

农村发展—生态资源环境

北京市延庆县种植业污染源普查情况及治理对策

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摘要:

延庆县是官厅水库所在地,种植业是该县污染的主要因素之一,掌握种植业源污染现状,对于防治农业面源污染和保证水源地安全有重要意义。此研究采用普查方法,摸清了延庆县2007年种植业污染源情况,分析了种植业中化学投入品(化肥、化学农药和地膜)的投入和流失情况,废弃物(农作物秸秆)的产生利用情况,并对该县种植业总体污染情况进行了评价。结果表明,2007年延庆县化肥总施用量为 $1.61 \times 10^4$  t(折纯),其中纯氮施用量是 $1.14 \times 10^4$  t,占总施用量的70.6%,延庆县种植业氮肥流失量占全县总氮排放量的52.4%,是农业面源污染中的氮素最主要来源,磷流失量占全县总磷流失量的35.1%。农药中用量较为突出的是人工除草剂阿特拉津,施用量为28129.97 kg。康庄镇、延庆镇、张山营镇、旧县镇、永宁镇、香营、井庄镇7个乡镇是延庆县种植业源排放最严重的区域,该7个乡镇紧临官厅库区,成为威胁官厅水库水质安全的主要因素。此文最后针对主要污染源的种类和成因,从源头阻断、过程控制及末端治理3个层面提出了4条防控措施。

关键词: 延庆

Survey of Planting Pollution Sources and Countermeasures in Yanqing County, Beijing

Abstract:

Planting is one of the main pollution sources of Yanqing County, where located Guanting Reservoir, the strategic water resource of Beijing. In order to control agricultural non-point source pollution and ensure the safe of water resource field, it is necessary to learn the pollution status. Survey methods were applied to find out the Planting source of Yanqing County in 2007, and analyze the chemical farming inputs (fertilizers, chemical pesticides and plastic film) as well as wastage (crop straw) production utilization. The overall pollution was evaluated on the basis of survey. The results showed that, the total amount of fertilizer application of Yanqing County was 16169.72 tons (pure), in which nitrogen fertilizers was 11408.88 tons, accounting for 70.6%. The total nitrogen (TN) loss of Planting accounted for 52.4% of total nitrogen emissions, which is the serious source of nitrogen emission. Phosphorus loss accounted for 35.1% of total amount. Artificial herbicide-Atrazine is more prominent pesticides, application rate was 28,129.97 kg per year. Seven towns (Kangzhuang, Yanqingzhen, Zhangshanying, Jiuxian, Yongning, Xiangying, Jingzhuang) are the key emission sources, which neighbored to the Guanting Reservoir, become key threats to water quality. Finally, four control measures were proposed from three levels of the source block, process control and end treatments according to the types and causes of the main sources.

Keywords: Yanqing

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