
THE IR-4 COMMODITY LIAISON COMMITTEE SPOTLIGHT

IR-4's Commodity Liaison Committee (CLC) was formed in 1991. The CLC provides guidance on how to best serve minor crop producers. Most importantly, the CLC strives to keep their Congressional representatives informed about the valuable work being done by IR-4 and the need for increased federal funding to continue that work. We are spotlighting individual members of the CLC to provide a better understanding of their role in minor crop agriculture.

Rocky Lundy and the Mint Industry Research Council (MIRC) are our focus for this edition of the IR-4 Commodity Liaison Committee Spotlight.

Mint Industry Research Council (MIRC)

Mint oil stands out as a natural product in a sea of synthetic flavorings. Hundreds of different compounds form the complex nuance of mint flavor. It has never been successfully synthesized, and a little mint oil goes a very long way. One drum weighing 400 pounds can flavor 5 million sticks of gum or 400,000 tubes of toothpaste. Gum and toothpaste flavoring accounts for 90% of mint oil use with the remainder flavoring confectionery, pharmaceuticals, and liqueur.

Demographics and innovation promise to increase future uses for mint and mint oil flavoring. An aging population means expanded product lines for oral/dental care products - both primarily flavored with mint oil. The pharmaceutical industry is using mint-flavored gum as an innovative drug delivery system. Biotech experts are looking at the mint plant, with its ability to produce oil in response to sunlight and then store the oil in leaf glands, to bioengineer the production of nutritional supplements and pharmaceuticals. An age-old use for mint - tea - is new again. Twenty-five hundred acres of mint end up in tea.

Mint varieties grown commercially for oil production are primarily peppermint, native spearmint and scotch spearmint. The Pacific Northwest states of Oregon, Washington and Idaho comprise the major mint producing area, growing 70% of approximately 140,000 acres. The remaining 30% grows in Indiana, Michigan, Montana, South Dakota and Wisconsin. The 1999 crop - 7 million pounds of peppermint oil and 3 million pounds of spearmint oil - had a farm value of \$120-\$140 million. This translates to a \$5 billion dollar domestic market. About 50% of the oil is exported and currently supplies about 65% of the world market for peppermint and spearmint oil.

The desire to improve mint quality, productivity and integrated pest management practices led growers, processors, and end users to form the Mint Industry Research Council (MIRC) in 1976. MIRC is a nonprofit organization with the mission to fund, direct and coordinate scientific research and programs needed to sustain and enhance the productivity of high quality mint. The MIRC Executive Director, Rocky Lundy, also currently chairs the IR-4 Commodity Liaison Committee. MIRC and the state mint commissions are dedicated to supporting practical pest management programs. More than 75% of the MIRC research budget is spent on development of pest resistant varieties, basic biology of pests and biological control agents.

In 1995 MIRC joined EPA's Pesticide Environmental Stewardship Program (PESP). The goals of PESP, to further the implementation of IPM, reduce the use of conventional pesticides and promote registration of new, safer pesticides, mirror MIRC's goals. The mint industry was awarded a \$30,000 grant to assist with the production and distribution of educational materials that illustrate the benefits of using certified plant material and biological pest control. The MIRC maintains a "mother bed" repository to supply disease-free plants to the mint industry.

Mint is grown as a 3-5 year crop with best oil production in years 2 and 3. All commercial varieties are sterile clones that are vegetatively propagated. Peppermint is harvested in late summer and spearmint is harvested in June and again in late summer. The distillation process takes place on the farm, generally yielding 60-100 pounds of oil per acre. Oil buyers/dealers then test the oil, determine the chemical profile, categorize and blend the oil to the customer's specifications.

Conventional synthetic pesticides remain an important component of mint IPM practices. The major biotic factor limiting mint production in the U.S. is *Verticillium* wilt, a soil-borne fungus disease. Because tillage spreads the disease, the mint industry relies on the judicious use of herbicides to manage the wide array of weed problems. Good weed control is extremely important because weeds present in harvested mint reduce the quality and may even lead to rejection of the oil. Whether pesticides are needed for insect, disease or weed control, the mint industry selects new candidates for registration with the emphasis on environmental safety. According to Rocky Lundy, "Without IR-4 the mint industry would be lost. It is the only avenue we have to obtain new or retain old registrations for pest control products on minor crops like mint. The mint industry is very satisfied with IR-4's work and is particularly pleased with the quality and consistency coming from research centers such as the one at Prosser, Washington."

Article by Sandy Perry