

农学—研究报告

陇东塬区冬小麦不同生长阶段水资源丰歉度

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摘要:

本文利用世界粮农组织（FAO）公布的模式，计算了陇东塬区冬小麦不同生长阶段需水量，并分析了该区域冬小麦不同生长阶段水资源丰歉度、可生长季水资源构成和农业生产对策。分析显示：陇东塬区冬小麦冬前生长期水资源过剩，返青后生长期水资源短缺，短缺最严重的时段是成穗期，即4月中旬到5月中旬，水资源总量只占需水量的67%，80%保证率为31%，是影响冬小麦产量的关键时期。春、夏、秋三个可生长季节中，春季麦田水资源以早春土壤贮水为主，夏季以自然降水为主，秋季初秋土壤贮水和自然降水占水资源总量的比例接近。植株生长期水资源、成穗期水资源和全生育期耗水量和冬小麦产量相关程度较高，幼苗期和籽粒形成期水资源对产量的影响相对较小。农业生产上要根据不同时期水资源构成特征科学决策种植模式，并采取工程措施或生产措施有效降低越冬期土壤水分损耗、麦田冬前旺长水肥损耗、晚秋和早春秋白地水分无效损耗，提高水分利用率。

关键词：冬小麦；水资源；丰歉度

The water resources abundant and famine of winter wheat different growth stage in Gansu east plateau area

Abstract:

This article uses the world food and agriculture organize (FAO) announcement the pattern, has calculated Gansu east plateau area winter wheat different growth stage water demand, and analyzed this region winter wheat different growth stage water resources abundant and famine, has been possible to grow the season water resources constitution and the agricultural production countermeasure. The analysis demonstrated that east Gansu before the plateau area winter wheat winter the vegetal period water resources are surplus, after turn green the vegetal period water resources to be short, the short most serious time interval is Cheng Suiqi, namely mid-April to mid-May, the water resources total quantity accounts for the water demand 67%, 80% guarantee rate is only 31%, is affects the winter wheat output the crucial phase. Spring, the summer, fall three may grow in the season, spring the wheat field water resources by the early spring soil water storage primarily, summer by the natural precipitation primarily, the autumn early fall soil water storage and the natural precipitation account for the water resources total quantity the proportion to be close. The adult plant vegetal period water resources, Cheng Suiqi the water resources and the entire period of duration water consumption and the winter wheat output relativity are high, seedling time and grain formative year water resources to output influence relative small. The agricultural production needs to act according to the different time water resources constitution characteristic macro-scientific policy-making planter pattern, and takes the project measure or the production measure reduces effectively survives the winter the time soil moisture to lose, before the wheat field winter the prosperous long sludge fertilizer loses, the late autumn and early the Spring and Autumn Period white moisture content invalid loss, raises the moisture content use factor.

Keywords: winter wheat water resource abundant and famine

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