

Contents

Vol. 38, No. 1, 2012

A simultaneous English language translation of this journal is available from Allerton Press, Inc.
Distributed worldwide by Springer. *Russian Agricultural Sciences* ISSN 1068-3674.

Plant Industry

Theoretical Basis of Optimal Choice of Crop Varieties

V. P. Yakushev, V. M. Bure, V. V. Yakushev, and A. V. Bure

1

Resource-Conserving and Zero-Waste Principles of Technologies for Producing
Liquid-Phase Biosubstances

N. G. Kovalev, G. Yu. Rabinovich, and N. V. Fomicheva

4

Winter and Spring Wheat Yield Depending on Type of Crop Rotations and Forecrops
in the Arid Steppe of the Volga Region

*Yu. F. Kurdyukov, L. P. Loshchinina, Zh. P. Popova, G. V. Shubitidze, F. P. Kuz'michev,
and M. V. Tret'yakov*

8

Growth and Yield Response of Wheat (*Triticum aestivum* L.) to Phosphobacterial Inoculation

Asmat Ullah Malik, Abdul Latif Malghani, and Fiaz Hussain

11

Postmodern Management of Starchy Grains for Ruminants: a Barley Grain Perspective

A. Nikkhah

14

Effect of Type of Sterile Cytoplasm on Manifestation of Economically Valuable Traits
in Sorghum–Sudangrass Hybrids

O. P. Kibal'nik and L. A. El'konin

22

Distinguishing and Identifying Tomato Varieties by Microsatellite Analysis

O. S. Kolobova, N. S. Velishaeva, I. A. Shilov, and P. N. Kharchenko

26

Effect of Copper on Formation of Green Mass and Nutritional Qualities of Broad Beans

L. I. Goncharova, P. N. Tsygintsev, O. S. Gubareva, K. V. Manin, and T. V. Chizh

30

Plant Protection

Screening of Parent Material for Breeding Oat Varieties Resistant to *Fusarium* Disease
and Accumulation of Mycotoxins in Grain

O. P. Gavrilova, T. Yu. Gagkaeva, and I. G. Loskutov

33

Agrochemistry. Pedology

Regularities of Intrafield Variability of Soil Fertility Indices

R. A. Afanas'ev

36

Mobility of Soil Water-Soluble Organic Matter during Rice Cultivation

O. A. Gutorova, A. Kh. Sheudzhen, and A. G. Ladatko[†]

40

Transformation and Dynamics of Active Components in Humus of Leached
Chernozems under Various Anthropogenic Loads

A. I. Gromovik

43

Animal Husbandry

Mechanism of the Relation between the Content of Nitro and Nitroso Compounds
in Amnion and Allantois of Chicken Embryos and Rate of Posthatch Chick Growth

V. Yu. Titov, N. S. Akimova, V. I. Fisinin, and A. V. Ivanova

47

Hemostatic Activity of Vascular Wall of Newborn Calves

S. Yu. Zavalishina

51

Adaptation and Productivity of Cattle of Different Ecogenesis

B. P. Mokhov, A. A. Malyshev, and E. P. Shabalina

55

Veterinary Science

Use of Therapeutic–Prophylactic Immunoglobulin to Prevent Immunodeficiency in Animals

S. Yu. Smolentsev and K. Kh. Papunidi

58

Etiology and Possibility of Correcting the Mastitis–Metritis–Agalactia Syndrome in Sows

V. P. Degtyarev, K. V. Leonov, A. M. Ermakov, E. P. Kareva, and M. A. Aksenov

62

Identification and Differentiation of Rift Valley Virus Strains by the Polymerase Chain Reaction Method and Restriction Analysis

N. N. Vlasova, V. I. Balyshева, N. I. Zakutskii, I. Yu. Khukhorova, S. D. Kushnir, O. V. Kapustina, and A. N. Zhukov

65

Ecology

Modernized Technology for Processing Liquid Waste of Agroindustrial Complex Enterprises

A. A. Denisov, A. A. Kadyseva, and I. M. Kalistratov

69

Storage and Processing of Agricultural Products

Effect of Electromagnetic Radiation of the Extremely High Frequency Millimeter Range on Technological Properties of Milk

S. V. Larionov, D. V. Krivenko, and A. V. Avdeenko

72

Mechanization

Results of Experiments to Develop Technology and Machines for Producing Plant Industry Products under Drought Conditions

N. K. Mazitov, R. L. Sakhapov, R. S. Rakhimov, Yu. B. Chetyrkin, F. M. Sadriev, S. Yu. Dmitriev, and N. E. Garipov

75
