

Crops - Commercial

Stored Grain	
Clean the storage bin	Good sanitation practices can prevent at least one early fumigation. Bins should be thoroughly cleaned at least two weeks prior to storing grain. All old grain, trash and debris should be cleaned from within and around the storage bins and fumigated or burned. Spray the bin inside and out including overhead with a labeled insecticide.
Treat the storage bin	<ol style="list-style-type: none"> 1. Centynal (Deltamethrin) – Apply 0.25 to 1.5 fluid ounces in 1 gallon water per 1,000 square feet. 2. Diacon – D IGR ((S)-Methoprene) – Apply 1.5 ounces per 1,000 square feet. 3. Tempo SC Ultra (β-Cyfluthrin) – Apply 8-16 milliliters of concentrate per 1,000 square feet. See label for the amount of water to add in preparing the spray solution. <p>Storcide II (Chlorpyrifos-methyl) – Mix 1.8 fluid ounces per gallon water per 1,000 square feet of bin surface. (See label for specific application instructions).</p>
Grain protectants	<p>Grain that is to be held in storage should be protected from stored grain insects. An approved grain protectant applied to the grain at the time of storage will help prevent an early infestation. Grain must be at the proper moisture content for storage. Do not apply before high temperature drying. High temperature and high moisture content grain will shorten the residual life of grain protectants. See insecticide labels for specific application instructions. Most grain protectant solutions should be applied to the grain as it enters the storage bin on the conveyor belt, unless it is applied as a surface treatment.</p> <ol style="list-style-type: none"> 1. B.t. (<i>Bacillus thuringiensis</i>) sold as Dipel and others. Follow label directions for surface treatment only to control Indian meal moth. 2. Actellic 5E¹ (Pirimiphos-methyl): Corn² and Grain Sorghum: 9.2 to 12.3 ounces per 5 gallons water per 1,000 bushels; as a surface treatment for Indian Meal moth 3 ounces per 2 gallons of water per 1,000 square feet. 3. Storcide II (Chlorpyrifos-methyl) (21.6% chlorpyrifos-methyl and 3.7% deltamethrin) <ul style="list-style-type: none"> Wheat – 12.4 fluid ounces per 5 gallons water per 1,000 bushels Barley – 9.9 fluid ounces per 5 gallons water per 1,000 bushels Oats – 6.6 fluid ounces per 5 gallons water per 1,000 bushels Rice – 9.3 fluid ounces per 5 gallons water per 1,000 bushels Grain Sorghum – 11.6 fluid ounces per 5 gallons water per 1,000 bushels 4. Fyfanon (Malathion) 6 percent Grain Dust³: Wheat, Corn, Oats – 10 pounds of dust per 1,000 bushels as grain is being loaded or turned into final storage. (See label for further mixing instructions) 5. Pyrenone (Pyrethrins) (6% pyrethrins and 60% PBO) – <u>Short term knock-down control. Degrades rapidly.</u> <ul style="list-style-type: none"> Barley, corn, rice, sorghum and wheat – mix 1 part Pyrenone with 29 parts water. Apply 4-5 gallons per 1,000 bushels. 6. Diatomaceous earth (several trade names). Barley, corn, oats, rye, sorghum, wheat. Follow the label. 7. Dichlorvos resin strips (DDVP, Vapona). Barley, corn, oats, rye, sorghum, soybean, sunflower, wheat. One strip is needed per 1,000 cubic feet of bin headspace. A vapor is released from dichlorvos strips that kills adult Indianmeal moths preventing reproduction. 8. Centynal (Deltamethrin) – <ul style="list-style-type: none"> Wheat 9.14 fluid ounces per 5 gallons water per 1,000 bushels Barley 7.31 fluid ounces per 5 gallons water per 1,000 bushels Oats 4.88 fluid ounces per 5 gallons water per 1,000 bushels 9. Apply 8-10 pounds per 1,000 bushels 10. Sensat (Spinosad) – <ul style="list-style-type: none"> Wheat 10.5 fluid ounces per 5 gallons water per 1,000 bushels Barley 8.2 fluid ounces per 5 gallons water per 1,000 bushels Oats 5.9 fluid ounces per 5 gallons water per 1,000 bushels

¹ Actellic should give 9 to 12 months control of all stored grain insects in Louisiana (except lesser grain borer).

² Not labeled or effective for corn stored in the shuck.

³ This insecticide may not be a suitable grain protectant because it breaks down rapidly and many stored-grain insects have developed high resistance to it in other states. National tolerances for malathion on grain are very low. Grain treated with malathion may be unmarketable in international markets.

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Stored Grain			
Fumigation			
Insect	Fumigant*	Amount Per 1,000 Bushel Grain	*Minimum No. of Days Bin Must Be Closed During Fumigation
Rice weevils	Aluminum Phosphide (Phostoxin)	Follow label Instructions.	Four days – check label for additional information. (Do not fumigate below 40 F)
Lesser grain borer		Follow label Instructions.	
Bran beetles		Follow label Instructions.	
Sawtoothed grain beetle		Follow label Instructions.	
Flat grain beetle		Follow label Instructions.	
Angoumois grain moth		Follow label Instructions.	
Indian meal moth		Follow label Instructions.	

***Note:** Bins must be gas tight. Phosphine gas is deadly to people and other animals. Follow all safety and application guidelines on the label.