

Organic Seed Treatment For Control of Soil borne Pathogens in Valencia Peanut
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The objective of this study was to minimize the impact of soil borne pathogens on Valencia peanut by treating seeds with commercially available organic seed treatment products.

The experimental trial was planted on May 6, 2019 in 36-inch rows under center pivot irrigation. The study site was on an organic peanut grower's field in Lingo, New Mexico. Soil type is an Amarillo-Acuff-Olton and elevation is 3986 feet. Individual plots consisted of two rows, 36-inch rows with 20 feet long. There were four replications for each entry, planted in a randomized complete block. Individual plots were planted at a seed rate of five seeds/foot. Plots were planted with a John Deere Max Emerge planter fitted with cone metering units. Ten different seed treatments were used in this study. A.) untreated check (control) B.) Neem combo (3%) C.) Trilogy (3%) D.) Neem plus SP-1 (3%) E.) AKX-602 (2.4 kg/ha) F.) AKX-612 (1.2 kg/ha) G.) AKX-618 (2.4 kg/ha) H.) Cilus (1 g/kg of seed) I.) Mycostop (12 g/Kg seed) J.) Prestop (0.25 g/sq m). The list of treatments evaluated included a chemical (Dynasty) product for comparison. About 1800 kg/ha of compost along with chicken manure at the rate of 50 kg/ha was applied over the field in April 2019. Previous crop was a CRP grass. The average pod yield for the trial was 1406 kg/ha. The highest pod yield was recorded when the peanut seeds were treated with Cilus plus (1626 kg/ha). A preparation of *Bacillus velezensis*, commercial in Europe. Application of Cilus plus resulted in an increase of 363 kg/ha or 28.7% compared to the Untreated Check (1263 kg/ha). The chemical check Dynasty (1406 kg/ha) which was significantly not different from the organic seed treatments Trilogy (1478 kg/ha.), AKX 618 (1408 kg/ha), and Mycostop (1466 kg/ha). By treating the Valencia peanut seeds with organic products a grower can benefit anywhere from \$ 236 with AKX-602 to \$ 315 with Cilus.