

Checklist and Sample Abstract

Abstracts accompany all articles in Society journals. They are often republished as printed in secondary abstracting services and journals, such as *Chemical Abstracts* and BIOSIS or *Biological Abstracts*. The abstract, therefore, should meet two requirements. An agronomist reading an abstract should be able to tell quickly the value of the report and whether or not to read it thoroughly. It also should provide the literature searcher enough information to assess its value and to index it for later retrieval. Use the checklist below to assure that your abstract meets these requirements.

The abstract should:

- ___ Strive for an impersonal, noncritical, and informative account.
- ___ Give a clear, grammatically accurate, exact, and stylistically uniform treatment of the subject.
- ___ Provide rationale or justification for the study. The statement should give a brief account of the purpose, need, and significance of the investigation (hypothesis or how the present work differs from previous work).
- ___ State the objectives clearly as to what is to be obtained.
- ___ Give a brief account of the methods, emphasizing departures from the customary. Be specific.
- ___ Name the soil type by the new classification system if soil type is a factor in interpreting the results.
- ___ Clarify whether it is a greenhouse or field experiment.
- ___ Identify scientific name of plants, other organisms, and chemicals.
- ___ State results succinctly.
- ___ Outline conclusions or recommendations, if any. An emphasis of the significance of the work, conclusions, and recommendations. This may include new theories, interpretations, evaluations, or applications.
- ___ Use specific figures whenever possible to avoid use of general terms, especially in presenting the method and reporting the results. For example, if two rates of a treatment are used, state what they are.
- ___ Never cite references.
- ___ Contain about 200 to 250 words for articles or 100 to 150 words for Notes.

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Dryland Grain Sorghum Water Use, Light Interception, and Growth Responses to Planting Geometry

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ABSTRACT

Rationale

Crop yields are primarily water-limited under dryland production systems in semiarid regions.

Objectives

This study was conducted to determine whether the growing season water balance could be manipulated through planting geometry.

Methods

The effects of row spacing, row direction, and plant population on the water use, light interception, and growth of grain sorghum [*Sorghum bicolor* (L.) Moench] were investigated at Bushland, TX, on a Pullman clay loam (fine, mixed, thermic Torrertic Paleustoll).

Results

In 1983, which had a dry growing season, narrow row spacing and higher population increased seasonal evapotranspiration (ET) by 7 and 9%, respectively, and shifted the partitioning of ET to the vegetative period. Medium population crops yielded 6.2 and 2.3 Mg/ha of dry matter and grain, respectively. High population resulted in high dry matter (6.1 Mg/ha) and low grain yield (1.6 Mg/ha), whereas low population resulted in low dry matter (5.4 Mg/ha) and high grain yield (2.3 Mg/ha). Row direction did not affect water use or yield. In 1984, dry matter production for a given amount of ET and light interception was higher in the narrow-row crops. Evapotranspiration was less for a given amount of light interception in the narrow-row crops and in the north-south row crops.

Conclusions

Narrow-row planting geometry appears to increase the partitioning of ET to the transpiration component and may improve the efficiency of dryland cropping systems.