

# Grain Drying

Farm Name: \_\_\_\_\_

Building: \_\_\_\_\_ Area: \_\_\_\_\_ Date: \_\_\_\_\_

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**Note:** Air is somewhat like a sponge in that it can hold a certain amount of water. Eventually it reaches saturation and can no longer take water out of the grain. As the temperature of the air increases the amount of water the air can take-up increases. This is why heat is used when drying grain as well as other materials. High temperature drying is fast but can over dry some of the grain. No heat drying is slow and can even put water into the grain rather than take the water out.

When grain is stored in a bin the air in the voids around the grain can become saturated with moisture when the temperature drops. Condensation within the grain can result in spoilage. Even when grain is stored in a bin for long periods of time it may be necessary to mix the grain with a stirring auger or by some other technique. It may also be necessary to circulate some air through the grain. Not only is energy used to put grain into and remove grain from a bin or dryer, but it is also necessary to apply energy to maintain grain quality while in long term storage.

Does farm have grain drying? ( yes, no )

Type of crop:  corn  soybeans  wheat  \_\_\_\_\_

Does farm have grain storage? ( yes, no )

Type of crop:  corn  soybeans  wheat  \_\_\_\_\_

Type of grain dryer:

In-bin dryer  batch dryer  continuous flow dryer

Air heating technique:

natural air  low temperature  high temperature

Heat source for drying:

natural gas  LP gas

Dryer fan:

Horsepower \_\_\_\_\_ Power: ( 1-phase, 3-phase ) Voltage: ( 208v, 240v, 480v )

Tractor powered

Alternative fuels and heat exchanger used to dry grain.