



NUTRI CHARGE®

EFFICIENCY OF PHOSPHORUS TREATED WITH NUTRICHARGE

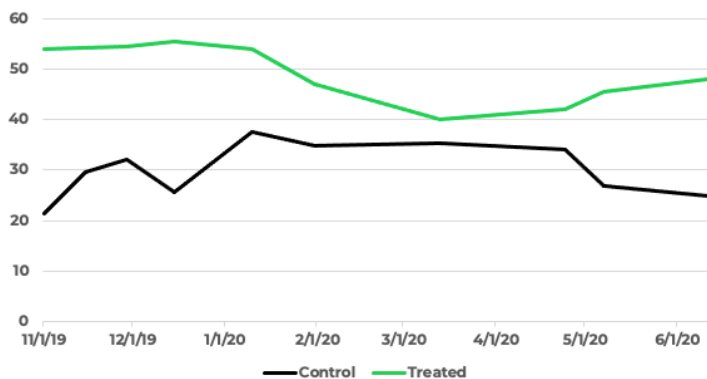
DETERMINING THE EFFECT OF NUTRICHARGE ON PHOSPHORUS DYNAMICS IN THE SOIL

Trial Location-Center for Plant Science

Investigator: Director of Institute O.G Nazarenko

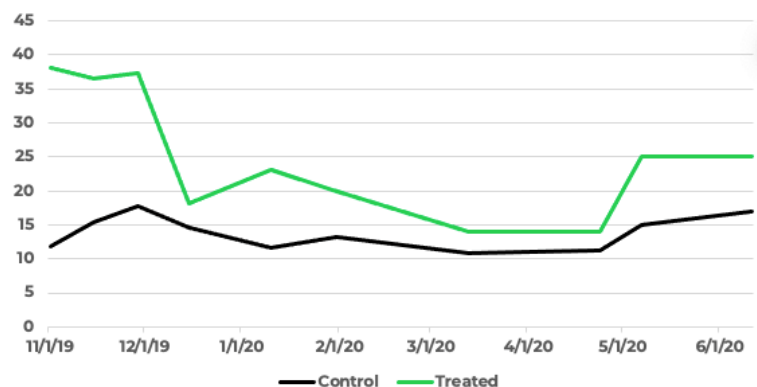
Trial Design- Replicated field study using GPS sample locations. 15-15-15 both treated by NutriCharge and untreated was applied at 125 lbs per acre. Sampling was conducted throughout the season at two different depths 0-8 inches and 8-16 inches. In addition to soil phosphorus levels, leaf analysis was conducted and biological yield was measured.

AVAILABLE PHOSPHORUS 0-8 IN



On average 1.65 X the available phosphorus during the 6 months

AVAILABLE PHOSPHORUS 8-16 IN



On average 1.8 X the available phosphorus during the 6 months

PHOSPHORUS REMOVAL RATES

A study of the mass removal of phosphorus was conducted in the experiment. An initial application rate applied 29.9-32.3 ppm of phosphorus from the granules. At the end of the growing season from 11.7 ppm to 14.2 ppm was used. This is the difference between the extraction of P from treated fertilizer at the beginning and last sampling. Therefore for the P treated with NutriCharge, 39%-49% of the phosphorus was taken up by the plant.

After harvest the P content in the soil was 38.6 ppm and 25.5 ppm, the difference of 13.1 ppm in the 0-8 in range is the remainder of the phosphorus from the application. Therefore for the P treated with NutriCharge from 16.7-19.2 ppm or 56%-59% of the total fertilizer was used.

It can be concluded from the experiment that the dissolution and the mobilization of soil P occurs later than the control. Therefore, the winter wheat plants were more constantly supplied with nutrients during late stages in development. This is evident in the higher biological and morphometric parameters of the crop.

YIELD RESULTS

CONTROL

# PLANTS	# TILLER	GRAIN IN EAR	WEIGHT PER GRAIN	YIELD
22.2	50.3	35	31 GRAMS	96.28 BUSHEL/AC

NUTRICHARGE TREATED FERTILIZER

# PLANTS	# TILLER	GRAIN IN EAR	WEIGHT PER GRAIN	YIELD
23.9	56.8	37	33 GRAMS	113.07 BUSHEL/ACRE

GRAIN QUALITY CONTROL

GLUTEN	IDK	PROTEIN	N	P	K
16.7	78.3	9.23	1.62	0.38	0.45

GRAIN QUALITY NUTRICHARGE

GLUTEN	IDK	PROTEIN	N	P	K
21	81.7	10.87	1.91	0.41	0.45

YIELD RESULTS SUMMARY

The yield in the NutriCharge treatment was 16 bu/acre higher than in the control. It was achieved due to an increase in plant characteristics, because the number of tillers per square foot was 6.5 more, as well as due to the difference in the number of grains in the ear, on the plots of the experiment there were 2 more grains in the ear. A certain influence on the quality indicators of winter wheat grain was also revealed; the content of gluten, protein, phosphorus increased.