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不同耕作技术模式对土壤理化性状及大豆产量的影响

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摘要： 以退化黑土为对象，对7种耕作技术模式下土壤物理、化学特性进行研究。结果表明：“测土施肥+浅翻深松+秸秆还田”和“测土施肥+浅翻深松+有机肥”2种技术模式降低容重、提高田间持水量的效果最好。与原垄种相比，各种技术模式对土壤有机质都有一定的提升作用，且以加有机肥和加秸秆还田的2种模式效果相对最佳，分别增加17.8%、22.4%；“测土施肥+浅翻深松”和“测土施肥+浅翻深松+有机肥”2种技术模式对大豆生长发育具有明显的促进作用，与常规施肥+原垄种相比分别增产9.7%和5.7%。不同技术模式中以浅翻深松加秸秆还田和有机肥的处理对改良退化土壤效果最好。

Abstract: Soil physical and chemical properties were studied in degenerated soil under seven cultivation technique patterns. Results showed that treatments of soil-test-fertilization+deep loosening shallow ploughing+stalk returning and soil-test-fertilization+deep loosening shallow ploughing+organic matter could increase field capacity and reduce soil bulk density significantly. Compared with original ridge growing, soil organic matter could be improved by all cultivation technique patterns, especially, soil-test-fertilization+deep loosening shallow ploughing+stalk returning treatment and soil-test-fertilization+deep loosening shallow ploughing+organic fertilizer treatment could increase content of soil organic matter about 17.8% and 22.4% respectively. Treatments of soil-test-fertilization+deep loosening shallow ploughing and soil-test-fertilization+deep loosening shallow ploughing+organic fertilizer promoted soybean growth obviously, the yield of soybean increased about 9.7% and 5.7%, compared with treatment of conventional method+original ridge growing. Treatments of deep loosening shallow ploughing+stalk returning+organic fertilizer would improve degenerated soil much better in different cultivation technique patterns.

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