

Farm Women's Day proclaimed

HARRISBURG — Friday, October 14, is Farm Women's Day in Pennsylvania, by a proclamation signed this week by Governor Dick Thornburgh.

On hand to witness the proclamation signing ceremony at the Capitol Building were representatives of the Society of Farm Women organization, the Pennsylvania Senate and the state Department of Agriculture.

After he had affixed his signature to the official document, Governor Thornburgh accepted a basket of the state's diverse food commodities from Farm Women president Marie Baughman, Shippensburg.

Also taking part in the ceremony were the Farm Women's first and second vice-presidents, Naomi Bupp, Glen Rock, and Edith Diehl, Shippensburg. Deputy Secretary of Agriculture Chester Heim and Senator Edward Helfrich,

chairman of the Senate Ag and Rural Affairs committee, attended as well.

Governor Thornburgh saluted farm families as the backbone of Pennsylvania's agriculture tradition, farm women as being instrumental in preserving the farm heritage.

His proclamation states: "For nearly 70 years, the Society of Farm Women has continued the fine farming customs and dedication exhibited by the Commonwealth's first family farmers. By sponsoring activities in their communities, these women uphold the dignity and purpose of farming, teach youngsters respect for the soil, and foster a deeper appreciation for farming and rural life."

Membership in the Society of Farm Women includes over 4,000 women from 187 local societies in 17 counties across Pennsylvania.



After signing Farm Women's Day proclamation, Gov. Dick Thornburgh receives basket of Pa. farm products from Farm Women officers, from the left, Edith Diehl, Marie Baughman and Naomi Bupp.

Will farmers ever grow smooth sumac?

WASHINGTON, D.C. — The U.S. Department of Agriculture's search for "energy crops" got a boost in 1977 when Congress directed the Department to make U.S. agriculture self-sufficient in energy by 1990.

If surpluses continue to erode farm economy, new "energy crops" could give farmers a boost as profitable alternatives to corn and soybeans in the 1990's.

One such crop reported on here today at the national meeting of the American Society of Agronomy is smooth sumac — a woody perennial native to North America. Unlike its distant relative, poison sumac, smooth sumac causes no allergic reactions.

According to T. Austin Campbell of USDA's Agricultural Research Service (ARS), smooth sumac — or *Rhus glabra* by its scientific name — would grow wherever corn and soybeans grow. Moreover, smooth sumac would draw a higher price in today's market because the whole plant can be processed to yield more types of products. Based on preliminary economic analyses, "the oil and protein from an acre of soybeans is not worth as much as the polyphenols, oil and protein from an acre of *Rhus*," he said.

To be profitable, however, new handling, processing and marketing systems would have to develop alongside the new crop, according to scientists at ARS's Northern Agricultural Energy Center in Peoria, Illinois.

The center, which was established as a result of the 1977 Congressional legislation, has surveyed more than 500 plant species for energy-rich "botanochemicals." Smooth sumac is a semifinalist as a multi-use crop.

Although its products would now power the family automobile, the plant is rich in tannins — chemicals currently imported from Europe for leather manufacturer — and other polyphenols that could serve as antioxidants or be converted into adhesives and resins for use in the manufacture of wood products. It also contains a variety of oils which could replace petrochemicals as lubricants or as industrial raw materials — for instance, in the manufacture of plastics. After these chemicals are extracted, Campbell said, the

residue could serve as high-protein cattle feed.

Campbell, who is an agronomist based at the Beltsville Agricultural Research Center in Maryland, is cooperating with the energy center in Illinois to study smooth sumac's potential as a field crop.

Smooth sumac passed the first test: it grows well from seed. It can be harvested once during the planting year and twice a year, in spring and fall, thereafter. If adopted on the farm, Campbell explained, the whole plant would be cut, allowed to dry and baled much like hay, then hauled off to an extraction plant nearby.

Campbell evaluated plants grown from seeds gathered at 17 locations in 3 states to determine if smooth sumac can be improved through breeding. He statistically analyzed the variation in growth characteristics — such as plant survival, vigor, dry matter yield, and number of secondary shoots — as well as the variation in polyphenol and oil content. He found significant genetic diversity and concluded that smooth sumac "has the potential for great improvement in botanochemicals through breeding, and for moderate improvement in yield through breeding and management."

Although the ratio of polyphenol to oil may have to be adjusted through breeding, Campbell said, some of the plants had combined polyphenol-oil levels that exceeded the requirements of two economic feasibility analyses.

Campbell also sees no problem in improving protein content through breeding. According to reports by energy center scientists, residues of smooth sumac already contain about 7 percent crude protein, which is only 2 percent below the level deemed necessary to make smooth sumac competitive as a high-quality animal feed.

Yield, said Campbell, poses the only potential problem. But that depends on which economic analysis one relies on, he added. In his own study, yields were far short of the energy center's recommendations for a profitable crop, but were as high or higher than the levels recommended by Mississippi scientists.

Campbell estimates 5 to 10 years of breeding should bring smooth sumac up to par as a cash crop

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