An in-depth look at cropping systems in SW Colorado and SE Utah. (A08-berrada131655-Oral)

Authors:

- A.Berrada - *Colorado State University*

Abstract:

A 3-yr SARE project was funded in 2000 to evaluate dryland cropping systems that would maximize water use efficiency and minimize the detrimental effects to the environment. Field experiments were established at two locations in Colorado and one location in Utah. Treatments consisted of 2- and 3-yr crop rotations managed using conventional (CT) or minimum tillage (MT) systems. A severe drought in 2000 and 2002 resulted in partial or total failure of the spring crops at all three locations. In 2001, bean after winter wheat in CT wheat-bean and bean after corn in MT wheat-corn-bean produced significantly more seed yield than bean after safflower at one location due to more available soil moisture at planting. Winter wheat after fallow was superior to winter wheat after spring grains (bean, chickpea, safflower, corn) in 2000 and 2002. Minimum till wheat-fallow was superior to CT wheat-fallow in 2001 and 2002, due to N and P fertilizer and more available soil moisture at planting. Under severe drought conditions, MT winter wheat-fallow may be the only feasible cropping system in the project area. Winter wheat-corn-bean rotation holds promise under normal conditions. Crops following alfalfa or safflower do poorly in a dry year.

Corresponding Author Information:

Abdelfettah Berrada
Colorado State University
Southwestern Colorado
Research Center
Yellow Jacket, CO 81335-0233

phone: (970) 562-4255
fax: (970) 562-4254
e-mail:
aberrada@coop.ext.colostate.edu

Presentation Information:

Presentation Date: Wednesday, November 13, 2002
Presentation Time: 1:45 pm

Keywords:

cropping systems, sustainability