



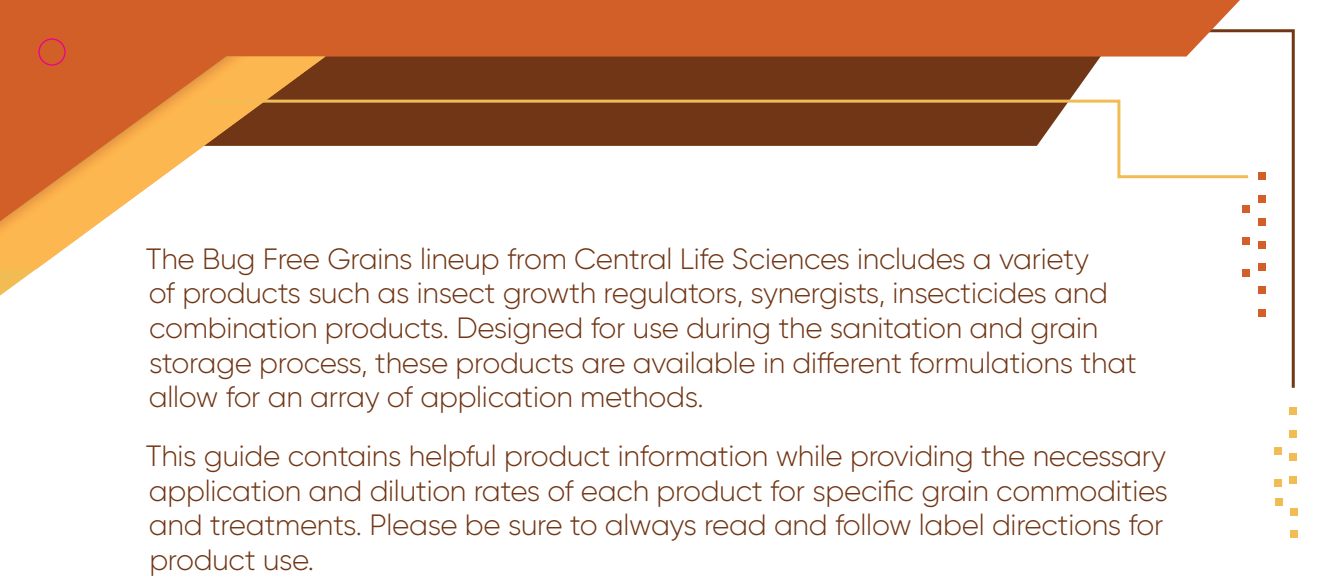
BUG FREE

GRAINS

Stored Product Solutions



PRODUCT APPLICATION GUIDE



The Bug Free Grains lineup from Central Life Sciences includes a variety of products such as insect growth regulators, synergists, insecticides and combination products. Designed for use during the sanitation and grain storage process, these products are available in different formulations that allow for an array of application methods.

This guide contains helpful product information while providing the necessary application and dilution rates of each product for specific grain commodities and treatments. Please be sure to always read and follow label directions for product use.





APPLICATION RATES*

Amount of Gravista™/1,000 Bushels of Grain

Commodity	Treatment at 0.5 ppm Deltamethrin/ 14 ppm PBO/1.2 ppm (S)-Methoprene		Gallons of Diluent	Liters of Diluent
	fl. oz.	mL.		
Barley	31	916	3-5	11.3-19
Corn	35.6	1,053	3-5	11.3-19
Oats	20.38	603	3-5	11.3-19
Popcorn	35.6	1,053	3-5	11.3-19
Rice	28.5	843	10	11.3-19
Rye	35.6	1,053	3-5	11.3-19
Sorghum (milo)	31.7	937	3-5	11.3-19
Wheat	38	1,124	3-5	11.3-19

Amount of Gravista™/Ton of Grain

Commodity	Treatment at 0.5 ppm Deltamethrin/14 ppm PBO/ 1.2 ppm (S)-Methoprene		Ounces of Diluent	Milliliters of Diluent
	fl. oz.	mL.		
Barley, Corn, Oats, Popcorn, Rice, Rye, Sorghum (milo), Wheat	1.3	38	13-21	384-630

*See label for complete product directions.

DILUTION RATES

Gravista™ Dilution Rates

Application

On-grain application with water or food grade oil	3-5 gal. solution per 1,000 bu.
Rough rice spray	10 gal. of water per 1,000 bu.
Grain bins/warehouse	1-6 fl. oz. + 1 gal. water per 1,000 sq. ft.

Can be applied directly on grain streams and
as an empty-bin and warehouse treatment.

Features 3-in-1 insect
control with an adulticide,
an insect growth regulator
(IGR) and a synergist, killing
listed exposed insects and
breaking their life cycles.



NOTES

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APPLICATION RATES*

Amount of Centynal™ Synergized Insecticide/1,000 Bushels of Grain

Commodity	Treatment at 0.5 ppm Deltamethrin/14 ppm PBO		Gallons of Diluent	Liters of Diluent
	fl. oz.	mL.		
Barley	31	916	3-5	11.3-19
Corn	35.6	1,053	3-5	11.3-19
Oats	20.38	603	3-5	11.3-19
Popcorn	35.6	1,053	3-5	11.3-19
Rice	28.5	843	10	11.3-19
Rye	35.6	1,053	3-5	11.3-19
Sorghum (milo)	31.7	937	3-5	11.3-19
Wheat	38	1,124	3-5	11.3-19

Amount of Centynal™ Synergized Insecticide/Ton of Grain

Commodity	Treatment at 0.5 ppm Deltamethrin/14 ppm PBO		Ounces of Diluent	Milliliters of Diluent
	fl. oz.	mL.		
Barley, Corn, Oats, Popcorn, Rice, Rye, Sorghum (milo), Wheat	1.3	38	13-21	384-630

* See label for complete product directions.

DILUTION RATES

Centynal™ Synergized Insecticide Dilution Rates

Application

On-grain application with water or food grade oil	3-5 gal. solution per 1,000 bu.
Rough rice spray	10 gal. of water per 1,000 bu.
Grain bins/warehouse	1-6 fl. oz. + 1 gal. water per 1,000 sq. ft.

Features an
adulticide and a
synergist, designed
to meet short-term
storage or rescue
treatment needs.



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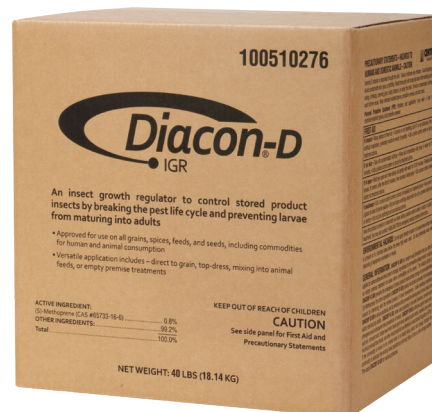
APPLICATION RATES

Diacon®-D IGR Application Rates

Application

Loading grain	8-10 lbs. per 1,000 bu.
Mixing into animal feed	.33 lbs. per ton of feed
Area treatments	1.5 oz. per 1,000 sq. ft.

Designed for water-challenged operations.



NOTES

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APPLICATION RATES*

Diacon® IGR Application Rates (Per 1,000 Bushels) in Solution

Commodity	fl. oz.
Wheat	7
Corn	7
Sorghum (Milo)	7
Barley	6
Rice	6
Oats	4
Peanuts**	4
Sunflower	4

**Breaks the insect
life cycle.**

*See label for complete product directions.

**For peanuts, use water solution only.

DILUTION RATES

Diacon® IGR Dilution Rates

Application

On-grain application with water as carrier	5 gal. of solution per 1,000 bu.
On-grain application with food grade oil as carrier***	1 gal. of solution per 1,000 bu.
Rice spray with carrier as water	10 gal. of solution per 1,000 bu.
Fogging - aerosol generators****	1/10 fl. oz. per 10,000 cu. ft.

***Apply at the oil manufacturer's label application rate.

****Follow equipment manufacturer instructions for amount of diluent.

Broad-spectrum control.



NOTES

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APPLICATION RATES*

Amount of Diacon® IGR PLUS/1,000 Bushels of Grain				
Commodity	0.5 ppm Deltamethrin/ 1.25 ppm (S)-Methoprene	1 ppm Deltamethrin/ 2.5 ppm (S)-Methoprene	Gallons of Water	Food Grade Mineral Oil/Gallon
	fl. oz.	fl. oz.	gal.	gal.
Barley	7.75	15.5	5	1
Corn	9	18	5	1
Oats	5.15	10.3	5	1
Popcorn	9	18	5	1
Rice	7.2	14.4	5	1
Rye	9	18	5	1
Sorghum (milo)	8	16	5	1
Wheat	9.6	19.2	5	1

* See label for complete product directions.

DILUTION RATES

Diacon® IGR PLUS Dilution Rates

Application

On-grain application	3-5 gal. liquid per 1,000 bu.
Rough rice spray	10 gal. liquid per 1,000 bu.
Surface spray	1 fl. oz. Diacon® IGR PLUS + 1.5 fl. oz. PBO-8® Synergist + water to make 1 gal. of solution per 1,000 sq. ft.

**Combination product for
pre-bin treatments and
on-grain applications.**

Follow the 1-1-1 Rule for Pre-Bin Treatments:

- 1 fl. oz. Diacon® IGR PLUS
- 1 gal. water
- 1,000 sq. ft.



NOTES

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APPLICATION RATES*

Amount of Centynal™ EC Insecticide/1,000 Bushels of Grain

Commodity	0.5 ppm	1 ppm	Gallons of Water	Food Grade Mineral Oil/Gallon
	fl. oz.	fl. oz.	gal.	gal.
Barley	7.75	15.5	3-5	Follow oil manufacturer's recommendation
Corn	9	18	3-5	
Oats	5.15	10.3	3-5	
Popcorn	9	18	3-5	
Rice	7.2	14.4	3-5	
Rye	9	18	3-5	
Sorghum (milo)	8	16	3-5	
Wheat	9.6	19.2	3-5	

DILUTION RATES

Centynal™ EC Insecticide Dilution Rates

Application

On-grain application with water as carrier	3-5 gal. solution per 1,000 bu.
On-grain application with food grade oil as carrier	Follow oil manufacturer's recommendation
Rough rice spray	10 gal. liquid per 1,000 bu.

Emulsifiable concentrate formulation.

Centynal™ EC Insecticide Tank Mix Rates

PBO-8® Synergist	1 part Centynal™ EC Insecticide + 1.5 parts PBO-8® Synergist
Diacon® IGR	4 fl. oz. in mix to do 5 gallons solution per 1,000 bu.

Treating the outside of bins

Mix:
1 fl. oz. of Centynal™ EC Insecticide
+ 1 gal. water = 1,000 sq. ft.

Broadcast Spray:
2-3 ft. up the bin foundation
6-10 ft. around bin perimeter

Treatment Frequency:
21-28 days



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APPLICATION RATES*

Amount of PBO-8[®] Synergist/1,000 Bushels of Grain

Commodity	Mixing with Centynal [™] EC Insecticide at 0.5 ppm	Mixing with Diacon [®] IGR PLUS at 0.5 ppm Deltamethrin/1.25 ppm (S)-Methoprene
	fl. oz.	fl. oz.
Barley	11.625	11.625
Corn	13.5	13.5
Oats	7.725	7.725
Popcorn	13.5	13.5
Rice	10.8	10.8
Rye	13.5	13.5
Sorghum (milo)	12	12
Wheat	14.4	14.4

**Improves efficacy of insecticides
with added boost.**



Helps fight insect resistance.

*See label for complete product directions.

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APPLICATION RATES*

To kill exposed stages of the species listed below, use the indicated rate of InseLux™ Fog & Mill Spray per 1,000 cu. ft.

Insect	Rate of InseLux™ Fog & Mill Spray in fluid ounces:
<ul style="list-style-type: none"> House Flies, Indian Meal Moths Sawtoothed Grain Beetles Mosquitoes, Rice Weevils 	1 fl. oz.
<ul style="list-style-type: none"> Almond Moths, Angoumois Grain Moths, Boxelder Bugs, Bran Bugs Cadelles, Carpet Beetles Cheese Mites, Cheese Skippers Chocolate Moths, Cigarette Beetles Clover Mites, Crickets Confused Flour Beetles, Drugstore Beetles, Earwigs, Flour Beetles, Grain Beetles, Grain Mites, Granary Weevils Fruit Flies, Gnats, Non-Biting Ham Mites Lesser Grain Borers, Mealworms Mediterranean Flour Moths Merchant Grain Beetles Nuisance Ants** Red Flour Beetles, Rice Flour Beetles Rusty Grain Beetles, Silverfish Small Flying Moths, Spider Beetles Tobacco Moths, Warehouse Beetles Spiders*** 	2 fl. oz.

DILUTION RATES

InseLux™ Fog & Mill Spray Dilution Rates

May be applied undiluted or diluted with mineral oil at a 1:1 ratio through mechanical, thermal or compressed air fogging systems, as a fogging mist or space spray.

Fogging and space spray for use in flour mills, feed mills, warehouses, barns, food handling establishments and other storage facilities.

Features an adulticide, a synergist and an insect growth regulator (IGR) to kill exposed insects and break the insects' life cycle for long-term control.



* See label for complete product directions.

** Except carpenter, fire, harvester and pharaoh ants.

*** Except black widows and brown recluse spiders.

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THE BUG FREE GRAINS LINEUP OF PRODUCTS HELPS CONTROL THE MOST COMMON STORED GRAIN INSECTS FOUND ON YOUR OPERATION.

Lesser Grain Borer



Red Flour Beetle



Rice Weevil



Sawtoothed Grain Beetle



Indian Meal Moth



Granary Weevil



Confused Flour Beetle



To learn more about the Bug Free Grains product lineup,
call 1-800-248-7763 or visit

BugFreeGrains.com



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