

1. Identification

Title: Computer tools for irrigation management

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2. Introduction

Irrigation can be used to improve crop yields, reducing pressure on agricultural land expansion. On the other hand, agriculture, especially irrigated agriculture, is considered a large water user, demanding for water-savings technologies. Irrigation management has not been much used due to the difficulties involved on its practical implementation. As computers are more frequently used in agriculture, simple tools such as irrigation management spreadsheets and the *software* IrrigaFácil, were developed. This, coupled with the increasing water pumping costs, is stimulating irrigation management adoption.

1. Research State of the Art

Water scarcity and water-use competition are stimulating the development of technologies related to the rational use of this resource, such as *software* for irrigation design, operation and management at farm, scheme and regional levels. However, irrigation management adoption is definitely implemented only when water is scarce, charged for, or when there are water and energy use strict restrictions.

2. Beyond the State of the Art

With escalating of energy costs, increase water use competition and pressure from organized society over the irrigated agriculture, farmers will be forced to adopt water-savings technologies. The first step would be implementation of irrigation management with a strong tendency toward deficit irrigation.