

## **Study on the Subsurface Irrigation at Salt Affected Soils in Northeast Region of Thailand**

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### **Summary**

Salt affected soils are in northeast region in Thailand. The salt components are transported by the capillary water and accumulated in soil surface. The main reasons of salinization are the high evaporation from soil surface, a little rainfall, and high groundwater level. Salinization decreases the yield of agricultural products. However, the utilization of agricultural land located in salt affected area becomes important for increasing the agricultural production in the world. So, there is currently a great interest in the preventing measures of salinization and the effective methods for irrigation in salt affected area. The objective of this study is to consider the effects of mulching and geo-textile on the control of capillary water rise of salt groundwater. Therefore, several column experiments were conducted.

The results showed that A<sub>0</sub> layer mulching and vinyl mulching were not effective for decreasing capillary water rise in this experiment. And geo-textiles of cotton and nylon were effective for controlling capillary water rise of salt groundwater. However, EC<sub>1:5</sub> increased at upper point of nylon geo-textile after 420 minutes passed under subsurface irrigation. It was considered that sodium diffused in the column under saturated condition through geo-textile.