

NEBRASKA TECHNICAL NOTE

U. S. DEPARTMENT OF AGRICULTURE



SOIL CONSERVATION SERVICE

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PROCEDURE FOR COLLECTING CROP, HAY, AND PASTURE YIELDS

Hayland

Identify the soil and area where yield data is to be collected. If area has or will be grazed, an enclosure will be needed to protect the forage from livestock. See Range Technical Note No 12 for information on building portable enclosures.

At optimum harvest time, clip forage at time and stage suggested in Table 1, Pasture and Hayland Management (510), Technical Guide, for species harvested.

Tools for harvesting will be an 11.5-inch by 24-inch rectangle. (These are the same tools and technique used in range clipping.) Weigh the air-dried material in grams, and multiply by 50 to get pounds per acre yield.

For each harvest period, cut or clip the same area. Complete SCS-SOI-1, Soil Yield Data Form, for each site.

It is very important that fields and soils where yield data is to be collected be marked so that several years of data can be taken on the same area.

Drying Procedure for Hay

Bag the clipped forage loosely in 50-pound capacity burlap bags for drying. Hang bags in an area with good air circulation. Weigh each sample each day until there is no longer a weight loss. Record the official dry weight.

Pastureland (Cool-Season)

Identify the soil and area where yield data is to be collected. Enclose area with a fence or portable enclosure so that livestock are excluded.

At optimum grazing time (height of forage), clip forage at time and stage suggested in Table 1, Pasture and Hayland Management (510), Technical Guide, for species grazed.

Tools for harvesting will be an 11.5-inch by 24-inch rectangle. (These are the same tools and technique used in range clipping.) Weigh the air-dried material in grams, and multiply by 50 to get pounds per acre yield.

Clip this same area every 28 days or whenever forage reaches grazing height. Stop clipping approximately 30 days before the first killing frost. After a killing frost, clip pasture area to grazing height. Add the total clipping weights for the year to obtain yield in pounds per acre.

If not possible to set up clipping study, show production in animal unit months of grazing obtained per acre. If possible also show production in pounds of livestock gain per acre.

It is very important that pastures and soil areas where yield data is collected be marked so that several years of data can be taken in the same area.

Drying Procedure for Forage Clippings

See Hayland.

Small Grain

Identify the condition and site where yield data is to be collected. Locate the distance between rows to determine number of drilled rows and length of row needed to sample 1/1000 acre. Place a wire flag at each corner and lay a straight edge between flags to delineate sample area.

Harvest the grain by cutting straw approximately 1 foot long at proper harvesting time. Use three 50-pound capacity burlap bags for each 1/1000 acre sample site. This allows enough air space in each bag for drying.

After the grain is dry, run the sample through a combine or remove all grain from the panicle by hand stripping.

Weigh the grain from the site and determine the percentage of moisture and calculate yield per acre.

Drying Procedure for Small Grain

Hang bags in an area with good circulation. Weigh each day until there is no longer a weight loss.

Corn For Grain

Identify the condition and soil site where yield data is to be collected. Locate the distance between rows and length of row needed to sample 1/1000 acre. Four rows 3.63 feet long and 36" wide will equal 1/1000 acre. Place a wire flag at each measured section of each row to delineate site area. Pick all ears in the measured area and place in a bag or container for air drying. Shell corn by hand or machine, determine percentage of moisture and calculate yield. Weigh grain in pounds and multiply by 1,000 to obtain yield in pounds per acre.

Soybeans and Field Beans

Identify the condition and soil site where yield data is to be collected. Locate the distance between rows and length of row needed to sample 1/1000 acre. Four rows 3.63 feet long and 36" wide will equal 1/1000 acre. Place

a wire flag at each corner of plot and lay a straight edge between flags to delineate site area. Pull up all plants and place in 50-pound capacity burlap bags. Allow enough air space in each bag for drying.

Dry plants in bags hung in a well aerated location. Weigh each day until there is no longer a loss of weight. Thresh beans in a combine or hand thresh and determine percentage of moisture. Weigh beans in pounds and multiply by 1,000 to obtain yield per acre in pounds at percentage of moisture.

Grain Sorghum

Identify the condition and soil site where yield data is to be collected. Locate the distance between rows needed to sample 1/1000 acre. Four rows 3.63 feet long and 36" wide or 4 rows 4.36 feet long and 30 inches wide will equal 1/1000 acre. Place a wire flag at each measured section of each row to delineate the site area. Cut off all heads and place in a 50-pound capacity burlap bag for drying. Hang bags in a well aerated area. Weigh each day until there is no longer a loss of weight. Thresh sorghum by hand or machine and weigh grain in pounds. Multiply weight by 1,000 to obtain yield in pounds per acre.