



الجمعية العلمية الملكية  
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# “Soil fertility Al-Shouneh Al-Janoubeyeh”

## FACTSHEET

The salinity content in the soil of the Al-Shouneh Al-Janoubeyeh is high. As reported by farmers and from the soil analysis results, it can be inferred that addition of inorganic fertilizer in this site has been heavy (JVA, 2012).



All macronutrients and most of the micronutrients are in high to excessive levels, while cation exchange capacity CEC and organic matter content are low. Poor organic matter content is indicative parameter that the natural soil fertility and the ability to retain nutrients are very low in these soils.

These conditions are not being beneficial neither for the soil nor for the crop. Soil salinity, nutrient imbalance, and leaching are valid concerns. The soil texture is also coarser; therefore the water holding capacity is low (JVA, 2012).

The nutrient content varies with the water source. The South Jordan Valley JV receives blended water from King Talal Reservoir KTR and the King Abdullah Canal. KAC-South has a medium nutrient content. The total nutrient applied with the irrigation water will depend on the water source and the amount of irrigation water applied to each crop (Athamneh and Suliman, 2011). The amount of nutrients in the irrigation water, in most cases, is not sufficient to meet the crop nutrient requirement; however, the contribution is significant enough to be considered when a fertilization program is developed and implemented (Mohammad, 2004) .

Deep percolation of water and nutrients besides polluting the ground water is a waste of resources.

Fertilizers are also fixed or immobilized in the soil decreasing their availability for crop uptake; in general, the estimated efficiency of fertilizers added to the soil and used by the crop is as follow:

Nutrient	Efficiency %	Main cause for losses
Nitrogen	30-70	Denitrification, volatilization, immobilization, leaching
Phosphorus	10-30	Fixation by other ion, leaching
Potassium	50-80	Fixation by clay, leaching

For seasonal crops, manure is usually applied before planting. Manure is used as a nutrient supplier and as a soil conditioner. Fresh manure mostly from poultry, cow and in less intensity, composted manure is used.

Manure application in open field is on average 1 ton/du up to 2 tons/du for eggplant fields. The applied amounts of irrigation water and fertilizer are 1.5 to 2 times higher in plastic houses than in open field crops; longer growing seasons and higher crop yields are in part responsible for the increased use of water and fertilizers in plastic houses (Ammari, et. Al., 2013)

Most farmers mentioned that they had no problem with water quality and quantities, costs or distribution. When salinity of water was raised, they responded that this is not a problem because they can adapt to this. Only farmers who plant bananas consider this as a problem (farmers focus group, October. 2013).



Most farmers mentioned that they combat soil salinity by washing soil. They do not consider analyzing soil because of the relatively high entailed costs (farmers focus group, October. 2013).

After meeting with the farmers of the region, it was found out that they are confident of their knowledge with their land and that they are running it in the best way possible to provide the best products under the current situation (farmers focus group, October. 2013).

The National Center for Agricultural Research and Extension NCART provides technical support to the farmers through their support offices distributed in the area and the support includes water quality information and soil types and helps them combat pests and agricultural diseases. It also provides help with selecting the types of enhanced crops and provides access to the results of the experiments conducted at the center.



## References

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