

宁夏银北灌区排水沟水的化学特征及其灌溉效应

Chemical characteristics and its irrigation effect of drainage water in ditches of Yinbei Irrigation Districts

中文关键词: [沟水灌溉](#) [矿化度](#) [盐渍化](#) [化学特征](#)

英文关键词: [Drainage reuse for irrigation](#) [Mineralization](#) [Saline-alkaline](#) [Chemical characteristics](#)

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作者	单位
王少丽	中国水利水电科学研究院 水利研究所, 北京 100048
许迪	中国水利水电科学研究院 水利研究所, 北京 100048
杨建国	宁夏农林科学研究院 农业资源与环境研究所, 宁夏 银川 750002
万树星	宁夏水文水资源局, 宁夏 银川 750004

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中文摘要:

摘要: 以宁夏银北灌区5个沟水利用点为例, 分析评价排水沟水的化学特征、沟水灌溉的盐渍化风险及灌溉后的土壤环境效应。分析表明, 暖泉农场排水沟水为重碳酸盐钠型水, 其它均为氯化物钠型水。灌溉中后期排水沟水各项盐渍化指标明显小于灌溉初期, 除前进农场外, 沟水灌溉的盐渍化危害程度较轻。土壤中盐类主要成分为钠、钙的氯化物—硫酸盐; 土壤质地对灌后的盐渍化有明显影响, 质地较轻的沙壤土不易积盐; 长期淹灌种植水稻, 地下水位较高, 为保持土壤性状良好, 宜改为水旱轮作方式。采用与耐盐作物轮作、引山洪水冲洗及实行水旱轮作等, 能

英文摘要:

Abstract: This paper analyzed the chemical characteristics of drainage water in ditches, saline-alkaline hazard and its impact of drainage reuse on soil in Yinbei irrigation districts, Ningxia. The result showed that the hydro-chemical type of drainage water is CNa at the Nuanquan Farm and ClNa at other four plots. Every alkaline index in drainage water was obviously smaller during the middle-late irrigation than those during the early irrigation. Except for the Qianjin Farm, the saline-alkaline hazard of drainage reuse for irrigation was relatively slight. The dominant soluble salt in soil was Chloride-sulfate bearing sodium and calcium. The soil texture had an obvious impact on soil saline-alkaline after irrigation. The lightly textured soil, such as sandy loam, was not easy to accumulate the salt. In the area where the rice was planted for a long term, the groundwater level was higher and the better choice was to adopt the paddy-upland rotation system in order to maintain the effect of soil improvement. Adopting rotation system with anti-saline crops, soil flushing with fresh water, paddy-upland rotation and so on would play an important role in controlling soil water-salt and improving the soil and the effects of drainage reuse for irrigation were good.

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单位地址: 北京海淀区复兴路甲一号 中国水利水电科学研究院A座1156室 邮编: 100038 电话: 010-68786238 传真: 010-68786262 E-mail: slxb@iwhr.com

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