CONTENTS

Physics, biophysics and ecology of soils

Anti-deflation resistance assessment models for arable sand and loamy sand soils of Belarus
Tsyrybka V. B., Ustsinava H. M., Logachev I. A. 1

Comprehensive assessment of physical parameters for agrogenic permafrost meadow-black soil of Central Yakutia
Chevychelov A. P., Zakharova O. G., Alexeev A. A. 7

Hydrophysical properties of substrates for green roofs
Korytina M. A., Goncharov V. M., Sayanov A. A. 14

Physics of the active layer of the atmosphere, agrometeorology and agroclimatology

Hail processes and their damage to agricultural crops in the Krasnodar region
Liev K. B., Gekkieva J. M. 21

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

Parameters of ecological plasticity and stability of sunflower in changing hydrothermal coefficient conditions
Ivanova O. M., Vetrova S. V. 26

Precision agriculture – crop production based on information technologies

Digital medium-scale mapping of organic carbon content in soils of the island Kungur Forest-steppe using the Random Forest algorithm
Chashchin A. N., Alyoshin M. A. 33

Diagnostics of nutrient availability for corn crop based on ground monitoring and remote sensing in the conditions of the Yenisei region of Siberia
Belousova E. N., Belousov A. A., Demyanenko T. N., Trubnikov Yu. N., Krasnoshchekov K. V., Dergunov A. V. 42

Physico-agronomical basis for management of crop production processes, amelioration and soil protection

Evaluation of effectiveness of mineral fertilizers and organic manures for barley on sod-podzolic sandy loam soil
Zavalin A. A., Shmyreva N. Ya. 50

Soil moisture supply when adopting no-till technology in a changing climate in south-eastern part of the Central Chernozem region
Kalinichenko R. V., Bolotov A. G., Garmashov V. M. 56

Content of total and mobile (available) forms of trace elements in southern chernozem depending on agricultural land use
Klipakova Yu. A., Chebanova Yu. A., Korotkaya I. A., Denisova E. M. 63

Dragavtsev Victor Aleksandrovich. Obituary 70