEEDLINGS AS THEY GERMINATE. It will not control established weeds.

#### **CROPS REGISTERED**

Spring Wheat (includes Semi-Dwarf)

Durum Wheat

#### **WEEDS CONTROLLED**

<b>FALLOW YEAR</b>		<b>CROP YEAR</b>
Barnyard grass	Wild buckwheat	Lamb's-quarters
Cow cockle	Wild millet (Green foxtail)*	Wild buckwheat***
Lamb's-quarters	Wild oats	Wild millet (Green foxtail)
Persian Darnel	Wild oats**	Redroot pigweed

\*BONANZA 10G GRANULAR HERBICIDE will not control trifluralin tolerant Green foxtail. See specific recommendations in WARNING section of this label.

\*\*Control of Wild oats in the crop year may be variable depending on Wild oat population as well as soil and climatic conditions.

\*\*\*Some Wild buckwheat may escape the herbicidal action of BONANZA 10G GRANULAR HERBICIDE but its growth will be retarded and result in limited competition to the wheat.

NOTE: During the fallow year, susceptible weeds may not be fully controlled until after the second incorporation operation has established a uniform layer of soil treated with BONANZA 10G GRANULAR HERBICIDE. During the crop year, BONANZA 10G GRANULAR HERBICIDE will provide commercially acceptable control of weeds as specified above.

**BONANZA 10G GRANULAR HERBICIDE SUMMERFALLOW APPLICATION  
RECOMMENDED RATES (kg/ha) BROWN SOIL ZONE**

	%Organic Matter	
Application Date	1 – 3%	4 – 8%
May	9.5 kg/ha	11.0 kg/ha
June	8.0 kg/ha	9.5 kg/ha
July	6.5 kg/ha	8.0kg/ha

**LAND PREPARATION**

By reducing the number of fallow workings in a season, a greater trash cover is retained which reduces wind erosion and evaporation. The greatest reduction in the number of necessary fallow cultivations in a season may be obtained by applying BONANZA 10G GRANULAR HERBICIDE just prior to the first spring fallow working.

BONANZA 10G GRANULAR HERBICIDE may be applied to standing or pre-worked stubble, provided trash is not so heavy as to prevent soil mixing.

BONANZA 10G GRANULAR HERBICIDE may be applied over top of moderate green growth (not affecting soil mixing). If green growth is heavy (interfering with soil mixing), destroy existing growth before application of BONANZA 10G GRANULAR HERBICIDE either by cultivation or with the application of a recommended herbicide.

**APPLICATION**

Application of BONANZA 10G GRANULAR HERBICIDE to summerfallow fields will provide weed control during both years of the summerfallow-wheat rotation. Apply with a properly calibrated granular herbicide applicator that will apply the granules uniformly.

Calibrate the applicator according to manufacturer’s directions and check frequently during application to ensure equipment is working properly. Avoid concentration of the material in narrow bands or strips. Apply BONANZA 10G GRANULAR HERBICIDE to soil surface and incorporate in the same operation if possible (see below for incorporation details). Ensure that large clods are broken. When applied as directed, BONANZA 10G GRANULAR HERBICIDE will not injure wheat grown in rotation after summerfallow; however an over application caused by overlapping, improper calibration or non-uniform application, may result in reduced crop stand, delayed development or reduced yields.

## **THE INCORPORATION OPERATIONS**

To incorporate, mix BONANZA 10G GRANULAR HERBICIDE into the soil in two different directions using a field cultivator, deep tillage cultivator, or a disc implement operated at 8-10 km/hr. The first incorporation must be done within 24 hours of application and the second working should be done no sooner than one week after application. Subsequent workings may be done whenever necessary to destroy resistant weed growth during the remainder of the fallow year. For the first 2 incorporations the equipment should be set to work 5-8 cm deep. Subsequent workings should be no deeper than 8 cm.

After completing the two incorporations, additional cultivations with a rod weeder or shallow tillage may be required to control resistant weed growth and more uniformly blend BONANZA 10G GRANULAR HERBICIDE into the soil. These additional cultivations should be as shallow as possible to minimize surface trash burial and evaporation.

BONANZA 10G GRANULAR HERBICIDE should not be blended with a cultivator when the soil is crusted, lumpy or too wet for good mixing action.

Blending with implements set to cut deeper than 8 cm may result in erratic weed control and crop injury.

## **SPRING TILLAGE FOR SEEDBED PREPARATION**

Seedbed preparation should be done using a field cultivator set to cut 5 cm deep (no deeper than the incorporation operation), when the soil is warm enough to promote good germination. Avoid transplanting weed seedlings; seed into a weed-free seedbed using a double disc drill or hoe drill set to seed 3-6 cm deep. If a discer or air seeder is used for seeding, separate spring tillage may not be necessary. The discer or air seeder should be set to place seed 3-6 cm deep and the seedbed should be firmly packed or harrowed after seeding to promote good germination.

**WHEAT:** to reduce risk of wheat injury, use quality seed and agronomic practices which will promote good growing conditions. Avoid deep seeding, loose seedbeds, and seeding into cold soils.

**SEMI-DWARF WHEAT:** When seeding semi-dwarf wheat, special care should be taken to ensure shallow seeding. Check local recommendations for proper seeding depth.

## **ENVIRONMENTAL HAZARDS**

To reduce runoff from treated areas into aquatic habitats, avoid application to areas with a moderate to steep slope, compacted soil or clay.

Avoid application of the product when heavy rain is forecast.

Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.

## **PRECAUTIONS:**

### **DANGER: EYE IRRITANT- CAUTION**

### **KEEP OUT OF THE REACH OF CHILDREN.**

Avoid contact with eyes, skin and clothing. Wash hands and arms thoroughly after application. Avoid contamination of feed and foodstuffs. Do not contaminate any body of water. Keep in original bag during storage.

This product contains a petroleum distillate which is moderately to highly toxic to aquatic organisms. Avoid contamination of aquatic systems during application. Do not contaminate these systems through direct application, disposal of waste or cleaning equipment.

If this pest control product is to be used on a commodity that may be exported to the U.S. and you require information on acceptable residue levels in the U.S., visit CropLife Canada's website at [www.croplife.ca](http://www.croplife.ca).

All handlers must wear a long-sleeved shirt and long pants. In addition, wear chemical-resistant gloves during mixing/loading, repair and clean-up activities.

DO NOT enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.

POTENTIAL SKIN SENSITIZER.

### **FIRST AID**

**IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control centre 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 centre or doctor for treatment advice.

**IF SWALLOWED:** Call a poison control centre or doctor immediately for treatment advice. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give **any** liquid to the person. 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, preferable by mouth-to-mouth, if possible. Call a poison control centre or doctor for treatment advice.

Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.



**TOXICOLOGICAL INFORMATION:**

Treat symptomatically. This product contains petroleum distillates. Vomiting may cause aspiration pneumonia.

**STORAGE**

Do not store under direct sunlight. Store in areas of cool temperature. Do not store in granular applicators for prolonged periods of time (maximum 24hours).

**RETURNABLE CONTAINER**

Disposal of Container: Do not reuse this container for any purpose. For disposal, this empty container may be returned to the point of purchase (distributor/dealer).

**DISPOSAL**

1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Follow provincial instructions for any required additional cleaning of the container prior to its disposal.
3. Make the empty container unsuitable for further use.
4. Dispose of the container in accordance with provincial requirements.
5. For information on the disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

**NOTICE TO USER:** This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *PEST CONTROL PRODUCTS ACT* to use this product in a way that is inconsistent with the directions on the label. The user assumes the risk to persons or property that arises from any such use of this product.

All product names are registered trademarks of their respective companies.