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环渤海低平原区土壤安全容盐潜力评价

**Evaluation of potential safety soil salinity in low plain around Bohai Sea**

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中文关键词: [土壤](#), [盐分](#), [数据](#), [环渤海低平原](#), [临界容盐潜力](#), [最大容盐潜力](#)

英文关键词: [soils](#), [salts](#), [data](#), [low plain around the Bohai Sea](#), [Salt content of soil potential safety-critical](#), [the maximum potential capacity of salt](#)

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中文摘要:

该文通过环渤海低平原区的土壤安全临界容盐潜力和最大容盐潜力分析,为保障土壤安全和粮食作物安全下的咸水灌溉提供科学依据。通过实验室数据和整合所搜集资料,查明了环渤海低平原区的0~40 cm土壤含盐量现状,在此基础上,以不同盐分情况下的土壤安全容盐值、土壤化学类型和作物布局结构为参考指标,对研究区的土壤安全容盐潜力进行了评价。总的来看,环渤海低平原区的土壤安全临界容盐潜力变化区间为1.0~3.0g/kg,其中以2.0~2.5 g/kg的潜力区为主,占总面积的81.3%,整体容盐潜力较大;其他等级1.5~2.0、2.5~3.0和1.0~1.5 g/kg的潜力区,分别占10.0%、5.4%和3.1%。土壤安全最大容盐潜力区的变化区间为1.5~5.5 g/kg,其中以2.5~3.5 g/kg的潜力区为主,占总面积的68.7%,整体容盐潜力较小;其他等级3.5~4.5、1.5~2.5和4.5~5.5 g/kg的潜力区,分别占25.2%、5.1%和1.0%。土壤安全临界容盐潜力区和最大容盐潜力区在空间格局上有很好的对应关系,临界容盐潜力大的地区,最大容盐潜力也大;反之,依然。

英文摘要:

Salt content of soil potential safety-critical and the maximum potential capacity of salt in a case study area of low plain of Huan Bohai were analyzed in this paper, in order to provide a scientific basis for protecting soil safety and irrigating food crops with saline water safely. Salinity distribution of 0-40 cm deep soil was identified by field investigation and laboratory data analysis, and on the basis of which, the paper evaluated the potential safety margin of salt using factors of safety soil salinity for different salts, soil chemical type and crop distribution pattern. The results indicated that the soil potential safety salinity ranged from 1.0 to 3.0 g/kg in the low plains around the Bohai Sea. The area where the soil potential safety salt ranged from 2.0 to 2.5 g/kg accounted for 81.3% of the total area, indicating a great potential margin for salt content. The areas with salinity ranges of 1.5-2.0, 2.5-3.0 and 1.0-1.5 g/kg accounted for 10.0%, 5.4% and 3.1% respectively. For the maximum soil potential safety salinity, it ranged from 1.5 to 5.5 g/kg, which was dominated by the range of 2.5-3.5 g/kg, and the area falling in this range accounted for 68.7%, indicating a smaller salt tolerance. The area falling in the maximum soil potential safety salinity ranges of 3.5-4.5, 1.5-2.5 and 4.5-5.5 g/kg accounted for 25.2%, 5.1% and 1.0% respectively. The spatial distribution of the potential safety margin of salt and the maximum soil potential safety salinity showed a great corresponding relationship. The area with larger potential safety margin of salt has a larger maximum soil potential safety salinity at the same time, and vice versa.

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