ARS researching camelina as a new biofuel crop

April 14 2010

Agricultural Research Service (ARS) scientists have long-term studies under way to examine growing camelina as a bioenergy crop for producing jet fuel for the military and the aviation industry. This research supports the recently signed memorandum of understanding between the U.S. Department of Agriculture (USDA) and the Department of the Navy (DoN) and interests of the Commercial Airlines Alternative Fuels Initiative (CAAFI).

Native to Europe, camelina (*Camelina sativa*) is a member of the plant family *Brassicaceae* and has been grown since ancient times for use as lamp fuel, among other things. The seed's high oil content has made it a promising candidate as a new source for biofuels.

Since 2006, ARS researchers and university collaborators throughout the country have been examining how to incorporate camelina and other oil seed crops into existing crop production systems. Preliminary results from Sidney, Mont., suggest that current camelina varieties use about as much water as spring wheat, so growers would still need to leave land fallow in alternate years to build up water or accept possible yield losses for wheat grown in rotation. However, with appropriate breeding and selection for uniform, desirable agronomic and oil quality characteristics, camelina has potential to be a good oil seed crop for planting during fallow years.

Also, scientists in Maricopa, Ariz., have identified a few lines of germplasm from the ARS camelina collection that are suitable for

rotations with cotton. ARS camelina germplasm research concentrates on identifying high-yielding lines that industry can use to develop new cultivars suitable for different growing conditions across the country.

In addition to Sidney and Maricopa, other ARS laboratories involved in camelina and other oil seed research are Akron, Colo.; Morris, Minn.; Peoria, Ill.; Prosser, Wash.; and Pullman, Wash. The ARS camelina germplasm collection in Ames, Iowa, has 85 accessions of seven camelina species from around the world available to researchers throughout the country.

Provided by United States Department of Agriculture-Research, Education, and Economics