Corn Performance Evaluation with the APSA-80 Soil Surfactant under Dryland and Irrigated Conditions

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APSA-80 is a soil-applied product meant to change the properties in the soil-water interaction, aimed at improving water infiltration and retention. In 2012 this product evaluation occurred in both dryland and irrigated conditions at Carrington. The trial was planted on May 5. Before corn emergence, APSA-80 was applied to the soil with a CO_2 backpack sprayer with 8002 nozzles at 28 PSI and a 20 GPA target. Two rates of APSA-80 were used, 15 and 30 oz/ac. The dryland study was harvested on October 10, and irrigated on October 12. No differences were identified between APSA-80 rates nor the non-treated check for any of the variables measured (Table 1).

Table 1. Response to APSA-80 treatment with corn under irrigated and dryland conditions.

Treatment	Rate	Silk Date	Ear Height	Plant Height	Moisture	Test Weight	Yield
	oz/a		in.	in.	%	lb/bu	bu/a
Dryland							
check		16-Jul	41.7	106.9	14.0	59.81	176.4
APSA-80	15	16-Jul	41.1	106.3	14.0	59.60	169.9
APSA-80	30	16-Jul	41.5	106.6	13.9	59.82	183.9
LSD (α = 0.05)			NS	NS	NS	NS	NS
C.V. (%)			2.7	1.7	1.4	5.80	0.6
Irrigated							
check		19-Jul	40.9	106.5	15.7	57.33	217.9
APSA-80	15	19-Jul	40.6	104.9	15.5	57.81	216.5
APSA-80	30	19-Jul	40.7	104.5	15.8	57.60	211.9
LSD (α = 0.05)			NS	NS	NS	NS	NS
C.V. (%)			2.2	1.2	1.6	5.6	0.7
Combined							
check			41.3	106.7	14.8	58.57	197.2
APSA-80	15		40.8	66.2	14.8	58.59	193.2
APSA-80	30		41.1	105.6	14.8	58.71	197.9
LSD (α = 0.05)			NS	NS	NS	NS	NS
C.V. (%)			2.5	1.6	6	11.5	2.1