

Research: Wheat (Triticum spp.)

Global wheat production continues to be the second most-produced cereal. World trade in wheat is greater than for all other crops combined and is the major source of vegetable protein in human food, having a higher protein content than either maize (corn) or rice. In terms of total production tonnages used for food, it is currently second to rice as the main human food crop. India and Canada, having different soil and climatic conditions, are among the major wheat producing countries in the world.

Nutrient Requirements

Wheat plant nutrient requirements vary significantly depending on soil nutrients status and climate. Nitrogen is one of the most important nutrients that is required in larger quantities as it is directly related to the protein content in grain. Phosphorous and potassium are required in large quantities in medium fertile soils. Copper and boron are micronutrients that are required when the soil test values are low. Soil testing is highly recommended before the nutrient requirements are calculated.

Trial Data and Technical Information

Best Environmental Technologies conducted research trials in Canada and India to test the efficacy of Best Farming System (Best) for grain yield, biomass production and soil quality parameters. Tests were conducted at independent, government accredited and highly reputable agricultural universities and research institutions.

Testimonials

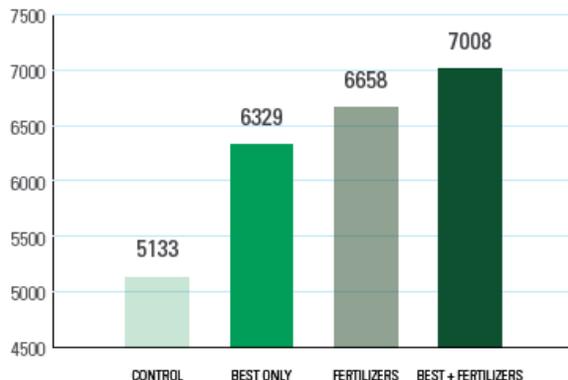
“I have been using Best on my wheat crop for 4 years. My wheat crop looks great; the heads are the biggest I have ever had on a wheat crop. My brix reading was 15 to 15½%, best ever. Pesticide consumption was down. My soil was mellow (airy soil), not compacted. I have noticed soil improvement each year.”

Jason Ouellet, Peace Country, Alberta, Canada

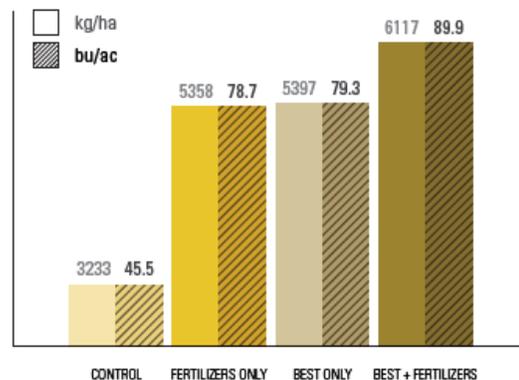
“I have been using the Best Farming System for 2 years on my wheat crop. I have noticed increased protein (1%) on finished grain. My bushel weight increased, there was no lodging due to the strength of my straw. Underground I noticed a larger root mass. Best was safe and easy to handle.”

Alex Carruthers, Sturgeon County, Alberta, Canada

Biomass Yield (kg/ha)



Wheat Yield

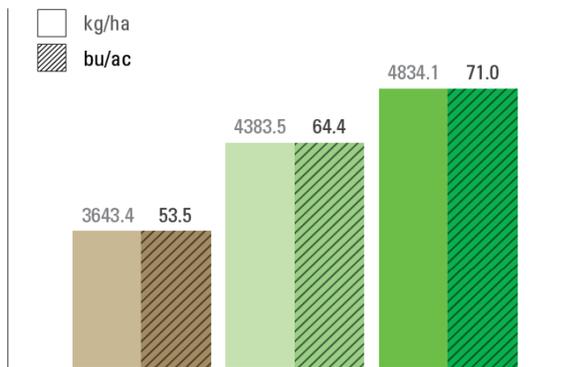


Best Farming System, in combination with recommended doses of fertilizers, increased grain yield by 12.5% over fertilizer-only applications. Dry biomass yield increased by 140 kg/ac. Protein percent in grain increased by 1% in crops treated with Best Farming System and fertilizers over crops grown only with fertilizers.

Observations

- plants were stronger and healthy
- showed resistance to moisture stress conditions
- leaves stay green for longer period

Grain Yield



In Canada, trials were conducted in several provinces. Results showed an increase in dry biomass and grain yield.

In some locations the grain yield increased by more than 10% and the biomass increased by 15%.

Crops treated with Best Farming System showed earlier and uniform germination over the untreated crops.

Comparison of different treatments on root mass, plant growth, and heads.



Soil Quality Parameters

Treatment	SMBC (ppm)	Soil Bacteria (cfu 10 ⁴ g ⁻¹)
Control	80.6	31.5
Only Fertilizers	113.6	39.33
Best Only	115.8	42.17
Best + Fertilizers	122	47.33
Initial Value	78.8	30.2

Soil quality measured in terms of Soil Microbial Biomass Carbon (SMBC) was found to have increased significantly in Best treated soils over untreated soils.

