

1949-2008年黄土高原沟壑区农业生态经济系统耦合分析——以陕西长武县为例

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Coupling analysis of agro-ecologic system in gully area of Loess Plateau in 1949-2008: A case study in Changwu County of Shaanxi Province.

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摘要

在分析农业经济系统与农业生态系统相互胁迫、动态演进关系的基础上,采用改进的熵值法确定了位于黄土高原沟壑区的长武县农业生态经济系统评价指标权重,利用耦合度模型分析了1949-2008年长武县农业生态经济系统耦合规律.结果表明:1949-2008年,长武县农业生态经济系统的发展经历了“粗放式传统农业阶段-农业机械化进程阶段-前现代化农业协调发展阶段”3个历史时期,与国家宏观经济政策调控效应基本吻合,系统耦合在“协调发展”和“极限发展”间经历了两起两落的急剧变化过程.1955-1961年、1984-1992年,长武县农业生态经济系统处于极限化耦合态势;1962-1965年、1981-1983年,为纠正前阶段宏观政策后的快速过渡期;1949-1954年、1966-1980年为生态系统与经济系统的低水平协调发展阶段;1993年以后,农业生态经济系统经过螺旋式发展,进入高水平协调发展阶段.目前,长武县农业生态经济系统有突破协调发展水平,并向极限化发展的潜在危险.良好的农业政策和外部环境能够促进农业生态经济系统在协调发展的水平上稳定发展,反之,容易出现系统相悖发展的局面.

关键词: 农业生态系统 农业经济系统 耦合度 黄土高原沟壑区 长武县

Abstract:

Based on the analysis of the coercing and dynamic evolution relationships between agro-economic system and agro-ecological system, and by using modified entropy method, the weight of each evaluation index for the agro-ecologic system in Changwu County of Shaanxi Province was determined, and, by employing coupling degree model, the coupling processes of agro-ecologic system in the gully area of Loess Plateau were investigated. From 1949 to 2008, the agro-ecologic system in the County experienced three stages of “traditional extensive agriculture”, “agricultural mechanization”, and “agricultural pre-modernization”. In corresponding to the implement of national macro policies, the coupling degree of the agro-ecologic system reached two peaks standing for utmost increasing phase and three valleys standing for coordinate development phase. Periods 1955-1961 and 1984-1992 were the utmost increasing phases of the coupling degree; periods 1962-1965 and 1981-1983 were the rapid transition periods responding to the national-wide policies controlling; while periods 1949-1954 and 1966-1980 were the low-level coordinated development phases. Since 1993, the system had been in the harmonious phase by a spiral development. At present, the system had a potential risk of changing from the harmonious phase to the utmost development phase. Appropriate agricultural policies and better external environment could promote the stable development of the agro-ecologic system on a harmonious level; otherwise, a retrogressive system might be expected.

Key words: agro-ecological system agro-economic system coupling degree gully area of Loess Plateau Changwu County

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[1] 盛萍萍,李敏,刘润进. 农业技术措施对AM真菌群落结构的影响研究进展[J]. 应用生态学报, 2011, 22(06): 1639-1645.