

IN THE FIELD

The Cornhusker State grows corn on more acres than any other crop in Nebraska and ranks third in the nation in production. Nebraska ranks second in production of ethanol and distillers grains, a processing byproduct often used for cattle feed. Slightly more than 55% of the state's corn acres are irrigated. Considered separately from field corn production, the state's popcorn industry ranks first in the nation in production.



Better Soybean Storage Starts with Good Harvest Moisture

Harvest timing can have a huge impact on soybean shatter losses and storability. Field losses, splits and cracked seed coats increase as moisture content decreases.

Shatter losses increase significantly when seed moisture falls below 11% or when mature beans undergo multiple wetting and drying cycles. Also, molds develop more rapidly in soybeans with seed coat cracks, so the amount of mechanical damage during harvest affects the rate of bean deterioration.

A moisture content of about 13% at harvest is optimal for mitigating mechanical damage.

Harvesting during high humidity, such as early morning, late evening, or in damp conditions, may reduce shatter loss and mechanical damage if the soybeans are below 11% moisture content. Moisture content can increase several points with an overnight dew or decrease several points during a day with low humidity and windy conditions. Avoid harvesting when beans are driest, such as afternoons.

The market moisture for soybeans is 13%, which is fine for storing soybeans during cool conditions. If your soybeans will be stored through winter and into the warmer weather of spring and summer, store at 11% moisture to limit mold growth and deterioration. The storage life roughly doubles for each percentage point of reduction in moisture content.

Storage Temperature

Controlling soybean temperature during storage is critical. Free fatty acid percentages, a negative characteristic, tend to increase with storage moisture, temperature, and time.

At 12% moisture, free fatty acid percentages increase slowly with storage time if the beans are kept cool. In one study, the average free fatty acid content of 12% moisture beans stored at 50°F stayed below 0.75% but exceeded this level after only four months when stored at 70°F.

Cool soybeans as they go through the fall and winter to maintain quality. Aerate to keep the soybeans within 10 to 15 degrees of the average outdoor temperature during the fall.

Store soybeans during the winter near 30°F in northern states and 40°F or lower in southern states.

Approximate Allowable Storage Time for Soybeans

Moisture Content (%)	--- Grain Temperature (F) ---					
	30	40	50	60	70	80
	Approximate Allowable Storage Time (Days)					
11	300+	300+	300+	300+	200	140
12	300+	300+	300+	240	125	70
13	300+	300+	230	120	70	40
14	300+	280	130	75	45	20
15	300+	200	90	50	30	15
16	300+	140	70	35	20	10
17	300+	90	50	25	14	7
19	190	60	30	15	8	3

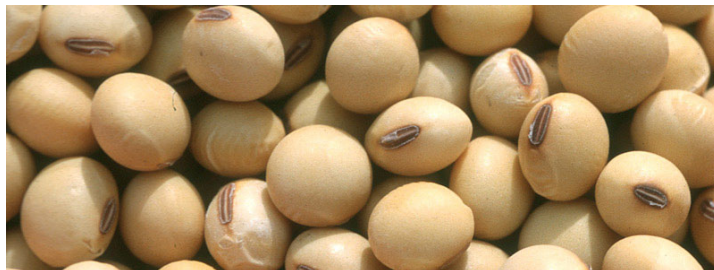
- Airflow through the soybeans permits maintaining the grain temperature but does not extend the allowable storage time beyond that listed in the table.
- Allowable storage time is cumulative. If 16 percent moisture soybeans were stored for 35 days at 50 degrees, one-half of the storage life has been used. If the soybeans are cooled to 40 degrees, the allowable storage time at 40 degrees is only 70 days.

During the spring and summer, aerate stored soybeans to keep the temperature as cool as possible —preferably 40-60°F. These temperatures enhance the storage life of soybeans and reduce mold and insect activity.

Soybeans at 11% moisture have similar storage characteristics as wheat or corn at 13.5% to 14% moisture. Use an allowable storage time chart for cereal grains to estimate allowable storage times for soybeans.

Storage Recommendations

- **Keep fans covered.** Once soybeans are cooled, cover fan and duct openings to prevent snow or moisture from blowing into the bins during winter storage. Keep fans covered during the spring and summer to limit air from warming the soybeans. Ventilate the top of the bin to reduce solar heating affecting the beans at the top of the bin.
- **Monitor stored grain regularly.** Outside temperature changes can result in temperature and moisture changes inside the bin. Monitor soybeans at least once every two weeks during winter storage and weekly during the fall until the grain has been cooled to winter storage temperatures. Monitor the soybeans weekly during the spring and summer. Measure the grain temperature and watch for indications of problems such as condensation, insect activity, and increasing grain temperatures. Record temperature values and grain condition to help track any changes.
- **Use available tools, but don't turn everything over to automation.** Improved technology can help you better manage stored grain, but you still need to manage the grain and inspect it visually. Temperature cables allow you to monitor the stored grain temperature at several locations, and fan controllers can operate fans according to desired air conditions. Monitor and verify that fans are operating as desired.
- **Equalize soybean moisture content.** Soybean moisture variation may lead to storage and marketing losses. Operating an aeration fan will help move moisture from wet to drier beans. Moisture movement will be minimal without aeration airflow. Initially, fans will have to run longer to equalize the moisture content than to cool the grain. The moisture will not be all the same, but it should become more uniform.



Source: <https://cropwatch.unl.edu>

Harvesting Prevent-Plant Sudans & Sorghums

Bruce Anderson, Extension Professor, University of Nebraska-Lincoln

September has arrived so crops like sorghum-sudangrass planted on prevent-plant acres now can be harvested or grazed. How should you do it?

Harvesting crops like sorghum-sudangrass requires dealing with all the moisture in the plant. As silage, it usually is too wet to chop directly. So you can windrow it, wilt to a desirable moisture, and then use a pickup attachment to chop. Or you can wait until grain gets dry enough to balance the plant moisture if the hybrid is one that makes enough grain. Or you can wait until a freeze causes the plant to dry down and then chop quickly enough so it doesn't get too dry.



Making hay isn't much easier, especially if plants are tall. September's short days and cool temperatures will slow the drying rate so cut high to hold windrows off the ground, spread it wide to use as much sunlight as possible to dry it, and crimp it well to open stems so they can dry. Then hope it doesn't rain for the next couple of weeks.

Maybe the best harvest option is baleage. Plastic wrapping bales that are around fifty percent moisture could save a week of drying time and reduce weather risks. You must either own the wrapping equipment or have a nearby custom operator but if it's available it should be considered.

Grazing also can be challenging. If cattle get free access they will trample most of the forage. Maybe good for the soil but certainly a loss of a lot of potential feed. Allowing access to just a small portion of the field by strip grazing will get much more of the forage eaten rather than trampled. Windrowing first and then strip grazing may work even better.

Tall, green sudans and sorghums can provide much good forage but using them takes good moisture management.

Free Farm Finance and Ag Law Clinics this September

Free legal and financial clinics are being offered for farmers and ranchers at five sessions across the state in September. The clinics are one-on-one meetings with an agricultural law attorney and an agricultural financial counselor. These are not group sessions, and they are confidential. To sign up for a free clinic or to get more information, call the Nebraska Farm Hotline at 1-800-464-0258.

Clinic Sites and Dates

Grand Island — Thursday, September 5
North Platte — Thursday, September 12
Lexington — Thursday, September 19
Norfolk — Wednesday, September 25
Valentine — Thursday, September 26

Bazile Groundwater Management Area Highboy Cover Crop Seeding Demonstration

Friday, September 20th - 10:30 a.m. to 1:00 p.m.

Meet at Midwest Seeds
53105 Hwy 59 - Creighton, NE

Field Site: Jim & Jody Fuchtman's Farm



Are you looking for an alternative way to plant cover crops? If so, you are invited to a field day demonstrating the use of a highboy interseeder to facilitate planting prior to harvest. Join us to learn about methods and benefits of early establishment of cover crops. Lunch provided after the demonstration at Midwest Seeds!



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