

HM 9754 (a Humic Based Product) Impact on Maize Yield When Applied with Nitrogen

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Abstract

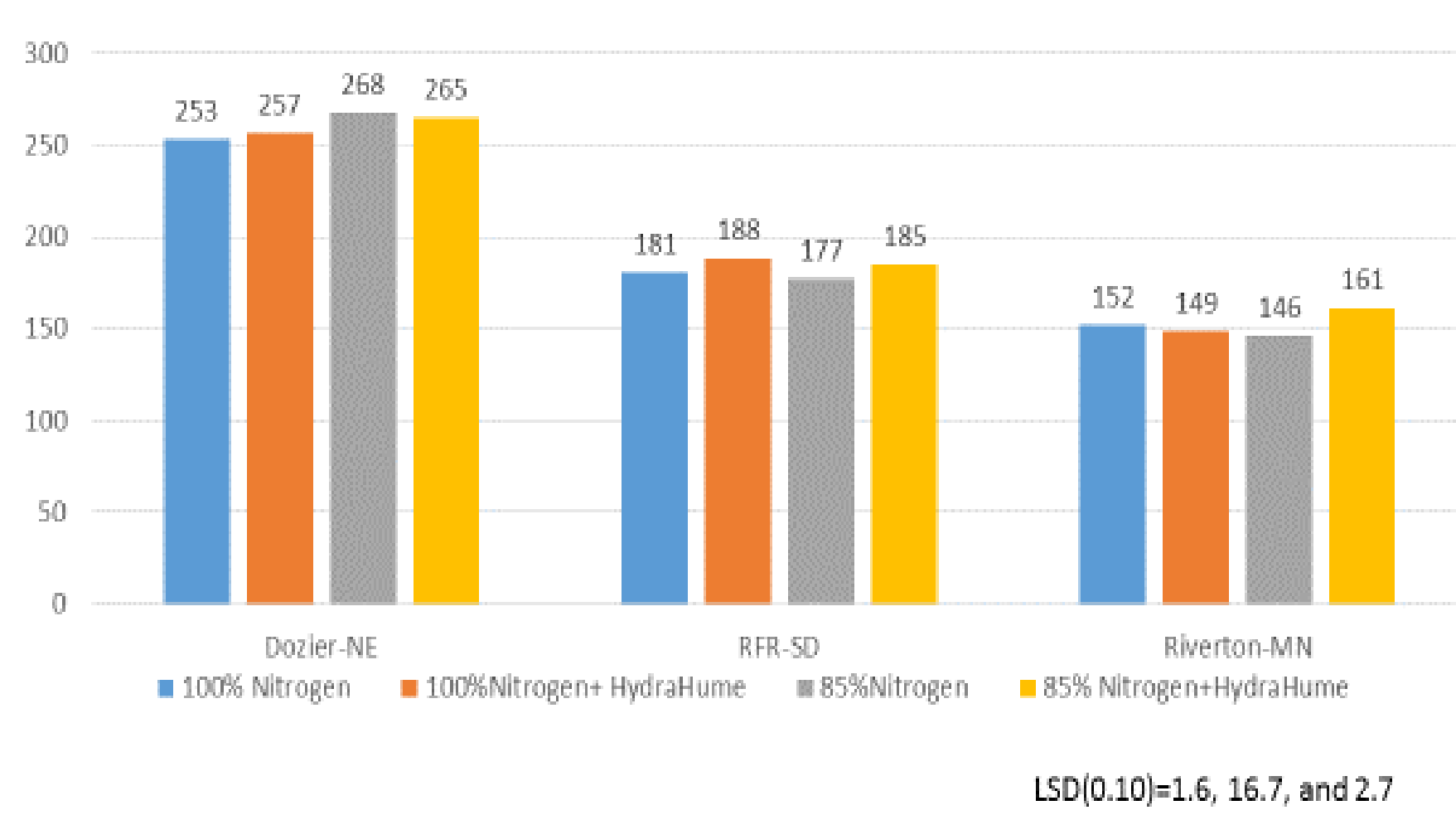
HM 9754 is a mixture of various weighted humic molecules, often called humic acids. Past published research has shown the role humic acids can play in stabilizing nitrogen, not from affecting biological transformations, but instead by chemical chelation or cation/anion exchange mechanisms. All ore sources have different compositions and therefore perform these task at different efficiencies, hence a necessity to evaluate each ore source. Presented are 28 site years of studies conducted throughout the Midwestern United States evaluating the yield impact on maize. Results show that in the presence of nitrogen loss mechanisms, volatilization and leaching, yields increased significantly when nitrogen was applied, either pre-plant, or side-dress, with HM9754 in conjunction. In the absence of loss mechanisms improvements still occurred but on a lower scale.

Summary and Conclusions

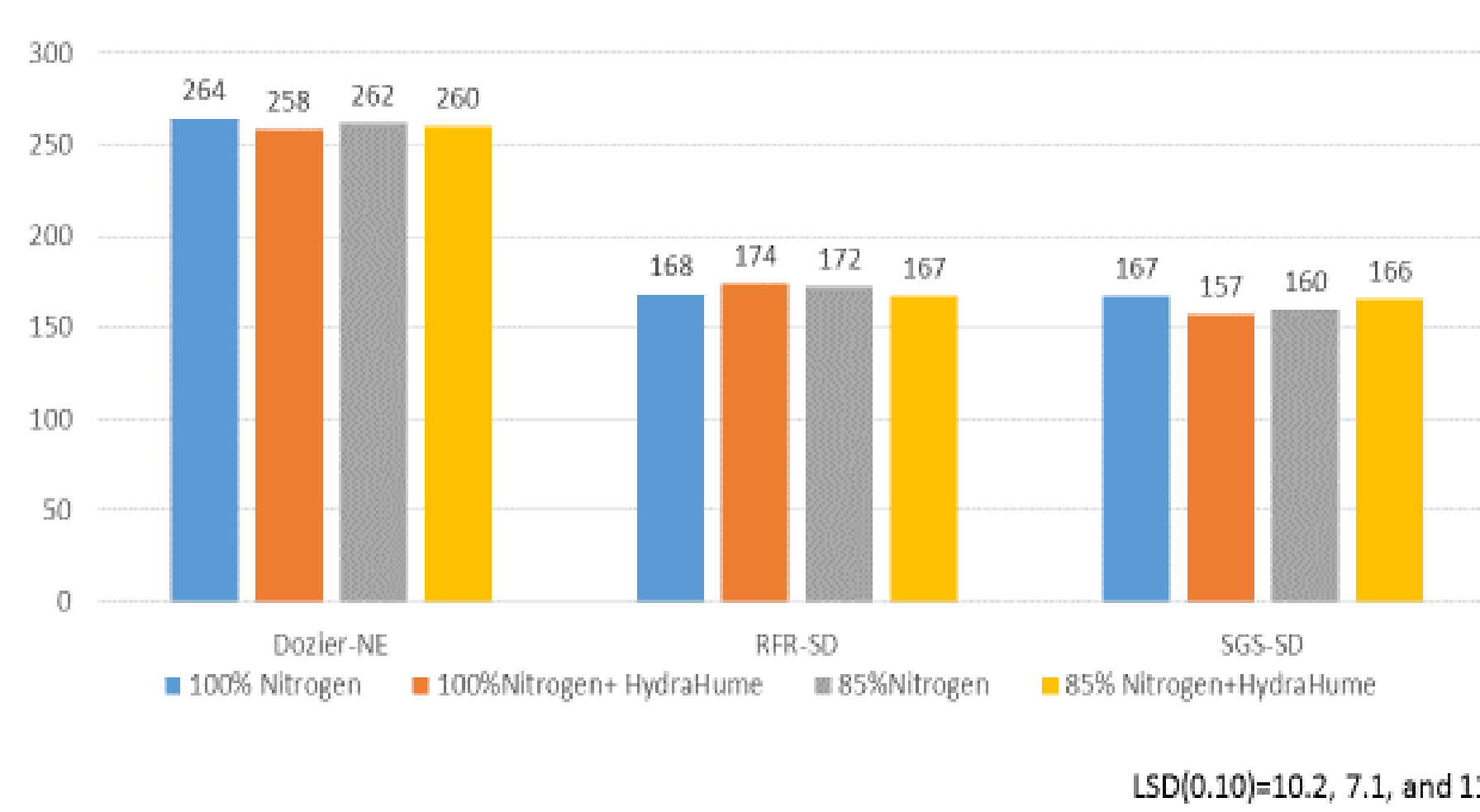
HM9754 is sold commercially as HydraHume® in the United States or FertiLink® in South Dakota. The product is sourced from Horizon Ag, Inc. and is in a liquid and dry version. As part of a labeling requirement for South Dakota Department of Agriculture studies were established on soils in South Dakota and on South Dakota soil types found in surrounding states. This data is presented below. ***In summary, results showed that in years were a 15% reduction in nitrogen application from University recommended rates showed yield loss, that the addition of HM9754 protected and enhanced nitrogen efficiency to return yields to those at the 100% nitrogen rates.***

Location codes correspond to contract research companies (Dozier Ag Research, Springfield, NE; RFR Real Farm Research(RFR), Aurora, KN; ABG Research, Toronto, SD; Riverton Research, Glyndon, MN; SGS, Brookings, SD; Precision Ag Research, Grimes, IA)

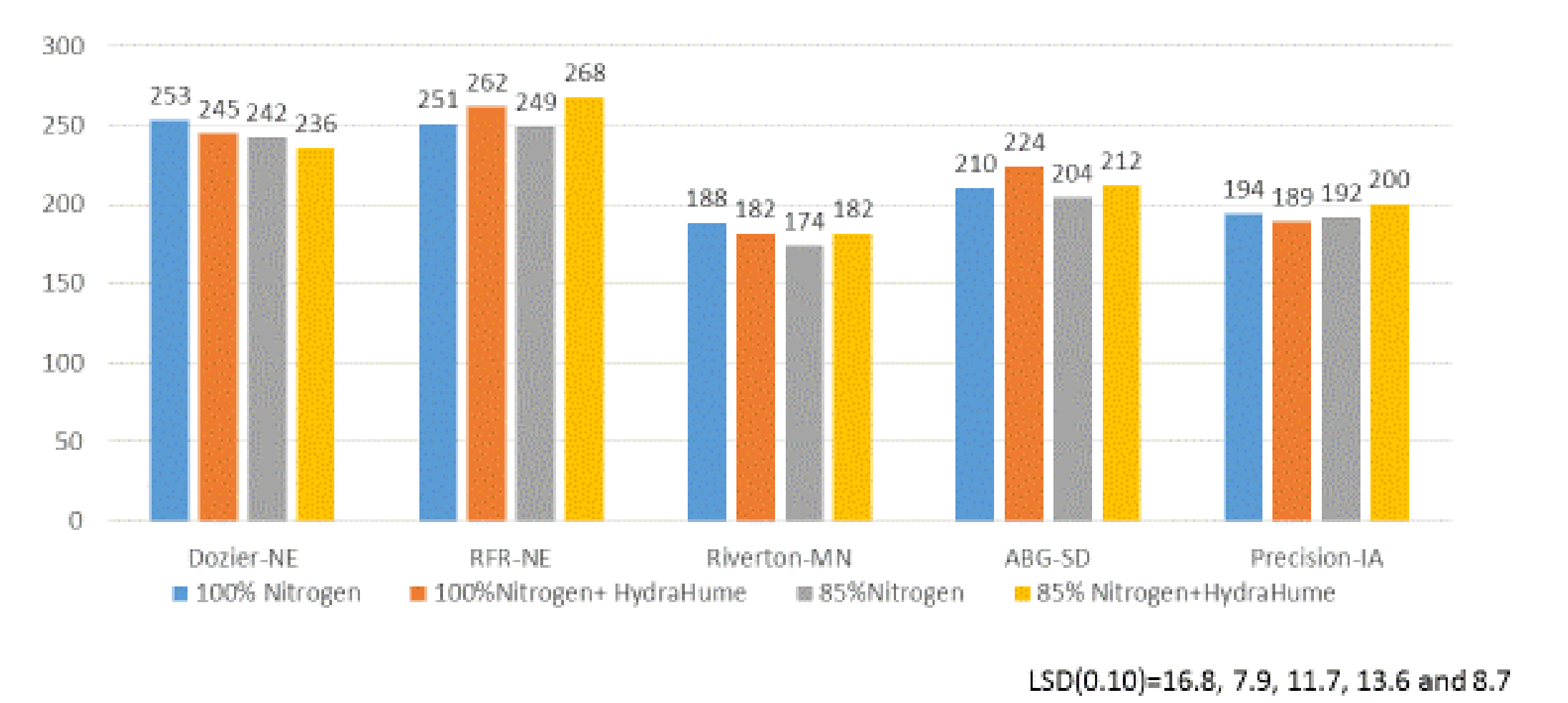
2013 Evaluation of HydraHume on Corn Sidedress UAN – South Dakota Soil Types Contract Replicated Research



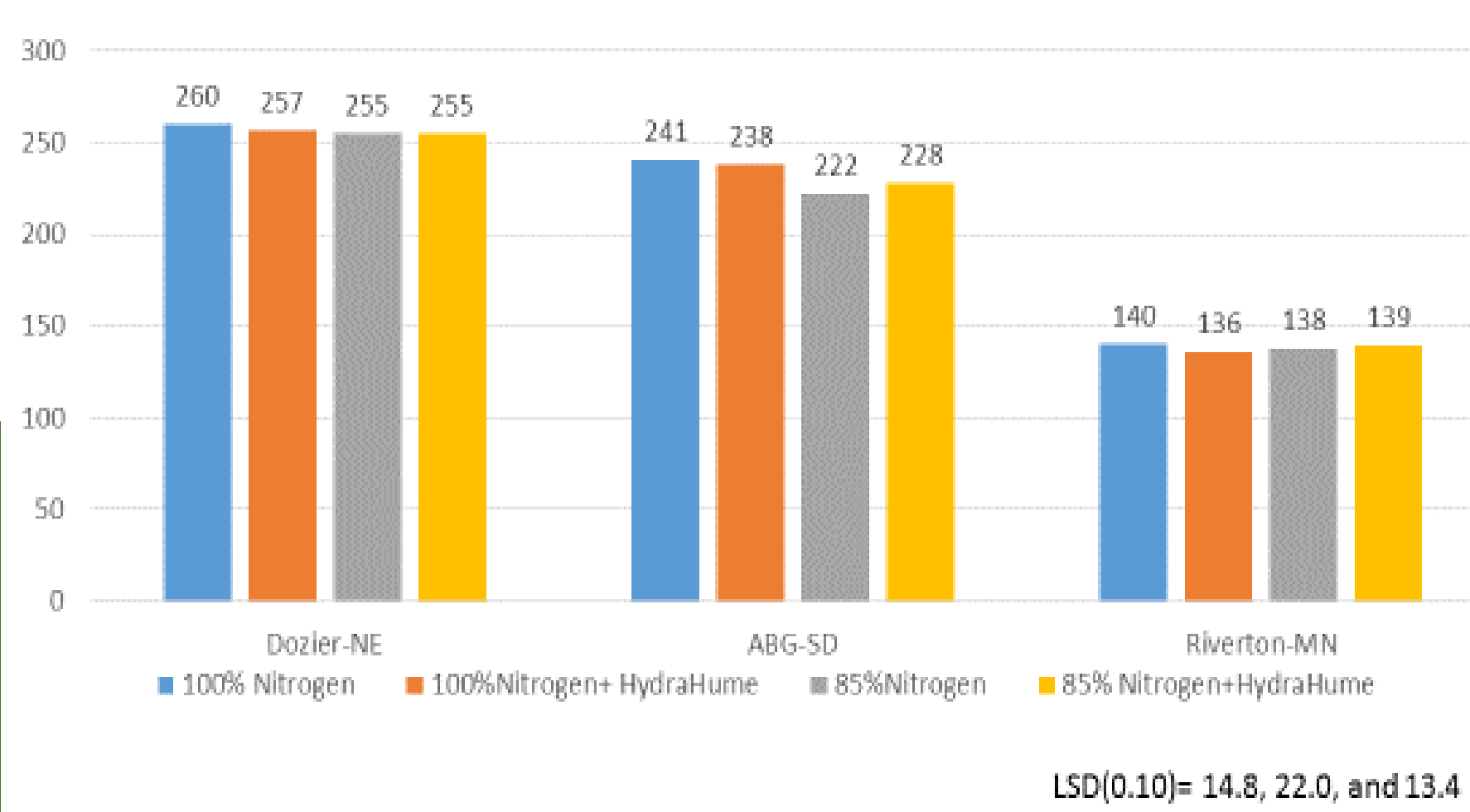
2014 Evaluation of HydraHume on Corn Sidedress UAN – South Dakota Soil Types Contract Replicated Research



2015 Evaluation of HydraHume on Corn Sidedress UAN – South Dakota Soil Types Contract Replicated Research



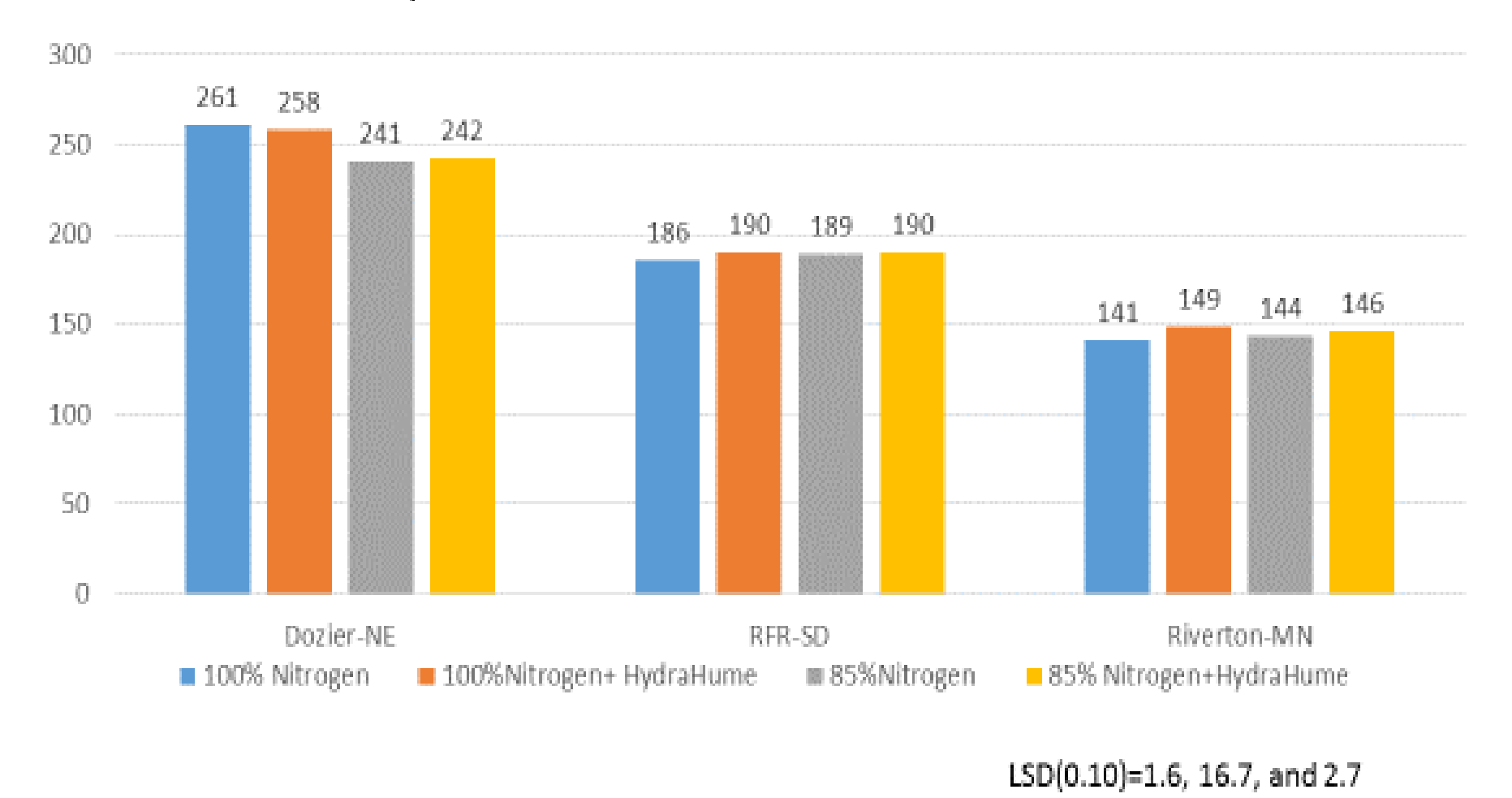
2016 Evaluation of HydraHume on Corn Sidedress UAN – South Dakota Soil Types Contract Replicated Research



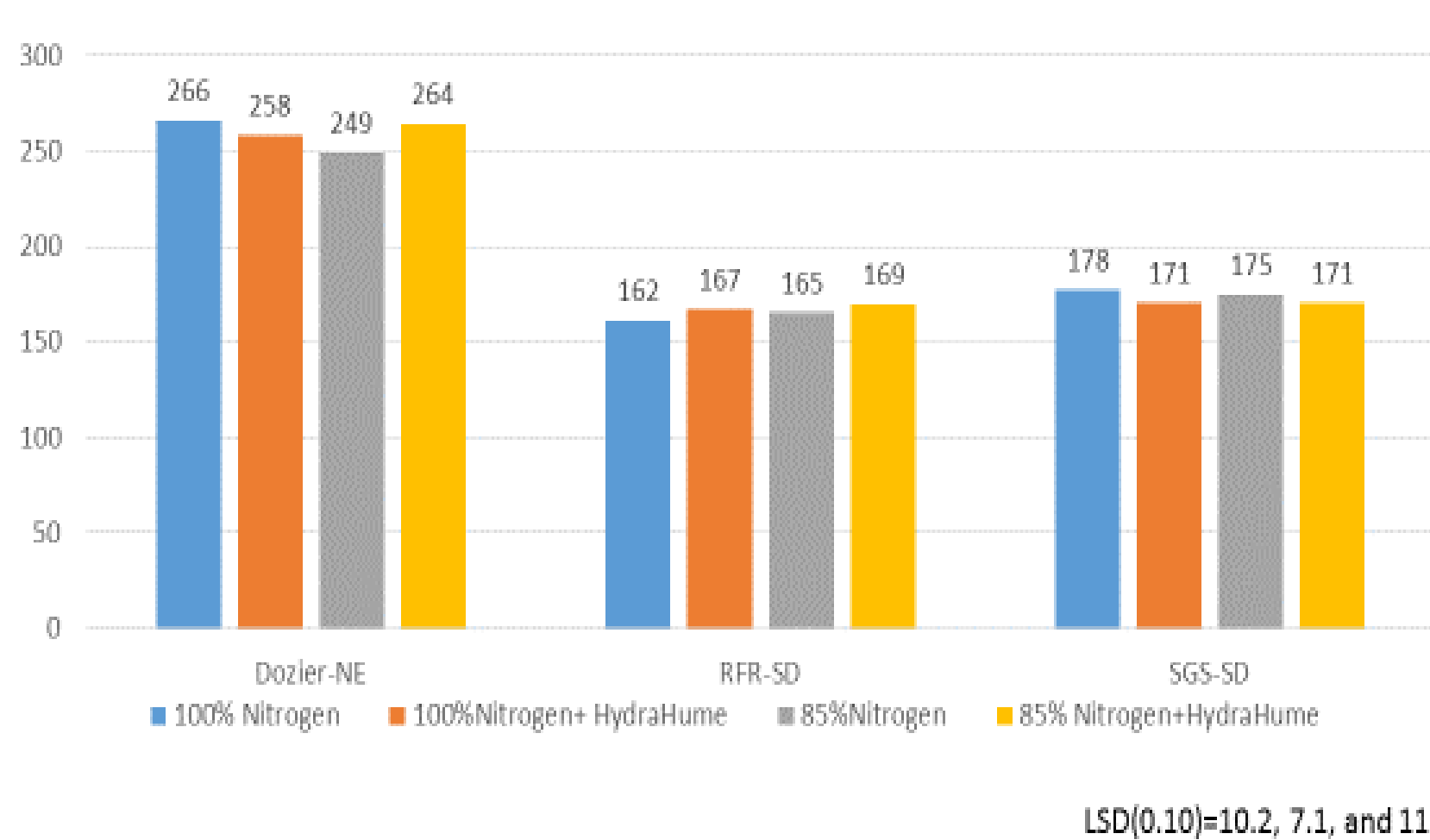
UAN 28-0-0 Side-dressed at V5 with 1 gal Hm9754 per 15 gal UAN (3.8L HM9754 per 75.7L UAN)

Urea 46-0-0 Preplant with 10 lbs/A Hm9754 per 150 lbs Urea (4.5Kg HM9754 per 68Kg Urea)

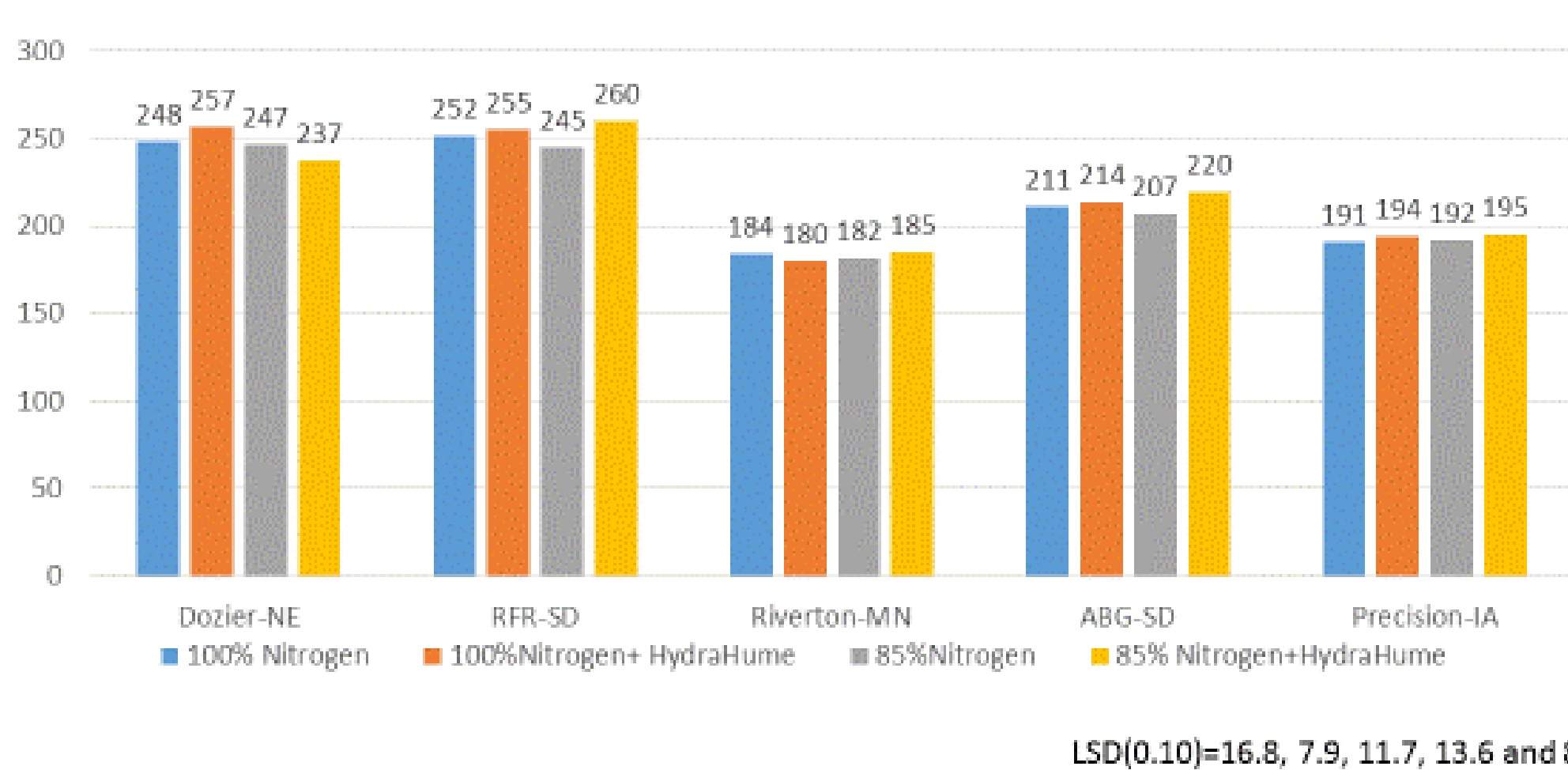
2013 Evaluation of HydraHume on Corn Preplant Urea– South Dakota Soil Types Contract Replicated Research



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