# Successful use of liquid dairy manure applied by border check irrigation to alfalfa. (C07-pettygrove150857-Poster)

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### Abstract:

Dairy producers in the western US are reluctant to apply liquid manure to alfalfa because of past experience with stand damage and yield reduction likely due to low oxygen in the root zone, smothering of the crop with manure solids, and excessive salt. Ability to apply liquid manure to a deep-rooted perennial crop such as alfalfa would increase the land area around dairies available for recycling of manure and would reduce the quantity of nutrients available for groundwater and surface water pollution. We conducted a replicated field experiment on a dairy in California's San Joaquin Valley and showed that liquid dairy manure could be applied to alfalfa without harming yield or feed value. Applications were limited to the early (cooler) part of the season and were well diluted with fresh water. Applied manure nutrients totaled 86, 18, and 133 kg/ha of N, P, and K, respectively. Nutrients removed in harvested forage measured in five of the nine harvests during one season totaled 473, 52, and 339 kg/ha of N, P, and K. There were no differences in yield and feed quality measures due to manure application. No differences were observed in weed coverage or bare ground as a percent of total area.

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