快速腐熟秸秆还田机设计与试验 Design and Experiment on Straw Returning Machine with Fast Decomposing Inoculant Spray Equipment

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关键词： 秸秆还田机 粉碎 腐熟剂 喷施 设计 试验

摘 要： 针对传统还田机作业后秸秆还田周期长，耽误耕作农时及秸秆焚烧现象引发的环境污染等问题，采用腐熟剂喷施与机械粉碎相结合的还田原理，设计了快速腐熟秸秆还田机。经田间试验测定，使用快速腐熟秸秆还田机完成作业的机收麦茬地，7个月后的秸秆腐熟还田率为97.2%，比单一机械粉碎方式高17.1%，小麦单位面积产量比单一秸秆粉碎还田地高16.5%。Traditional straw return implements slowly after the operation, and delays farming time, as well as, the straw burning causes environmental pollution. In light of the above problems, a fast decomposition straw returning machine which adopts the returning principle of combining decomposition agent spraying with mechanical straw shattering was designed. Field experiments show that straw decomposition rate of farmland when using this machine reaches 97.2% after 7 months, which is 17.1% higher than a single mechanical grinding treatment, and average wheat production is 16.5% higher than mechanical crushing method in the same area.

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