

Program for .....**HIGH SODIUM, SALT, CHLORIDES & BORON**

- **LIME & GYPSUM** - Broadcast Lime / gypsum indicated in the soil test
- **DEEP RIP** – rip when the soil is moist but not too wet so that it crumbles up and doesn't just distort and smear. Keep ripping speed slow and use high tech blades designed to avoid lifting subsoil clay to the surface.
- **LEACH** – leach the soil with fine overhead sprinklers at a slow rate. The water should not pool and the soil should not become waterlogged at any stage during leaching. You may need to turn the sprinklers on and off over a period of time. Use a spade to dig holes and monitor the wetted front as it moves down the soil profile. Use liquid calcium products like Aqua-Cal and N-Cal to help with the leaching – spray on before starting at recommended rates. Boron will be much harder to leach than salts.
- **ORGANIC MATTER** - spread compost made from green organics at least 1cm deep (2-3cm is better) and work it into the soil with 1.5kg/100m<sup>2</sup> of Urea. As the organic matter is broken down by soil micro-organisms, soil particles will be glued together so soil structure and drainage will improve.
- **MOUND** – build the soil into a mound along the planting row. It will then be easier to keep the salts leached out of the rootzone – every irrigation will help.
- **'LEACHING' IRRIGATIONS** – Use more frequent shorter pulses as the main irrigation. This will gradually wet up the root zone and progressively push salt out from the root zone without over-wetting or flushing nutrients away. As salts accumulate at the edge of the wetted zone an extra 20-30% of water will help to push them further away - every month or so apply a heavier watering to push these salts down the soil profile.
- **CALCIUM NUTRITION** – it will be important to keep calcium well supplied to your plants especially where boron is high. Calcium can be applied as needed via:
  - liquid calcium in irrigation water
  - foliar fertilizer sprays

Notes prepared by Phil Barnett - ProAg



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