

## SUCCESS STORY

### INTSORMIL- CENTA's New *bmr* Sorghum Varieties Create a Surge in Dairy Production



Photo by: E.A. Heinrichs

Rene Clara Valencia explaining the nutritional qualities of *bmr* sorghum CI-0973 at CENTA, San Andres, El Salvador

Scientists from the INTSORMIL-CENTA project based at the National Center for Agricultural Technology and Forestry (CENTA) of El Salvador have worked for five years to develop varieties of sorghum for grain and forage that are highly nutritious to cattle. Using the gene *bmr-12*, received from Dr. Gebisa Ejeta of Purdue University, they combined commercial varieties CENTA S-2, S-3 CENTA, CENTA RCV and VG 146 and were able to form new varieties containing this same gene. The first generation created 76 new varieties.

Sorghum plants with the *bmr* gene have a brown midrib. This gene has the feature of greatly reducing the fiber cell wall lignin, which makes the plant more readily digestible and allows more nutrients to be absorbed in the stomach of animals. In this way, the new plant of sorghum *bmr* competes with corn on nutritive value. Forage with the *bmr* gene increases milk production by 20% and will greatly increase income of small-holder dairy farmers.

Based on the potential impact of these varieties on reducing rural poverty and increasing nutrition USAID/W is supporting a project (2011-2013) to rapidly distribute these CENTA-developed varieties to Costa Rica, Honduras, El Salvador, Guatemala, Panama, Nicaragua and Haiti. Due to improved performance and quality of forage and grain, 15 *bmr* varieties were evaluated. Each country selected the best varieties in 2011. El Salvador, Nicaragua, Honduras and Guatemala have already commercially released these varieties to dairy farmers and further releases will follow in the other countries.

These varieties are rapidly spreading throughout Central America and in 2012 there were 8,000ha growing *bmr* varieties and these varieties benefitted 5,800 vulnerable households. By 2014 it is projected that these varieties will cover 40,000ha in Central America and Haiti and will benefit 23,000 vulnerable households.

The *bmr* varieties will have a significant impact on increasing rural income and promoting food security throughout Central America and Haiti.



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Young Nicaraguan dairy farmer feeding *bmr* sorghum silage to his dairy cows.