



Photo courtesy of Jon's Nursery

About 10 years ago, high chloride levels in the lower Peace River area made it difficult for the city of Punta Gorda to meet drinking water standards. This led to discussions with the Southwest Florida Water Management District (SWFWMD) and other stakeholders on ways to improve water quality in that part of the state. One of the results of these discussions was the creation of the

FARMS (Facilitating Agricultural Resource Management Systems) program by SWFWMD. FARMS is an agricultural best management practices (BMPs) cost-share program that is a public/private partnership involving SWFWMD and the Florida Department of Agriculture and Consumer Services (FDACS). The purpose of FARMS is to provide incentives to farmers and ranchers in the district to carry

out BMPs that will 1) reduce upper Floridian aquifer withdrawals, 2) improve groundwater or surface water quality in areas affected by groundwater withdrawals, and 3) improve natural system functioning in the Upper Myakka River Watershed.

Water-Logged

The goal of FARMS is to offset 40 million gallons per day (mgd) of groundwater pumping within SWFWMD by 2025 via reducing groundwater pumping and shifting to more surface water use. Reducing groundwater use can improve surface water quality in areas where poor quality water (slightly salty groundwater) is used for irrigation. One of the important BMPs of FARMS is the back-plugging funding initiative. This initiative helps fund water quality improvement practices such as back-plugging of wells that have high levels of chloride or total dissolved solids.

Back-plugging involves putting gravel and a cement “cap” in the lower part of deep wells to isolate the geological formation that transmits saltier groundwater to the rest of the well. This

reduces salts, but usually reduces pumping capacity as well. To meet agricultural water needs, FARMS also helps fund the construction of tailwater or surface water recovery ponds. These ponds typically collect excess irrigation water and stormwater runoff. The grower and FARMS share the cost of surface water pumps, filters, and other devices needed to connect the pond to an existing irrigation system.

Sharing The Wealth

FARMS also has provided funding for soil moisture sensors and weather stations that can help growers improve irrigation efficiency and scheduling. Improved soil moisture sensors have come on to the market in the past decade. With these sensors, growers can monitor the level of soil water extraction and irrigate for short durations to keep water just in the main root zone.

The FARMS program provides cost share funds for up to 50% for projects that reduce groundwater withdrawals



Photo courtesy of Three Pines Tree Farm

The FARMS program can be used by growers to upgrade their irrigation-management means through cost-sharing purchases of equipment such as valves and moisture sensors.

(i.e. reduce water quantity use). For projects that both reduce water use and improve water quality (e.g. salinity), reimbursement can reach up to 75%. After working out a plan with SWFWMD, the grower pays for the project and is then reimbursed by the district.

FARMS commonly pays for hardware equipment or structures. It does not pay for labor. Growers might be able to obtain funds to supplement FARMS dollars from other cost share programs such as EQIP (Environmental Quality Incentives Program) from Natural Resources Conservation Service federal funds.

FARMS does cost share programs throughout the entire district, but it continues its emphasis on the lower Peace River (Shell, Prairie, and Joshua Creek Watershed) south and east of Arcadia and the Upper Myakka River Watershed area inland from Bradenton and Sarasota. FARMS has provided cost share funds for a number of citrus projects, but recently it also has helped fund several blueberry projects.

TRB Groves in Punta Gorda is an example of FARMS at work. TRB has used the FARMS Program to upgrade its irrigation management by cost sharing the purchase of valves, soil-moisture sensors, a weather station, and a wireless network. With this system, they can monitor current soil water status in 15 different zones and irrigate each zone as needed. The company has saved an estimated 465,000 gallons per day in groundwater pumping and more than \$10,000 in fuel pumping costs. Wes Brumback of TRB Groves indicated they would not have been able to improve their irrigation management system as much as they have without the FARMS program. He is very pleased with the program and said FARMS reimbursed his operation in a timely manner.

For more information on FARMS, go to <http://www.swfwmd.state.fl.us/agriculture/farms/>.