

Dr. Yakov N. Demurin

Yakov Demurin graduated in Biological Sciences at the Kuban State University, Krasnodar, Russia in 1982. This year he joined the Research Institute of Oil Crops (VNIIMK) as a sunflower geneticist. He received both of a PhD in 1988 and a Doctor of biological sciences degree in genetics and breeding of sunflower in 2000 from the Vavilov's Institute of Plant Industry (VIR), St. Petersburg. From 1990 up to now, he has been engaged as a head of the genetics laboratory of VNIIMK. He also serves as a professor at the Kuban State University. In 2008 he gained the academic rank of professor in genetics from Russian ministry of education and sciences.

For the first time in the plant kingdom, Dr. Demurin discovered and investigated two separate genes controlling tocopherol composition in sunflower seeds. The recessive mutant alleles were incorporated in breeding lines and hybrids with increased oxidative stability of the oil. This achievement has initiated new directions of the research worldwide. He also worked out an original hypothesis of incomplete penetrance of a high oleic mutation caused by genetic suppressor. He took part in the international research programs on biochemical genetics of tocopherols, e.g. at IFVC, Novi Sad, Serbia and at ICRISAT, Patancheru, India. At present Dr. Demurin with his team of PhD students have developed firstly in Russia elite VNIIMK lines and hybrids with resistance to imidazolinones and sulfonylureas, high palmitic and stearic acid content in the seeds and low level of free fatty acids in the oil.

Dr. Demurin has authored 120 scientific papers (25 in English) and developed more than 200 (10 patented) inbred lines included in the genetic collection of VNIIMK. His most important applied contribution is the development of novel oil types with high oxidative stability due to the change of tocopherol composition targeted to specific food and non-food oil applications.