

Stewardship Leaders in Agriculture

Water Quality

BSB RANCH LLC

GENE AND LUKBIR BAINS are brothers who own and operate BSB Ranch LLC in the Sacramento Valley of California. The Bains grow peaches, prunes, and walnuts on four orchards totaling 350 acres. Using BMPs (Best Management Practices) such as cover crops for over a decade, BSB Ranch LLC has helped keep pollutants such as sediment, pesticides and fertilizers from running off their property and into their local watershed. Since 2009, the Bains have converted over 250 acres of flood-irrigated orchards to more efficient micro-drip and sprinkler systems. These systems use less water and eliminate irrigation water runoff from the fields.

MAKING A DIFFERENCE IN THE WATERSHED

The Bains were motivated by water quality issues in their local watershed, the Lower Feather River. In the early 1990's, the river was found to be polluted with the agricultural pesticide Diazinon. Being farmers, the Bains chose to address their own runoff issues which, when combined with neighboring farms, led to the delisting of the river in 2010. Today Lower Feather River remains off the impairment listing, while area farmers like the Bains Brothers continue to practice cover cropping and efficient irrigation methods.

"The BMPs (Best Management Practices) have helped my brother and me to limit the potential for offsite runoff of pesticides from our orchards, keeping us in compliance with water quality regulations." - Gene Bains farmer



ACHIEVEMENTS

Conserve water and reduce irrigation runoff by converting over 250 acres of flood-irrigated orchards to micro-drip and sprinkler systems.

Eliminated stormwater runoff on their farm by planting and maintaining 100 acres of cover crops.



BSB Ranch LLC's conservation practices have helped to significantly reduced pesticide pollution in their local watershed.



Photo courtesy of Sutter County RCD

Addressing pesticide runoff on farmland: BSB Ranch LLC

BEGINNINGS

In 1994, the Lower Feather River was placed on the Federal Clean Water Act 303(d) list as impaired for beneficial uses due partially to an exceedence of Diazinon, an organophosphate pesticide. Under the Federal Clean Water Act, the California State Water Resources Control Board (SWRCB) is required to set priorities for addressing 303(d) listed state waterbodies and to establish TMDLs (Total Maximum Daily Loads) for pollutants as objectives for attaining water quality standards. A TMDL was established on the Lower Feather River in 2002.

PROJECT DETAILS

In early 2008, the Sutter County Resource Conservation District (SCRCD) formed a partnership with the Natural Resources Conservation Service (NRCS) to sponsor an Agricultural Water Enhancement Program (AWEP) proposal. Titled, "The Gilsizer Slough AWEP Project Action Plan", the proposal focused on assisting producers who operate orchards within the Gilsizer Slough Watershed. Gilsizer Slough drains to the Sutter Bypass and eventually into the Lower Feather River.

In 2009, SCRCD was successful in securing up to \$5.4 million in AWEP funding over five years. So far, \$3.5 million has been allocated to Sacramento Valley farmers who have implemented 62 different projects covering 2,973 acres in the Gilsizer Slough Watershed. Many BMPs (Best Management Practices) that reduce runoff on cropland have gone into place as a result.

IMPLEMENTATION AND MANAGEMENT

SCRCD and the local NRCS field office worked in partnership to assist BSB Ranch LLC and other farmers in their district to obtain the funding, tools, and technical assistance necessary for successfully addressing runoff from irrigated cropland that might have been contributing to the 303(d) listing.

FOSTERING SUCCESS

These BMP installations by irrigated cropland farmers like the Bains Brothers resulted in a significant reduction of Diazinon concentrations in the Feather River Watershed. In 2010, the U.S. Environmental Protection Agency- as recommended by the California State Water Resources Control Board- removed 79 river miles along the Lower Feather River from the 303(d) list as impaired for beneficial uses due to Diazinon.

"The AWEP Program has helped us afford the installation of efficient 21st century irrigation systems and vegetative cover crops, saving our operation both money and time."

Gene Bains, farmer

PROJECT PARTNERS

Sutter County Resource
Conservation District

Natural Resources
Conservation Service