

Contents

Vol. 39, No. 5–6, 2013

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 Cultivation

- Study on the Strength of Straw in Rye (*Secale cereale* L.) with the Use of the Method of the Dynamic Mechanical Analysis
A. A. Konovalov, I. K. Shundrina, V. I. Mamatyuk, and N. P. Goncharov 385
- Analysis of Gluten-Hydrolyzing Proteinase Polymorphism in Wheat Grains Damaged by Sunn Pest *Eurygaster integriceps* Put. and Related Bugs
Al. V. Konarev, A. V. Konarev, L. I. Nefedova, N. K. Gubareva, and D. Sivri Ozay 390
- Regression Analysis of Plasticity and Phenotypic Stability of Hybrid Spring Soft Wheat Populations with Respect to Gluten Quality
V. M. Bebyakin, T. A. Rozanova, and L. N. Zlobina 396
- Problems of Breeding Triticale with a High Grain Starch Content and Its Use
A. I. Grabovets, N. R. Andreev, A. V. Krokmal', and N. A. Shevchenko 399
- Estimation of Spring Wheat Varieties in Terms of Yield and Adaptability Parameters
V. A. Sapega and G. Sh. Tursumbekova 403
- Breeding Agricultural Techniques as a Factor of Realization of Genetic Potential of Corn Hybrids
V. N. Bagrintseva 409
- Features of the Production Process in Extensive and Intensive Rice Varieties
N. V. Vorob'yov, M. A. Skazhennik, A. Kh. Sheudzen, and V. C. Kovalyov 412
- Influence of Sowing Period on Oat Seed Longevity
G. A. Batalova and L. A. Gorbunova 415
- Peculiar Properties of Glucosinolate Accumulation in the *Brassicaceae* Family
A. E. Solov'yeva, A. M. Artem'yeva, and W. Schuetze 419
- Study on Inheritance of Mildew Resistance (*Podosphaera leucotrica* (Ell. Everh.) Salm. in Progenies of Apple Varieties of Different Crown Type
N. I. Savel'yev and N. N. Savel'yeva 423
- Effective Techniques Increasing the Survival Rate of Apple and Quince Cuttings in the First Field of a Nursery Garden
B. S. Gegechkori, S. Yu. Orlenko, and A. P. Zadorozhny 426
- Polymorphism of Storage Proteins in Accessions of Pea Wild Taxa
T. N. Selikhova and S. V. Bobkov 428
- Transgenic Crysanthemum Plants Transformed with the Gene Encoding for the Virus B Coat Protein
T. Yu. Mitiouchkina, A. P. Firsov, and S. V. Dolgov 431
-

Plant Protection

- Protection of Cereals from Dicotyledonous Weeds by the New Herbicide Bomba
T. A. Makhankova, A. S. Golubev, V. G. Chernukha, and V. I. Dolzhenko 435
- Kinetin Induces the Resistance of Wheat *Triticum* L. to Leaf Rust *Puccinia triticina* Erikss
L. G. Tyryshkin 440
-

Ecology

- Application of Growth-promoting Rhizosphere Bacterium for Remediation of Pb-contaminated Gray Forest Soil
V. P. Shabayev and V. E. Ostroumov 443
- Probabilistic Approach to Sanitation and Hygiene Standards for Content of Pollutants in Soil
S. I. Spiridonov, V. S. Anisimov, and K. I. Odintsov 447
-

Agrochemistry. Soil Science

- Winter Wheat Productivity under Various Meteorological and Phytosanitary Conditions with the Use of Macro- and Microfertilizers
G. N. Cherkasov, N. S. Sokorev, M. Yu. Degteva, A. N. Voronin, and A. S. Poddubny 451
-

Soil Science

- Change in Aggregate Composition of Ordinary Chernozem during Application of Organo-mineral Compost
I. S. Belyuchenko and D. A. Slavgorodskaya 455
-

Agrochemistry. Soil Science

- Interaction of Lime and Gypsum with Sorption Complex of Acidic Soils
V. V. Okorkov and L. A. Okorkova 459
- Effect of Global Warming on Soil Salinity of the Arid Regions
Ye. I. Pankova and M. V. Konyushkova 464
-

Microbiology

- Bioindication Monitoring of the State of Fallow Lands
G. Yu. Rabinovich, Yu. I. Mitrofanov, V. A. Kotelnikov, and D. V. Tikhomirova 468
- Production and Use of Biofertilizer Based on Poultry Droppings
A. A. Ivanov, L. E. Matrosova, and M. Ya. Tremasov 471
-

Agriculture

- Energy and Resource Conservation in the Grain Corn Cultivation on Irrigated Lands
P. I. Kuznetsov and A. E. Novikov 474
- Ameliorative Treatment of Low-Fertility Soils
L. V. Berezin and A. M. Gindemit 479
-

Melioration

- Dependence of the Growth Force in Pear Seedlings on a Moistening Regime under Drip Irrigation
N. N. Dubenok and E. V. Eremin 484
- Improvement of Drop Irrigation Efficiency on Light-Textured and Semidesertic Soils
L. V. Kireycheva, A. V. Shuravilin, and Tabuk Musallam Akhmed 488
-

Animal Husbandry

- Special Traits of the Age Dynamics of Milk Productivity in Dairy Cows in Relation to Their Viability
G. G. Cherepanov, N. A. Bogdanova, and Z. N. Makar 492
- Evaluating the Efficiency of Using Farmasol P(S)-Z Preparation in the Diet of Dairy Cows
A. A. Aliev, Z. M. Dzhabulatov, and E. R. Nagiev 496
- Content of Macro- and Trace Elements in the Liver of Pigs of Precocious Meat Breed (CM-1) and Their Correlations with the Level of Free Amino Acids in Blood Serum
O. A. Zayko, O. S. Korotkevich, and V. L. Petukhov 499
- Nitric Oxide Metabolism in Poultry Embryo Tissue
V. Yu. Titov, O. V. Kosenko, N. S. Akimova, and V. I. Fisinin 503
- Influence of Complex of Biologically Active Compounds on Lipid Peroxidation in Sable under Heat Stress
I. I. Kochish, V. A. Lukicheva, E. Yu. Penschina, A. N. Timonin, and K. M. Mironov 507
- Method for Testing Water Absorption and Water-Absorbing Capacity of the Body of Bees
V. V. Kalinikhin and L. V. Efimova 509
-

Veterinary Science

- Structure of Genes Coding the Envelope Proteins of the Avian Influenza A Virus and Bovine Leucosis Virus
V. I. Glazko and G. Yu. Kosovsky 511
-

Animal Husbandry

- Efficacy of a Trivalent Inactivated Vaccine against Bluetongue in both Cattle and Small Ruminants
V. I. Balysheva, E. A. Nesterov, A. V. Lunitsin, S. P. Zhivoderov, T. F. Gorshkova, O. G. Lapteva, V. M. Balyshev, and D. V. Kolbasov 516
-

Veterinary Science

- Efficient Molecular and Genetic Technique for Identification of Salmonella and Proteus Strains
V. P. Terletskiy, V. I. Tyshchenko, O. B. Novikova, A. N. Borisenkova, D. E. Belash, and A. F. Yakovlev 519
-

Modeling

- Soil Water Retention Curves Based on Idealized Models
V. A. Sysuev, I. I. Maksimov, V. V. Alekseev, and V. I. Maksimov 522

Mathematical Modeling of the Process of Convective Drying of Skim Milk Using an Electric Field

N. S. Nikolaev, M. Ya. Burlev, and M. A. Uryupin

526

Methodology

Methodology of Forecasting Variations in Cereal Crops in Agroforestral Landscape Due to Climate Instability

Yu. I. Vasiliev, T. V. Voloshenkova, and N. N. Ovechko

529

Optimal Time Interval for Conducting Agrotechnical Measures

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

533

Description of Biological Objects Using Digital Photographs and Computer Equipment (with the example of fish)

V. M. Simonov and A. V. Poddubnaya

537

Nanotechnology

Farm Crop Waste as a Promising Resource for Forming Carbon Nanotubes

D. V. Onishchenko, V. P. Reva, and B. A. Voronov

540
