

Nitrogen Fixing Foliar Utrisha-N™ in spring wheat (Mountain View)

Closest Town: Carstairs, Alberta

Soil type: Medium textured Orthic Black Chernozem

Seeding Date: May 3, 2022

Harvest Date: September 5, 2022

Row Spacing: 25.4 cm (10"), 3" paired row

Variety(s): CDC Abound

Reps: Four

Previous Crop: Canola

Tillage: Fall disk

Herbicides: **Pre:** PrePass™ Flex + Roundup Weathermax®

In-Crop: Altitude FX® 3 + MCPA Ester

Seed Treatment: Vibrance® Quattro

Foliar Insecticides: None

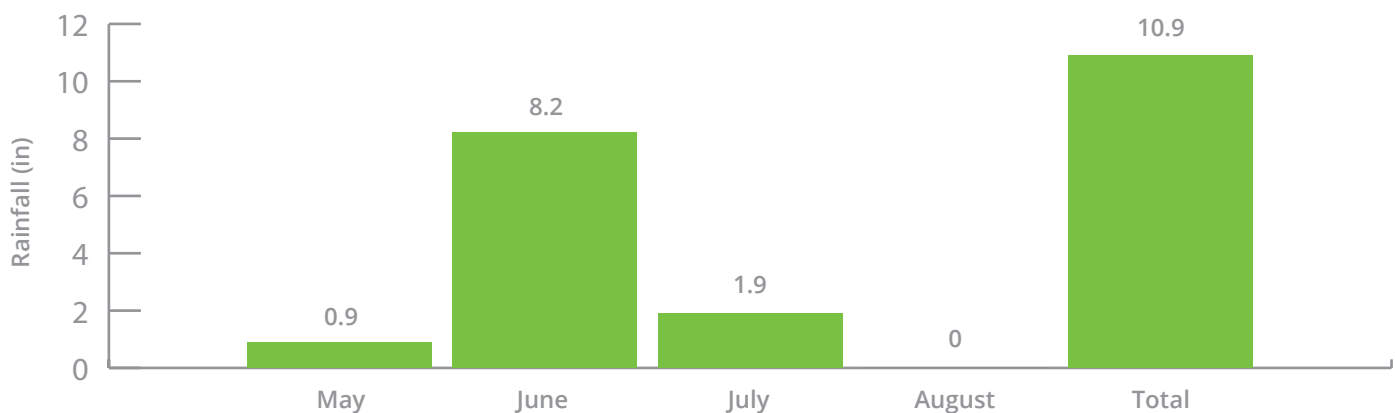
Foliar Fungicides: Trivapro®

Fertilizer:

99N-38.5P-11K lbs nutrient/ac

Irrigation: None

Rainfall (in) at trial location from May through August, 2022



Introduction

Partnering with Triple H Farms in Carstairs, Alberta this trial compared the impacts of Utrisha-N™ on the spring wheat variety CDC Abound compared to an untreated check. The trial was seeded using a 60-ft wide drill with 10" (25.5 cm) row spacings and 3" (7.5 cm) openers. Target plant stand of 32 plants ft² using a seeding rate of 165 lbs ac⁻¹. Treatments were replicated and randomized.

As indicated from soil tests, soil nitrogen (NO₃) at 0-18" depth was 20 lbs ac⁻¹. Organic matter for the field was 7.7%. Utrisha-N™ was applied at herbicide timing at label rates for the spring wheat crop. Crop stage at application of Utrisha-N™ was five to six leaf and two to three tiller. Utrisha-N™ was applied at 135.75 g ac⁻¹. Utrisha-N™ was applied as a separate pass to avoid herbicide tank mixing.

Treatments

Trial design goal:

To determine the yield and grain quality impacts of Utrisha-N™ on spring wheat.

Treatment 1: Check

Treatment 2: Utrisha-N™ applied at herbicide timing

Results

In-crop assessment results

Plant stand assessments were conducted 21 days after seeding. The average plant stand within the trial area was 24.4 plants ft².

Yield results

No significant differences in yield were seen between any treatments (Table 1).

Table 1: Yield, and quality results comparing Utrisha-N™ to an untreated check on the Canada Prairie Spring Red (CPRS) variety CDC Abound in Carstairs, Alberta, 2022.

Treatment	Yield at 14.5% seed moisture content (bu ac ⁻¹)	Protein (%)	Test Weight (lb/bu)
Check	86.6 a	11.6 a	67.1 a
Utrisha-N™	89.6 a	11.5 a	67.1 a
<i>p</i> -value	0.3709	0.6042	0.1817
CV%	4.54%	1.46%	0.09%

Values with the same letter are not significantly different. Significant difference if $p \leq 0.05$.

Grain quality results

No significant differences were seen on any grain quality parameters (Table 1).

Economics

No differences were seen between treatments. Therefore, the most economical treatment is the check.

Summary

No change in yield or quality parameters were seen when Utrisha-N™ foliar nitrogen fixing bacteria treatments were applied under these trial conditions.