

## Regularity of Water Requirement by Intercropped Cotton in the Symbiotic Period

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**Abstract:** The symbiotic period in cotton-wheat double cropping system in HuangHui plain lasts 50 days. The water stress is the important factor for late sprouting and ripping of inter-planted cotton. It is significant for hastening early germination of cotton to study the mitigating moisture stress in symbiotic period. Tests showed that the soil moisture suction in cotton-wheat symbiotic period fluctuates more than that in

cotton sole cropping in the same period, and there are three water-absorbing peaks in which soil moisture suctions are all lower than -60Kpa; film mulching is good for moisture retention and water utilization, and the soil moisture suction in non-mulching pattern is lower than that in the other patterns; the soil moisture suction in 3-1 pattern reaches -60Kpa 4~6 days earlier than that in 4-2 pattern, and lasts longer, which are not good for cotton shoot growth, while 4-2 pattern is good for shoot growth. It is time need to irrigate before soil moisture suction reaches -60Kpa in cotton-wheat symbiotic period. Otherwise, the cotton shoot begin to be flaccid and to such an extent as to die.

**Key words:** cotton-wheat double cropping; symbiotic period; pattern; soil moisture suction