

Appendix 4: Soil Water Conservation Strategies -- Survey and Interview Data

Nine of fifteen interviewed producers farmed without any irrigation, while two had non-irrigated farms, but leased some irrigated land. All producers worked with at least some non-irrigated land, and all cited water as a critical limiting factor for their operations.

The most important water conservation strategy, mentioned by all but one interviewee, was maintaining soil cover throughout the year. Cover crops and mulches were used in cultivated areas, and producers with livestock often rotated these areas with perennial pasture. Two producers were permanently re-vegetating substantial cultivated areas with perennial forage.

By virtue of being part of the value chain, all respondents were planting at least one low water need crop, since that is what the value chain markets. Many had built on this foundation by using soil water conservation as their major variable for rotation planning, choosing low yield/high value crops, or reducing their seeding rates and plant populations to match soil moisture.

Twelve explicitly mentioned soil moisture monitoring as an important part of their water conservation strategy, and of the three that did not, two had a relatively small share of cultivated land, comparative to perennial forage.

Eleven practiced some form of water conserving tillage, but only one producer had fully eliminated tillage. The no-till farmer felt his categorical rejection of tillage was the cornerstone of environmentally responsible management on his farm; but another farm household referred to tillage as a key tool for organic management and quipped, "if you're not tilling, you're not farming." Most producers used some tillage, but tried to reduce its impact by leaving untilled borders, plowing less frequently and at a shallower depth, using lighter equipment, or seeding directly into stubble.

Six producers told me they were snow trapping to capture winter moisture. Perennial windbreaks were the most common strategy, but snow moisture could be retained using any form of soil cover. One producer had planted sunflowers for snow trapping purposes: he planned to leave the stalks in the field over the winter after selling cut flowers during the growing season.

Two producers were trialing dryland vegetables, one of whom was interested in saving seed to adapt varieties for non-irrigated conditions. Although most producers were working with such dryland conditions, three mentioned conservation irrigation practices as a key part of their water conservation strategy.