REGISTRATION OF TODD'S MITCHAM PEPPERMINT\textsuperscript{1}  
(Reg. No. 1)  
M. J. Murray and W. A. Todd\textsuperscript{2}

"Todd's Mitcham peppermint (\textit{Mentha piperita} L.), a Verticillum wilt-resistant clone, was developed by the A. M. Todd Company, Kalamazoo, Michigan, and released in September 1971. Irrigated to agencies responsible for plant certification at Oregon State, Washington State, Michigan State, and Purdue Universities. This cultivar was obtained by mutation breeding from vegetatively propagated Mitcham. Todd's Mitcham was identified as Selection 58 in the breeding program.

A detailed account of the mutation breeding methods and screening procedures used in obtaining the Verticillum wilt-resistant Todd's Mitcham has been published by Murray,\textsuperscript{4} M. J. Mitchell peppermint stolons irradiated in 1955-59 with X rays and neutrons at Brookhaven National Laboratory produced 105,697 plants which were transplanted into a field heavily infested with \textit{Verticillium albo-atrum} var. \textit{menthei} Nelson. In this planting Verticillum wilt became more severe each year and the ensuing screening program reduced the approximately 6 million second-year plants to a 1% stand in the sixth year. The 58,224 non-wilt-infected selections were individually field tested, first as single plants, then in replicated 1.8 x 1.8-m plots and finally in 81-ha (2-acre) plots.

Three-year regional tests at Medaryville, Indiana; Corvallis, Oregon; and Prosser, Washington in cooperation with the Plant Science Research Division, ARS, USDA, and the Oregon and Washington State Agricultural Experiment Stations showed that established plantings of Todd's Mitcham have yields equal to the 'Mitcham' cultivar. Further, Todd's Mitcham produced an oil yield of 56 to 62 kg/ha (50-55 lb/acre) on the organic soil of Indiana under \textit{Verticillium} wilt conditions that resulted in a nearly complete crop failure of the Mitcham cultivar.

Organoleptic tests and gas chromatographic analyses have indicated that the oil of Todd's Mitcham is not qualitatively different from that of the Mitcham cultivar. The oil has been accepted for quality by several major U. S. peppermint oil users. Todd's Mitcham has been classified as \textit{Mentha piperita} by the FEMA Expert Panel and it has ruled that the oil is identical with Peppermint Oil already GRAS. Todd's Mitcham has a darker green herbage color, slightly smaller leaves, a more erect and less branched plant habit (especially in spaced plants on organic soil), and is 5 to 10 days earlier in plant maturity than the cultivar Mitcham.

A limited amount of planting stock for grower increase can be obtained from Oregon State Seed and Plant Certification Board, Oregon State University, College of Agriculture, extension Center, Prosser, WA. 99350; Washington State Dept. of Agriculture, Yakima, WA. 99501; Purdue University, Lafayette, IN. 47907, or Michigan State University, East Lansing, MI. 48823.

\textsuperscript{1}Registered by the Crop Science Society of America. Received Nov. 15, 1971.
\textsuperscript{2}Director of Plant Research and Vice-President respectively, A. M. Todd Company, Kalamazoo, Mich. 49005.

REGISTRATION OF TIFLATE PEARL MILLET\textsuperscript{1}  
(Reg. No. 25)  
Glenn W. Burton\textsuperscript{2}

'Tiflate' pearl millet, \textit{Pennisetum typhoides}, was released in March 1969 by the Georgia Agriculture Experiment Station and Plant Science Research Division, Agricultural Research Service, U. S. Department of Agriculture. It is an advanced generation synthetic variety developed by blending together 54 millet intro-ductions from West Africa that bred true for short-day photoperiod sensitivity. These introductions were first intercrossed in a greenhouse at Tifton, Georgia, and were carried through additional generations of natural intersection on the Federal Experiment Station, Mayaguez, Puerto Rico.

Tiflate is highly heterozygous and expresses a wide diversity of plant, head and seed types. It has been intentionally kept in a highly heterogeneous performance. It is uniform to the extent that all plants remain vegetative until the day length is 12 hours or less. (The short-day introductions used in developing Tiflate pearl millet required a day length of approximately 12 hours or less to induce the formation of seed head primordia.) At Tifton, Tiflate will not head until October or early November when planted from April to August. When not grazed or cut, April and August plantings may reach respective heights of 15 and 5 feet at maturity. Most plants of Tiflate have persistent leaves. Seeds of Tiflate are variable in size and are larger than seeds of Gahi-1.

When compared with 'Gahi-1' or similar day neutral hybrids, Tiflate remains vegetative much longer, supplies more months of grazing and gives a more uniform seasonal production of forage. Because it does not head until fall, Tiflate is much easier to manage than day neutral types. Tiflate gives a much higher single-cut yield at the boot stage for silage and will produce more accumulated green forage for fall grazing than day neutral types. In grazing trials at Tifton, where grazing has usually been terminated early to permit planting winter grazing crops, the same land, Tiflate and Gahi-1 pearl millets have given similar average daily gains and liveweight gains per acre. When clipped frequently, Tiflate has generally produced less dry matter than Gahi-1, but its dry matter has contained a higher percentage of live matter and has been higher in vitro dry matter digestibility. Tiflate is more disease resistant than most day-neutral pearl millets. Like other millets, it is free of cyanogenic glucosides.

Tiflate is widely adapted and should do well wherever other pearl millet varieties are successful. Because of its short-day photoperiod sensitivity, Tiflate will not mature seed before December, regardless of the date planted in the U. S. Thus, only the southern tips of Florida and Texas can mature seed before frost. Preliminary studies suggest that September plantings will produce mature plants 5 to 6 feet tall in these areas with seed yields ranging from 600 to more than 2000 pounds per acre.

The Georgia Coastal Plain Experiment Station maintains breeder seed.

\textsuperscript{1}Registered by the Crop Science Society of America. Received Nov. 5, 1971. Cooperative investigations of the Plant Science Research Division, Agricultural Research Service, U. S. Department of Agriculture, and the University of Georgia, College of Agriculture Experiment Stations, Coastal Plain Station, Tifton.  
\textsuperscript{2}Director of Plant Science Research Division, ARS, USDA, and the University of Georgia, College of Agriculture Experiment Station, Coastal Plain Station, Tifton. The assistance of D. K. Barnes, Research Geneticist, Plant Science Research Division, ARS, USDA, and F. R. Miller, Research Associate, Texas Agriculture Experiment Sta., College Station, in producing seed at the Federal Experiment Station, Mayaguez, P. R. is gratefully acknowledged.

REGISTRATION OF REMONT SAINFOIN\textsuperscript{1}  
(Reg. No. 13)  
A. E. Carlton and R. H. Delaney\textsuperscript{2}

'Remont' sainfoin, \textit{Onobrychis viciaefolia} Soop., was released in 1971 by the Montana Agricultural Experiment Station. Prior to release Remont was tested under the designations of Montana Synthetic and Regrowth.

\textsuperscript{1}Registered by the Crop Science Society of America. Published with approval of the Director of the Montana Agricultural Experiment Station as paper No. 284 Journal Series. Received Sept. 24, 1971.  
\textsuperscript{2}Associate Professor and Research Assistant respectively, Montana Agricultural Experiment Station, Plant and Soil Science Department, Montana State University, Bozeman, Montana.