

## INTERSEEDING COVER CROP INTO SILAGE CORN GROWN ON WIDE ROW SPACINGS

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### ABSTRACT

Using cover crops as a late fall or winter feed source is something that many livestock producers are looking to incorporate in their operations. In southern Idaho, the most commonly used practice is to seed cover crops after cereal grains are harvested. Planting by early August gives sufficient time for the cover crop to grow and develop enough forage mass for livestock to graze. Planting cover crops after longer season crops, such as corn silage, potatoes, or sugar beets has proven challenging. The cover crop may emerge and grow but rarely produces enough biomass for viable grazing.

Corn growers in southern Idaho have been seeding cover crops into corn at the v4-v6 stage using either airplanes or High-Boy applicators, attempting to establish the cover crop before silage harvest in September. The method has been successful, but the cover crop needs several weeks of growth after harvest before it produces enough biomass for grazable forage because the corn shades the cover crop. It was noted in several projects in the mid-west, corn growers were having success growing grain corn on wider than normal rows allowing more sunlight to penetrate the canopy and reach the growing cover crop.

A study was designed to determine if cover crop could be interseeded into silage corn grown on wider rows, increasing cover crop biomass, while maintaining silage yield. In southern Idaho silage corn is grown on either 22" or 30" row widths. The three-year study design used 44" and 60" twin-rows, with cover crop interseeded at v4 as the treatments, and 30" rows with no cover crop as the yield check.

Results of the study indicate in all three years corn on 44" rows with cover crop statistically matched or exceeded yield of the 30" check and were statistically higher yielding than the 60" rows with cover crop. The cover crop was clipped for yield estimation the day before silage harvest and the results show that in two of the three years, cover crop forage production was statistically equal for both 44" and 60" treatments, although with only two treatments and plot to plot variability, the cover crop statistics are less robust than the silage results.

**Table1. Combined results of a three-year cover crop interseeding study**

Corn Silage Yield-Tons/Acre @ 70% moisture			
	2020 p=.024	2021 p=.009	2022 p=<.005
30"	31 ab	35 a	37 a
44"	35 a	36 a	37 a
60"	27 b	32 b	32 b
Cover Crop Yield- Tons DM/Acre			
44"	0.58 a	0.49 a	1.07 b
60"	0.91 a	0.33 a	1.47 a