

POST-SILAGE DOUBLE CROPPING OPTIONS

Double cropping, also referred to as sequential planting or relay cropping, remains a relatively new cropping approach in north central Alberta. This practice involves planting a second crop, after harvesting the initial crop, on the same piece of land, in the hopes of getting a second harvest within the same growing season. Few demonstrations of the concept have been carried out in the area due to the shorter, cooler growing season than other global regions where it is popular, however interest in alternative management systems for crop and forage production continues to increase. Potential benefits to be gained from double cropping include additional feed production, land use efficiency, protecting soil from wind erosion, and maintaining living roots in the soil for an extended portion of the year. Cattle producers and feedlots in the area can benefit from an increase in feed production and land use efficiency.

Results Driven Agriculture Research (RDAR) launched a new pilot project in 2025 called Demonstrating Emerging Management Opportunities (DEMO) that Gateway Research Organization (GRO) had the privilege to partake in. A producer brought the double cropping idea forward in a committee meeting with GRO as a potential demo to showcase and learn more about its potential to develop further into producer field trials or replicated small plot. The idea was a perfect fit for RDAR's DEMO stream

This demonstration involved seeding 12 treatments in strips, placed side by side, to compare their performance. The treatments were categorized into warm season cereals, cool season cereals, fall/winter cereals, and cover crop mixes. Treatment varieties were selected for either early maturity or reduced heat unit requirements to improve chances of successful establishment and growth under local climate conditions.

AGRONOMIC INFORMATION:

Seeded: July 31, 2025

Seed depth: ½ - ¾ inch Millets; ¾ - 1 inch all other treatments

Soil temperature: 20°C

Rainfall recorded: July 31 to Oct. 14, 2025: 104 mm

Fertilizer:

Millets

Side Banded (At Seeding): 26.8-1.9-16.0-5.4 @ 373.2 lbs/ac

100 lb/ac Actual N; 7.2 lb/ac Actual P; 60 lb/ac Actual K; 20 lb/ac Actual S

Seed Placed (At Seeding): 11-52-0 @ 28.8 lbs/ac

3.2 lb/ac Actual N; 11.96 lb/ac Actual P

Cover Crop Mixes

Side Banded (At Seeding): 26.8-1.9-16.0-5.4 @ 100 lbs/ac

26.8 lb/ac Actual N; 1.9 lb/ac Actual P; 16 lb/ac Actual K; 5.4 lb/ac Actual S

Seed Placed (At Seeding): 11-52-0 @ 28.8 lbs/ac

3.2 lb/ac Actual N; 11.96 lb/ac Actual P

Cereals

Side Banded (At Seeding): 26.8-1.9-16.0-5.4 @ 373.2 lbs/ac

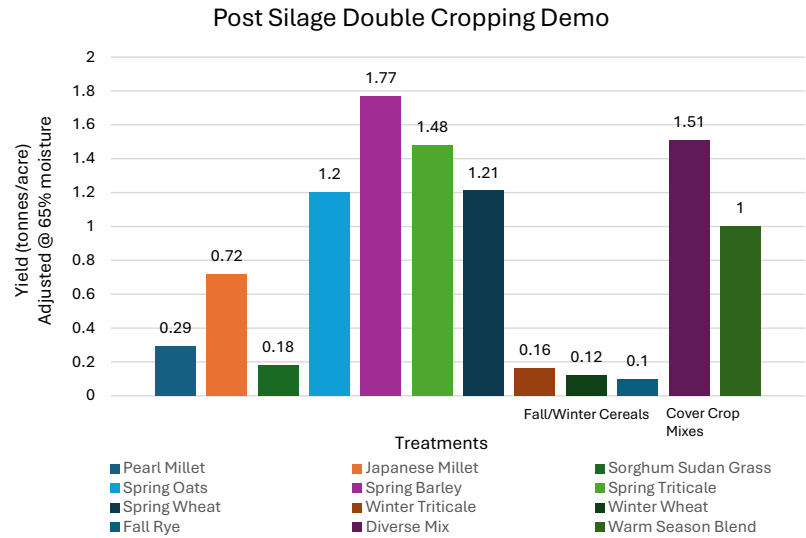
100 lb/ac Actual N; 7.2 lb/ac Actual P; 60 lb/ac Actual K; 20 lb/ac Actual S

Seed Placed (At Seeding): 11-52-0 @ 53.5 lbs/ac

5.9 lb/ac Actual N; 27.8 lb/ac Actual P

Harvested: Oct. 15, 2025

RESULTS AND DISCUSSION:



Results from this trial indicate that there is potential for a second crop to be planted and harvested for silage or grazing in this area. Cool season cereals and cover crop mixes performed the best, followed by warm season cereals and winter/fall cereals. Warm season cereals struggled with competition from barley regrowth and frost damage. These results were expected considering the time of year and moisture conditions when crops were established.

It is important to note that this trial consisted of single replication and was conducted on only one site. Continuing this demonstration with proper replication and a greater focus on cool-season cereals and cover crop mixes could see further benefits. This would provide higher quality data for producers interested in adopting this practice and provide an opportunity to assess the economics to determine whether a second seeding is a viable and cost-effective option for increasing feed production.

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