

ECONOMIC AND HYDROLOGIC TRADE-OFFS BETWEEN WATER
CONSUMPTION AND GROUNDWATER RECHARGE FOR COVER CROPPED
SYSTEMS

W.W. Wallender, R.E. Howitt, J.P. Mitchell, S. Temple

This project will investigate tradeoffs between water consumption and groundwater recharge at the field level in two ongoing experiments in California's Central Valley: the Sustainable Agriculture Farming Systems (SAFS) Project and Biologically Integrated Farming Systems (BIFS) Project. These projects are comparing cover-cropped systems with conventional systems in terms of soil quality, pest management, and other important biological parameters. Water budgets developed at the field level will then be used to quantify, with the Geographic Information System ARC/INFO as well as hydrology models, water consumption, infiltration, and groundwater recharge at the landscape or watershed level if cover-cropping were adopted on a large scale.