

CONTENTS

Physics, Biophysics and Ecology of soils

Impact of polymer gels «Ritin-10» and «V-415 K» on water supply of cereal crops under soil drought conditions	
Danilova T. N.	1

Assessment of relationships between hydrothermic indicators and enzymatic activity of chernozems of Rostov region under various soil management	
Minnikova T. V., Mokrikov G. V., Kazeev K. Sh., Akimenko Yu. V., Kolesnikov S. I.	9

Physical, physiological and genetic basis for biological productivity of soil-plant complexes under natural and controlled conditions

Features of the influence of nanopowders of iron, cobalt and their mixture on yield and biochemical parameters of sunflower «Donskoy 22»	
Nazarova A. A.	18

Mathematical modeling of processes in the agro-industrial complex and management problems

The structure of production processes in the agrotechnical decision support system	
Konev A. V., Lomakin V. S., Matveenko D. A., Yakushev V. V.	24

Physical and full-scale modeling of processes in agroecological systems

Saturated hydraulic conductivity of soils: experimental definitions and calculation by means of pedotransfer functions	
Mady A. I., Shein E. V.	37

Parameterization of the aquacrop model for simulating crop growth and development of rapeseed in the Leningrad region	
Maksenkova I. L., Dobrokhotov A. L., Kozyreva L. V.	45

Chronicles

Development of modelling with application of the theory and methods of similarity in agrophysics	
Uskov I. B., Moiseev K. G.	53

Anniversary

Yurii Gaikazovich Zakhryan – 65	64
--	----

Guidelines for authors	65
------------------------	----