



MICHIGAN SOYBEAN
PROMOTION COMMITTEE

a new release



FOR IMMEDIATE RELEASE

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NOTE TO EDITOR: This is the second article in a four-part series provided by Mike Staton. The remaining two are *Sampling for SCN* and *Fall vs. Spring Potassium Fertilizer Application*. They will be coming to you over the next week.

HARVESTING, HANDLING, AND STORING FROST-DAMAGED SOYBEANS

The late planting season has increased the potential for frost damage to occur this fall. The following information will help you reduce the adverse impacts in the event that some of your soybean fields are damaged by frost.

COMBINE ADJUSTMENT

Frost-damaged beans will probably be wetter than normal and more difficult to thresh. Your first step in adjusting for this condition is to reduce the concave clearance. If acceptable threshing still does not occur, increase the speed of the cylinder. Make incremental adjustments and check your progress after each adjustment.

HARVEST AT HIGHER MOISTURE CONTENTS

Frost-damaged soybeans will dry down slowly so producers should avoid significant harvest delays by harvesting these fields at moisture levels between 16 and 18%. The beans will need to be dried to a safe moisture level for storage (12% for 6 months). Electronic moisture meters tend to underestimate the moisture levels in green and immature soybeans so remember to add 1.5 percentage points to the moisture meter readings when testing mixtures of green, immature, and mature beans and adjust drying times accordingly.

DRYING FROST-DAMAGED SOYBEANS WITH AMBIENT AIR

If only 2 to 3 points of moisture need to be removed, the air temperature is above 60°F and below 75% relative humidity; no supplemental heat is required in drying bins equipped with full perforated floors and fans capable of producing one to two cfm/bu. However, drying will occur slowly. Drying times depend on initial moisture content, air flow, grain depth, and weather conditions.

DRYING FROST-DAMAGE SOYBEANS WITH SUPPLEMENTAL HEAT

If you plan to add supplemental heat, be careful as soybeans are more fragile than corn and can be damaged by drying temperatures above 130°F. These temperatures will cause excessive seed coat cracking and split beans. The relative humidity of the drying air should always be maintained above 40% to protect the integrity of the seed coats and prevent splits. Growers can control the heat and humidity of the drying air by using short burner cycles or by changing the burner jets.

STORE FROST-DAMAGED BEANS

Green and immature soybeans are included in the total damage factor in the U.S. soybean grading standard. Elevators will discount loads containing green and immature soybeans and in some cases may reject entire loads if the damage levels are high. Discounts can be reduced by screening out the small beans, drying the rest to 12% moisture, and storing them in aerated bins for at least six weeks. The green color should fade after this amount of time.

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