

**A mineral seed treatment for control of seedling diseases of alfalfa
suitable for organic production systems**

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Most alfalfa seed is treated with the fungicide mefenoxam (Apron XL) for control of soilborne seedling diseases. However, Apron XL is not active against *Aphanomyces euteiches* and Apron XL-treated seed cannot be used in organic production systems. An aluminosilicate (natural zeolite) mineral seed treatment allowed under organic standards was compared to Apron XL as an alfalfa seed treatment. Alfalfa seedlings were inoculated with *Phytophthora medicaginis*, *Aphanomyces euteiches*, or a mixture of the two pathogens. The mineral seed treatment gave significantly greater control of *P. medicaginis* and *A. euteiches* at 21 days after inoculation than the Apron XL seed treatment. Treated seeds were plated with *Pythium ultimum* and *P. paroecandrum* in assays for seed rot and damping off. The mineral seed treatment resulted in a greater percentage of protected plants than the Apron XL treatment. In growth chamber assays with naturally infested field soils the mineral treatment resulted in a similar or greater percentage of protected plants than the Apron XL treatment. Field experiments were established to compare the mineral treatment to Apron XL and Stamina fungicide treatments. Results of plant counts, nodule numbers, and initial forage yields will be presented. Controlled environment experiments indicated that the zeolite mineral seed treatment is a promising means of controlling seedling diseases in alfalfa production systems.