

(アグリバイオインフォマティクスセミナーのお知らせ)

演題:

Thermal remote sensing of vegetation function

日時: 7月7日(水) 13:00 - 15:00

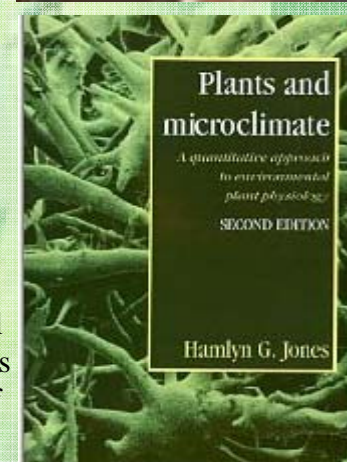
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His research centres on understanding plant adaptations to environmental stress, with a specific aim of improving crop production under stress conditions, and an emphasis on plant water relations and thermal adaptation of plants. Throughout he aims to adopt an integrative approach bringing together a broad range of approaches from genetic and biochemical studies through to environmental and climatic modelling incorporating an understanding of whole-plant responses. In recent years he has moved a substantial portion of effort to the development of remote-sensing approaches to the diagnosis and monitoring of plant stresses and responses. His main achievements have fallen in several areas: Basic plant water relations, Temperature adaptations of plants, Plant water relations and the improvement of irrigation practice, Thermal imaging and the remote diagnosis of plant stress.



要旨: In this seminar I will review the uses of thermal imaging as a tool for the study of plant adaptation to environmental stress and particularly for the study of plant water relations. In most applications some ancillary data are required to get the best from the thermal data; the types of such data include meteorological information and plant cover data as can be obtained using spectral sensing. The seminar will cover a range of recent studies in our laboratory involving applications at different scales from the single leaf to satellite remote sensing. There will be particular emphasis on practical problems that must be considered when using thermal remote sensing at the crop scale. A range of potential applications will be introduced, including general questions relating to the application of the technique for irrigation scheduling and the specific opportunities for the development of automated irrigation scheduling approaches for different crops. A particular aspect of the seminar will be discussion on potential errors in the estimation of stomatal conductance from remote thermal imagery, and the practical aspects of the use of wet and/or dry reference surfaces. The importance of environmental variation and especially variation in incoming radiation will be discussed.

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