

Seasonal variations of soil moisture, NDVI, and evapotranspiration over irrigated lands

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Abstract

North China Plain is a very important region in China with the high population density. In the recent years, water deficit is becoming a serious problem as well as the food security. It is necessary to understand well the water cycle over irrigated farmland in this region, since the crop water consumption is supplied by irrigation. The present research will concern of the seasonal variation of evapotranspiration, soil moisture, and the phenological change of crops over irrigated farmland. The correspondense of evapotranspiration on soil moisture and crop phenology also is discussed.

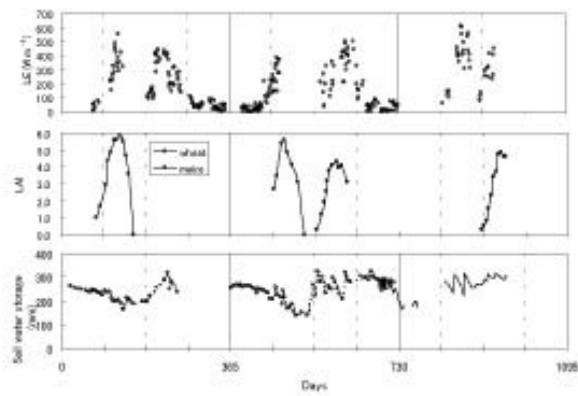


図1 蒸発散量、LAI、土壌水分の年々変動
(横軸は1999年1月1日からの日数を示している)

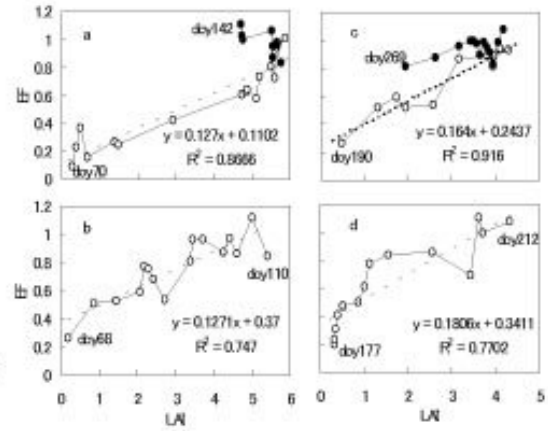


図4 LAIとEvaporative Fractionの関係

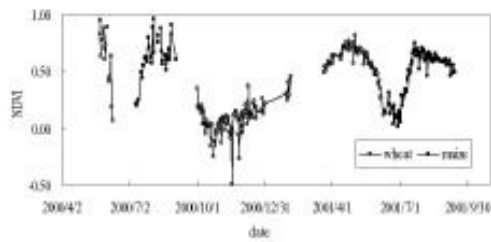


図2 灌漑農地における正規化植生指標の季節変動

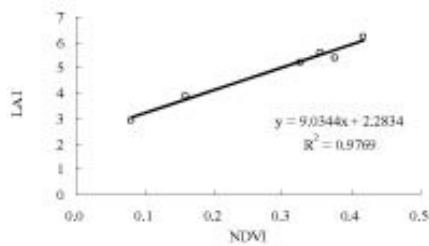


図3 NDVIとLAIの関係

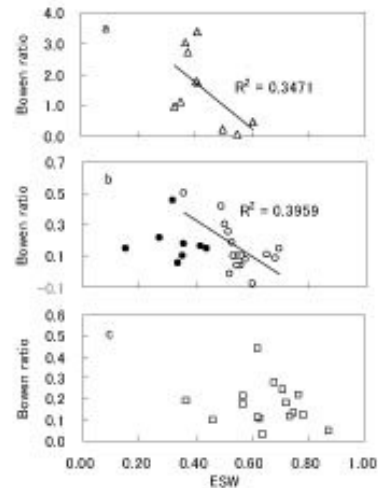


図5 土壌水分とボーエン比の関係