

CONTENTS

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

Studying the features of morpho-physiological parameters of plants of spring wheat varieties in the early stages of ontogenesis in relationship with yield and productivity

Marchenkova L. A., Davydova N. V., Pavlova O. V., Chavdar R. F., Orlova T. G., Shirokolava A. V.

1

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

Kinetics of cation displacement from sod-podzolic soils and their depositing ability as a criterion of soils acid-base state

Baibekov R. F., Belopukhov S. L., Savich V. I., Gukalov V. V., Sunyaeva O. I.

9

Influence of tillage on productive moisture reserves in agrochernozem of Krasnoyarsk forest-steppe

Belousova E. N., Belousov A. A.

14

Features of colorado potato beetle spatial placement in potato plantings

Smuk V. V., Shpanev A. M.

21

Influence of crop rotations and fertilizer systems on structural state of soddy-podzolic soils with different erosion levels

Tsybulka M. M., Tsyribko V. B., Logachov I. A.

30

Precision agriculture and livestock management – new technologies in agriculture based on information technologies

Determining the state of drainage systems using data of remote sensing in the North-West region of the Russian Federation

Petrushin A. F., Yanko Yu. G., Mitrofanova O. A., Mitrofanov E. P.

39

Physical properties of agricultural materials

Photoluminescent properties of potato starch

Belyakov M. V.

45

Polymer gels in vegetables

Yanchenko A. V., Fedosov A. Yu., Men'shikh A. M.

52

Manufacturing technology, structural and mechanical properties of a new composite agricultural material «chitosan-titanium dioxide»

Melnikova A. A., Baikin A. S., Mikhailova A. V., Kaplan M. A., Nasakina E. O., Sergienko K. V., Konushkin S. V., Sevostyanova E. P., Stepanova E. V., Zhelezova S. V., Glinushkin A. P., Sevostyanov M. A.

63