

论文

基于农户受偿意愿的农田生态补偿额度测算——以武汉市的调查为实证

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摘要:

农业环境政策已成为西方发达国家激励乡村适宜景观地保护的有效方式,有利于克服农田生态环境供给的不足,鼓励农户逐渐向绿色农业、生态农业或有机农业的方向发展。以武汉市农户的调查为实证,应用意愿调查法构建模拟的农田生态补偿政策及交易市场,从减少农业负外部性行为,对农民放弃一定程度化肥、农药等化学物质的施用所带来的损失给予补偿的角度,测算出农户对农田生态环境补偿的意愿及额度。研究表明:①当化肥农药施用在减少50%、100%等不同的限制标准下,受访农户愿意生产及供给农田生态服务的人数比例在69.32%~85.25%,并认为政府应分别向农户补偿3 928.88~8 367.00元/hm²·a,与农户按生产经验判断的减产幅度、增加的管理难度和工时相近;②从模拟的农产品交易市场出发,受访农户中愿意生产并供给化肥、农药施用量在不同限制标准下的农产品的比例在54.29%~82.12%,愿意以高出当前普通农产品1.65~2.67元/kg的价格生产环境友好型农产品,价格增幅在42.52%~68.45%。

关键词: 农田生态补偿 受偿意愿 意愿调查法 接受价格

Agricultural Land's Ecological Compensation Criteria Based on the Producers' Willingness to Accept: A Case Study of Farmer Households in Wuhan

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Abstract:

Agricultural land plays a multi-dimensional function and role. It provides not only food and fiber, which is the important safeguard to food security of our country, but also serves as various non-market commodities with characteristics of externalities or public goods. As an ecological barrier in protecting environment, it also brings into playing more and more important ecological and landscape functions in land use planning. So agri-environmental policies (AEPs) have become one of the effective methods to protect the rural landscape and agricultural land in western developed countries. It promotes the farmers to engage in ecological agriculture or organic agriculture, circumventing the shortage of agricultural eco-environmental supply. Ecological compensation system involves suppliers, demanders, other market players, the ecosystem services and products, it is similar to the standard elements of the market. According to Provider Gets Principle (PGP), this research estimates agricultural land's ecological compensation criteria based on the farmer households' willingness to supply and accept, and the results have some reference for reducing the negative externalities of agriculture. Based on the empirical survey on farmer households in Wuhan area, the current research studied the farmers willingness to accept if they will be given certain compensations for reducing the use of chemical fertilizers, pesticides and other chemicals. Several conclusions can be drawn from this study. Firstly, most farmers recognize the negative impacts of fertilizers and pesticides on the agricultural land's eco-environment. However, they stick to current practice due to the easy use and quick effects of chemical fertilizers and pesticides. Secondly, if we take the application of fertilizer and pesticide under different limits, it is a significant negative relationship between producers' willingness to supply and application restrictions of chemical fertilizers and pesticides. About 69.32%—85.25% farmers have willingness to provide ecological services as the limitation standards were settled, namely, reducing chemical fertilizers and pesticides applications by 50% or 100%. When the chemical fertilizers and pesticides utilization reduced 50% or 100%, the amount of compensation that the farmers would accept is 3928.88—8367.00 yuan per hectare per year. Based on the simulation of the agricultural products market, about 54.29%—82.12% of the farmers have willinness to produce agricultural products according to the limit standards of utilization of chemical fertilizers and pesticides. And, farmers are willing to produce environment-friendly agricultural products when the rice's price is higher than common agriculture products at 1.65—2.66 yuan per kilogram, which increases 42.52%—68.45%.

Keywords: agricultural land's ecological compensation willingness to accept (WTA) contingent valuation method (CVM) accept price

收稿日期 2010-07-14 修回日期 2010-09-19 网络版发布日期

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基金项目:

国家社会科学基金项目(09CJY021);国家自然科学基金项目(40901288, 70773047);教育部人文社会科学研究基金(07JC790034);教育部博士点新教师基金(20090146120005);华中农业大学科技创新基金(07XCX008);华中农业大学人才启动基金资助课题。

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