



Potassium nitrate alleviated salinity stress in cash crops

This paper is a compilation of several representative studies (Imas et al., 1995; Feigin et al., 1991; Satti et al., 1994; Bar et al., 1997 and Levy et al., 2000) featuring substantial data establishing the concept that constant application of 2-10 mM potassium nitrate in the fertigation solution considerably aids in alleviating salinity problems. This concept is validated for five moderately salinity-sensitive crops representing the three main sectors of agriculture: sweet corn for annual field crops, citrus for perennials, and tomato, lettuce and Chinese cabbage for greenhouse-grown vegetables. Most of those studies can be found in this website database as well. The most important advantage of KNO_3 versus many other fertilizers is that its contribution to salinity buildup is negligible. Both K and nitrate, which are the building blocks of this fertilizer, are macronutrients, and therefore, they are taken up in large rates while non-nutrient residues are not left in the soil. Potassium nitrate can counteract the deleterious effects of the chloride and the sodium in plant metabolism.