Federal Agency for Scientific Organizations (FASO Russia)
Federal State Scientific Institution
«Federal Research Centre N.I. Vavilov All-Russian Institute
of Plant Genetic Resources»

Genetic Resources of Winterfat

Krascheninnikovia Gueldenst.

Saint Petersburg
2018

Dzyubenko, Nikolay I. Genetic Resources of winterfat *Krascheninnikovia* Gueldenst / Nikolay I. Dzyubenko, Yuri D. Soskov, Albina A. Kochegina ; editors doctor biol. sci. E.A. Sokolova, cand. biol.sci. I. G. Chuhina. – SPb. : VIR, 2018. 168 p.

ISBN 978-5-905954-66-5

Using the classical geographic and morphological method of taxonomy with additions made by the authors, the monograph presents taxonomic study of the polymorphic North American-Eurasian genus *Krascheninnikovia* Gueldenst. A description of species, sections, and series is given. Particular attention is paid to the economically important for the selection in our country species of this valuable unique fodder and phytomeliorative plant winterfat *Krascheninnikovia ceratoides* (L.) Gueldenst. and *Krascheninnikovia ewersmanniana* (Borszcz.) Grub.

Based on the principles of eco typical selection, a methodology for identifying intraspecific winterfat taxa has been developed. The GIS map of the zone of the growth of the winterfat common, made according to herbarium specimens and literary sources, is included in the book. Besides, areas of all kinds are represented.

The results of a 90-year study of the genetic resources of these two most drought and salt tolerant species of arid and semi-arid perennial fodder rainfed half-shrubs which successfully used for the restoration of degraded pasture phytocenoses are generalized. Their agrobiological and phytomeliorative properties are described, as well as biogeocoenotic technologies for the use of winterfat in polycomponent agrophytocenoses. The history of the introduction of these species into culture is considered. A description of the five varieties created in Russia and the CIS countries is given. For the first time, data are presented for a 20-year study of samples of the winterfat collection in the conditions of the Aral Sea Experimental Station of VIR. Replenishment of the collection continues in our time. Recently discovered biologically active compounds open wide prospects for its use in veterinary medicine and medicine.

The book is addressed to resource scientists, geneticists, breeders, environmentalists, teachers and students of biological and agricultural higher education institutions, farmers and agricultural and forestry specialists.

On the front cover: *Krascheninnikovia ceratoides* in Almatinski region of Kazakhstan. Photo by N.I. Dzyubenko, 2003.

On the flyleaf: area map of winterfat *Krascheninnikovia ceratoide*s on the territory of Russia and CIS countries, the authors Dziubenko N.I., Dziubenko E.A., published in the electronic edition «Interactive Agricultural Ecological Atlas of Russia and neighboring countries: economic significant plants and their diseases, pests and weeds», 2004. www.agroatlas.ru

ISBN 978-5-905954-66-5

DOI 10.30901/978-5-905954-66-5

CONTENTS