

# **International Scientific and Practical Conference**

# **"Fundamental and Applied Research in Biology and Agriculture: Current Issues, Achievements and Innovations"**

# **(FABRA 2021)**

E3S Web of Conferences Volume 254

Orel, Russia

24-25 February 2021

Part 1 of 2

## **Editors:**

**Sergey Knyazev  
Olga Loretts  
Viktor Kukhar**

**Olga Panfilova  
Mikhail Tsoy**

ISBN: 978-1-7138-2986-7

**Printed from e-media with permission by:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571



**Some format issues inherent in the e-media version may also appear in this print version.**

This work is licensed under a Creative Commons Attribution 4.0 International License. License details:  
<http://creativecommons.org/licenses/by/4.0/>.

No changes have been made to the content of these proceedings. There may be changes to pagination and minor adjustments for aesthetics.

Printed with permission by Curran Associates, Inc. (2021)

For additional information, please contact EDP Sciences – Web of Conferences at the address below.

EDP Sciences – Web of Conferences  
17, Avenue du Hoggar  
Parc d'Activité de Courtabœuf  
BP 112  
F-91944 Les Ulis Cedex A  
France

Phone: +33 (0) 1 69 18 75 75  
Fax: +33 (0) 1 69 28 84 91

[contact-edps@webofconferences.org](mailto:contact-edps@webofconferences.org)

**Additional copies of this publication are available from:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571 USA  
Phone: 845-758-0400  
Fax: 845-758-2633  
Email: [curran@proceedings.com](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

## TABLE OF CONTENTS

### PART 1

THE PRODUCTIVITY POTENTIAL OF BLACK CHERRY VARIETIES WHEN GROWING IN THE ARID ZONE .....	1
<i>Ivanenko E. N., Menshutina T. V.</i>	
THE USE OF THE 'HEINEMANNS ROTE SPATLESE' VARIETY AS THE INITIAL FORM IN THE RIBES RUBRUM SELECTION .....	7
<i>Golyaeva Olga, Panfilova Olga</i>	
FEATURES OF THE PASSAGE OF MAIN PHENOLOGICAL PHASES OF COMMON CHERRY CULTIVARS IN THE CONDITIONS OF THE OREL REGION .....	14
<i>Efremov Igor, Gulyaeva Alexandra, Knyazev Sergey, Berlova Tatyana, Gal'Kova Anna</i>	
EVALUATION OF ECONOMICALLY VALUABLE TRAITS OF THE COLUMNAR VARIETY POESIA AND THE PROSPECTS OF ITS USE IN BREEDING.....	21
<i>Korneeva S. A., Sedov E. N., Yanchuk T. V.</i>	
STUDY OF FROST RESISTANCE AND DROUGHT RESISTANCE OF APPLE TREE VARIETIES OF VNIISPK BREEDING ON CLONAL ROOTSTOCK 54–118 .....	28
<i>Galasheva Anna, Krasova Nina</i>	
MANIFESTATION FEATURES OF THE PRODUCTIVITY POTENTIAL OF SALVIA OFFICINALIS L. IN THE CONDITIONS OF THE CRIMEA FOOTHILLS .....	36
<i>Nevkrytaya Natalia, Novikov Ilja, Soboleva Elena, Kashirina Natalia, Radchenko Ludmila</i>	
ASSOCIATION OF LEP GENE POLYMORPHISM WITH BIOCHEMICAL PARAMETERS OF LIPID METABOLISM AND MILK PRODUCTIVITY OF HOLSTEIN CATTLE.....	43
<i>Safina Natalia, Sharafutdinov Gazimzyan, Akhmetov Tahir, Ravilov Rustam, Vafin Fanil</i>	
RESEARCH AND RESTOCKING OF WHEAT VARIETIES TO PATHOGENS OF ESPECIALLY DANGEROUS FUNGAL DISEASES .....	49
<i>Zeleneva Yu. V., Sudnikova V. P.</i>	
THE DIVERSITY OF BLACKBERRY HABITUS AND ITS SIGNIFICANCE FOR CULTIVARS' GROWING IN THE CONDITIONS OF CENTRAL RUSSIA .....	56
<i>Gruner Lidia, Kornilov Boris</i>	
PROMISING DIRECTIONS IN THE SELECTION OF PEACH, APRICOT AND NECTARINE .....	64
<i>Smykov Anatoly, Shoferistov Evgeny, Korzin Vadim, Mesyats Natalya, Saplev Nikita</i>	
SELECTION OF THE SOURCE MATERIAL FOR THE CREATION OF BLACK CURRANT VARIETIES WITH COMPLEX RESISTANCE TO DISEASES AND PESTS .....	71
<i>Bakhotskaya Annastasiya, Knyazev Sergey</i>	
RESEARCH OF 5 EXTRACTS OF WILD AMUR GRAPE VITIS AMURENSIS RUPR. AND IDENTIFICATION OF ITS POLYPHENOLIC COMPOSITION BY TANDEM MASS SPECTROMETRY (HPLC-MS / MS).....	78
<i>Razgonova Mayya P., Zakharenko Alexander M., Derbush Irina V., Sabitov Andrey S., Golokhvast Kirill S.</i>	

USE OF GROSSULARIA ROBUSTA GOOSEBERRY SPECIES IN BREEDING.....	91
<i>Kurashev Oleg, Titova Yulia</i>	
FORMATION AND EVALUATION OF THE GENEFUND OF SUBTROPICAL CULTURES IN THE NIKITA BOTANICAL GARDENS.....	98
<i>Khokhlov Sergey, Tsiupka Sergei, Panyushkina Evgeniya, Kharchenko Anton, Melnikov Vladimir</i>	
DROUGHT RESISTANCE OF APPLE TREE AND RASPBERRY VARIETIES AND FORMS PROMISING FOR THE CRIMEA REGION .....	105
<i>Arifova Z. I., Chelebiev E. F., Smykov A. V., Khalilov E. S., Uskov M. K.</i>	
THE QUALITY OF BERRIES OF PROMISING BLACKBERRY VARIETIES IN THE CONDITIONS OF THE TAMBOV REGION.....	111
<i>Bryksin D. M., Kolesnikov S. A.</i>	
RESISTANCE OF WINTER SOFT WHEAT VARIETIES TO LEAF AND YELLOW RUST IN THE CONDITIONS OF THE CENTRAL CHERNOZEM REGION OF RUSSIA .....	118
<i>Zeleneva Yuliya V., Shaydayuk Ekaterina L.</i>	
COMPARATIVE MORPHOLOGICAL AND ANATOMICAL STUDY OF PRIMULA MACROCALIX BGE. AND PRIMULA SIBTHORPII HOFFM. LEAVES GROWING IN DAGESTAN .....	124
<i>Cheryatova Yulya, Arnautova Galina</i>	
SOME ASPECTS OF RASPBERRY BREEDING WITH PREDOMINANT FRUITING ON ANNUAL SHOOTS.....	130
<i>Evdokimenko Sergey, Kulikov Ivan, Podgaetsky Maxim</i>	
EVALUATION OF THE BREEDING AND GENETIC POTENTIAL OF STRAWBERRY VARIETIES AND HYBRIDS BASED ON ECONOMICALLY VALUABLE TRAITS.....	139
<i>Lapshin V. I., Yakovenko V. V., Shcheglov S. N.</i>	
NEW STUDIES OF WILD-GROWING GRAPES OF KUBAN: ECOLOGY, MORPHOLOGY, VARIABILITY .....	146
<i>Gorbunov I. V., Lukyanov A. A.</i>	
INITIAL MATERIAL FOR BREEDING DROUGHT-RESISTANT VARIETIES OF SPRING BARLEY IN THE CONDITIONS OF THE VOLGA-VYATKA REGION .....	153
<i>Zaytseva I. Yu., Mamaeva L. V., Shchennikova I. N., Kokina L. P., Dyagileva E. V.</i>	
GENETIC RESOURCES ARE THE BASE FOR IMPROVING THE ASSORTMENT OF SWEET CHERRY AND LARGE FRUIT CHERRY PLUM .....	162
<i>Gorina Valentina, Lukicheva Lyubov, Grigoriev Aleksander, Chernen'Ky Leonid, Sokolovskaya Janna</i>	
MANAGEMENT OF WALNUT GENETIC RESOURCES TO IMPROVE THE EFFICIENCY OF THE BREEDING PROCESS IN THE SOUTH OF RUSSIA.....	172
<i>Balapanov Ilnur, Artykhova Larisa</i>	
ASSESSMENT OF THE PRODUCTIVE POTENTIAL AND QUALITY OF PEAR FRUITS OF DIFFERENT RIPENING PERIODS, GROWN IN THE SOUTH OF RUSSIA .....	179
<i>Prichko T. G., Mozhar N. V., Drobicheva N. V.</i>	
GENETIC RESOURCES OF THE GENUS MALUS AS THE BASIS FOR THE ACCELERATED CREATION OF DOMESTIC ADAPTIVE APPLE TREE VARIETIES .....	186
<i>Ulianovskaya Elena, Belenko Evgeniya</i>	

EFFICIENCY OF THE BREEDING USE OF THE GENUS PRUNUS L. BIODIVERSITY .....	193
<i>Zaremuk R. Sh., Dolya Yu. A., Kopnina T. A., Kochubey A. A.</i>	
THE SOURCE MATERIAL ESTIMATION OF EARLY-MATURING GROUP SOYBEANS BY ADAPTABILITY PARAMETERS .....	199
<i>Galichenko Anna, Fokina Evgeniya</i>	
CREATION OF NEW INITIAL FORMS OF BLACK CurrANT (RIBES NIGRUM L.) IN BREEDING FOR ADAPTATION .....	206
<i>Sazonov Fedor, Kulikov Ivan, Tumaeva Tatyana, Sazonova Irina</i>	
ELITE FORMS OF WILLOW-LEAFED PEAR PYRUS SALICIFOLIA PALL. IN THE STEPPE ZONE CONDITIONS OF THE SOUTHERN URALS AS A SEED ROOTSTOCK FOR PEAR.....	216
<i>Lokhova A. I., Feshchenko E. M.</i>	
GENETIC CONTROL OF THE NUMBER OF GRAINS ON CORN COB.....	226
<i>Zaitsev S. A., Volkov D. P., Guseva S. A., Babushkin D. D.</i>	
ANTIOXIDANT STATUS OF BARLEY SEEDLINGS UNDER CONDITIONS OF EXCESS MANGANESE .....	232
<i>Simonova Olga, Tovstik Evgenija, Simonov Maksim</i>	
USE OF APPLE TREE GENE POOL TO CREATE ADAPTIVE CULTIVARS WITH HIGH QUALITY FRUITS.....	240
<i>Krasova Nina, Ikase Laila, Dekena Dzintra, Galasheva Anna</i>	
POTENTIAL OF APPLE VARIETIES OF THE URAL-SIBERIAN AND FAR EASTERN GROUP FOR USE IN BREEDING FOR WINTER HARDINESS.....	252
<i>Saveleva Natalya, Yushkov Andrey, Zemisov Alexander, Borzykh Nadezhda, Chivilev Vladislav</i>	
DWARF VARIETIES AND ROOTSTOCKS - THE BASIS FOR CREATING INTENSIVE PEAR GARDENS IN CENTRAL RUSSIA .....	256
<i>Dolmatov Evgeny, Igor Semin</i>	
PROSPECTS FOR IMPROVING SWEET CHERRY ASSORTMENT IN THE CONDITIONS OF THE CENTRAL CHERNOZEM REGION .....	265
<i>Bogdanov R. E., Kruzhkov A. V., Yushkov A. N., Borzykh N. V., Kozaeva M. I.</i>	
THE STATE AND PROSPECTS OF USING CENTRAL RUSSIAN BEE COLONIES OF THE “ORLOVSKY” TYPE .....	275
<i>Grankin N. N., Bakina S. N., Tyapkina A. P., Fedyayeva T. V., Fomina E. A.</i>	
MORPHO-PHYSIOLOGICAL PARAMETERS OF WHEAT CULTIVAR FOR CULTIVATION ON ALUMINUM-ACID SOILS.....	281
<i>Volkova Lyudmila, Amunova Oksana, Lisitsyn Eugene</i>	
GENETIC SELECTION IMPROVEMENT OF THE STRAWBERRY ASSORTMENT IN THE CENTRAL BLACK EARTH REGION CONDITIONS.....	288
<i>Luk'Yanchuk Irina, Zhbanova Ekaterina, Zaitseva Ksenia, Lyzhin Alexander</i>	
COMPREHENSIVE ASSESSMENT OF RED CurrANT VARIETIES IN ALTAI.....	296
<i>Nazaryuk Nadezhda, Sorokopudov Vladimir, Sorokopudova Olga, Nigmatyanov Radmil</i>	
SOME RESULTS OF BREEDING IN THE GENUS RIBES L. IN THE ASIAN PART OF RUSSIA.....	302
<i>Sorokopudov Vladimir, Sorokopudova Olga, Nazaryuk Nadezhda, Nigmatyanov Radmil</i>	

SOURCE MATERIAL FOR QUINCE VARIETIES SELECTION WITH HIGH COMMERCIAL AND CONSUMER QUALITIES OF FRUITS IN THE KRYMSK EBS, VIR BRANCH GENE POOL .....	309
<i>Chepinoga Irina, Tikhonova Anna</i>	
GRAIN QUALITY AND ASSOCIATED CHARACTERISTICS AND PROPERTIES OF SPRING WHEAT OF CANADIAN BREEDING .....	315
<i>Rubets Valentina, Voronchikhina Irina, Pylnev Vladimir, Kotenko Yulia, Blinkov Andrey</i>	
PROMISING GARDEN PLUM VARIETIES OF KRYMSK EBS, VIR BRANCH BREEDING FOR PRUNES PRODUCTION .....	325
<i>Eremin Gennady, Tikhonova Anna, Gorelikova Olga</i>	
CULTIVATION OF PROSPECTIVE PLANT SEEDS FOR ALMATY CITY GREENING.....	332
<i>Seilkhan A., Dossymbetova S., Issabekova A., Kuspanova A., Kuandykova E.</i>	
STUDY OF THE WATER REGIME DYNAMICS OF CHERRY IN THE SUMMER PERIOD.....	338
<i>Ozherelieva Zoya, Lyakhova Anna</i>	
INITIAL AND POST-CRYOGENIC ASSESSMENT OF VIABILITY OF RUSSIAN PLUM CULTIVARS POLLEN (PRUNUS ROSSICA EREM.) IN THE CONDITIONS OF THE NORTH- WEST OF RUSSIA .....	346
<i>Radchenko O. E., Erastenkova M. V., Pavlov A. V., Verzhuk V. G.</i>	
SPECIES ABUNDANCE DISTRIBUTIONS: INVESTIGATION OF ADAPTATION MECHANISMS OF PLANT COMMUNITIES.....	352
<i>Ivanova Natalya, Petrova Irina</i>	
POSTHARVEST TREATMENTS WITH CALCIUM-BASED BIOACTIVATORS TO PRESERVE TABLE GRAPE QUALITY (VITIS VINIFERA L) CV. RED GLOBE DURING STORAGE .....	358
<i>Levchenko Svetlana, Boyko Vladimir, Belash Dmitriy, Cherviak Sofia, Romanov Alexander</i>	
EFFECT OF SELENITE-ION ON THE INTEGRITY OF WINTER RYE SEEDLINGS (SECALE CEREALE L.) MEMBRANES IN DROUGHT CONDITIONS .....	365
<i>Puzina Tamara, Makeeva Inna, Nedbaylo Alina</i>	
OPTIMIZATION OF THE ADAPTIVE MECHANISM OF SUBTROPICAL CROPS UNDER THE INFLUENCE OF INNOVATIVE FORMS OF FERTILIZERS .....	371
<i>Belous Oksana, Vasileyko Marina, Lagoshina Angelina, Platonova Natalia</i>	
ROLE OF ENZYME ACTIVITY IN INCREASING SOYBEAN PLANTS' RESISTANCE TO HERBICIDES .....	377
<i>Sinegovskaya Valentina, Dushko Oksana</i>	
BIOCHEMICAL MONITORING OF GENETIC COLLECTIONS OF STRAWBERRY IN NCFSCHVW AND CEBS .....	383
<i>Prichko T. G., Germanova M. G., Podorozhniy V. N.</i>	
USE OF SSR MARKERS TO STUDY GENETIC POLYMORPHISM IN MEMBERS OF THE RIBES L. GENUS FROM THE VNIISPK COLLECTION .....	392
<i>Pavlenko Anna, Dolzhikova Maria, Pikunova Anna, Bakhotskaya Annastasiya</i>	
THE INFLUENCE OF HYDROXYARYLS OF VARIOUS GENESIS ON THE GROWTH AND DEVELOPMENT OF WINTER WHEAT (TRITICUM AESTIVUM L.).....	400
<i>Konoshina Svetlana, Prudnikova Elena, Gorkov Alexey, Mikhaylova Yulia, Koneeva Oksana</i>	

EFFECT OF PROHEXADIONE CALCIUM ON VEGETATIVE GROWTH, YIELD AND SCAB DEVELOPMENT ON 'SINAP ORLOVSKII' APPLE TREES .....	405
<i>Kashirskaya Natalia, Kuzin Andrei, Kochkina Anna</i>	
STUDY OF FROST RESISTANCE OF GENERATIVE BUDS OF SCION/ ROOTSTOCK COMBINATIONS OF SWEET CHERRY BY FREEZING IN CONTROLLED CONDITIONS .....	413
<i>Upadysheva G. Yu., Motyleva S. M., Tumaeva T. A., Mertvischeva M. E., Upadyshev M. T.</i>	
FEATURES OF ADAPTATION OF PHOTOSYNTHESIS OF WINTER WHEAT PLANT LEAVES TO GROWING CONDITIONS.....	420
<i>Amelin A. V., Chekalin E. I., Zaikin V. V., Ikusov R. A.</i>	
ACCUMULATION OF ALKALOIDS IN PLANTS OF THE FAMILY BORAGINACEAE DEPENDING ON ENVIRONMENTAL CONDITIONS PLACES OF GROWTH.....	426
<i>Akhkubekova Amina A., Tamakhina Aida Ya.</i>	
WAYS TO INCREASE STRESS RESISTANCE OF GRAPES IN CONDITIONS OF MOISTURE DEFICIT.....	434
<i>Aleynikova Natalia, Galkina Yevgenia, Didenko Pavel, Zaripova Carina, Shaporenko Vladimir</i>	
PECULIARITIES OF YIELD FORMATION OF POTATO DEPENDING ON THE CLIMATE CONDITIONS OF THE WESTERN FOREST STEPPE OF UKRAINE.....	441
<i>Shuvar Ivan, Korpita Hanna, Balkovskiy Volodymyr, Shuvar Antin</i>	
EVALUATION OF COMMON QUINCE OF VNIISPK BREEDING AS PEAR SEEDLING ROOTSTOCK FOR FRUIT PRODUCTION IN CENTRAL RUSSIA.....	447
<i>Semin Igor, Dolmatov Evgeniy, Ozhereleyeva Zoya</i>	
FEATURES OF PHYSIOLOGICAL AND BIOCHEMICAL PROCESSES OF PRUNUS ARMENIACA AND FICUS CARICA IN WATER STRESS CONDITIONS .....	458
<i>Gubanova Tatiyana, Pilkevich Ruslana, Paliy Ivan, Grebennikova Oksana, Melkozeorova Ekaterina</i>	
GRAPES ADAPTIVE RESISTANCE TO SUMMER STRESSES IN THE CONDITIONS OF CLIMATE CHANGE.....	466
<i>Nenko Nataliya, Kiseleva Galina, Ilina Irina, Sokolova Viktoriya, Zaporozhets Natalia</i>	
INFLUENCE OF SEPTORIA GLYCINES HEMMI ON THE ENZYMES' ACTIVITY OF HYDROLYTIC GLYCINES MAX (L.) MERR SEED COMPLEX .....	473
<i>Martynenko Natalia, Lavrentieva Svetlana, Tarasova Olga</i>	
RESPONSE OF BLACK Currant PLANTS TO ABNORMALITIES IN WATER AND TEMPERATURE REGIME 2020.....	480
<i>Zhidyokhina Tatiana, Tsukanova Elena</i>	
STUDY OF THE ADAPTABILITY OF SCION-ROOTSTOCK COMBINATIONS OF PLUM TREE TO TEMPERATURE STRESSORS IN THE KRASNODAR TERRITORY .....	489
<i>Kuznetsova Anna, Dragavtseva Irina, Shcheglov Sergey, Drygina Anna, Klyukina Anna</i>	
ASSESSMENT OF THE SILICON COMPOUNDS EFFECT ON DISEASE RESISTANCE AND PRODUCTIVITY OF SPRING BARLEY WITH A DECREASE IN PESTICIDE LOAD IN THE SOUTH OF RUSSIA .....	497
<i>Slastyra Irina V., Khudyakova Elena V., Stepantsevich Marina N.</i>	

FEATURES OF MERCURY MIGRATION IN NATURAL OBJECTS OF TECHNOGENICALLY POLLUTED AREAS.....	505
<i>Kubareva Marina, Denisova Elena, Soloviev Anatoly, Smirnov Vadim</i>	
SUSTAINABILITY OF APPLE FRUITS CV. BERKUTOVSKOYE TO PHYSIOLOGICAL DISEASES UNDER DIFFERENT STORAGE TECHNOLOGIES.....	511
<i>Gudkovsky Vladimir, Kozhina Lyudmila, Nazarov Yuri, Sutormina Alena</i>	
IMPACT OF THE SOUTH RUSSIA WEATHER CONDITIONS ON THE FRUITFULNESS COEFFICIENTS OF DOMESTIC BREEDING GRAPE VARIETIES .....	520
<i>Marmorstein Anna, Petrov Valeriy, Lukyanov Aleksey, Lukyanova Anna, Kovalenko Aleksandr</i>	
DETERMINATION OF HEAVY METALS CONTENT IN TEA LEAVES AND PRODUCTS OF THEIR PROCESSING BY METHOD OF INVERSION VOLTAMMETRY .....	526
<i>Maharramova S. I.</i>	
IMPROVEMENT OF CULTIVATION TECHNOLOGY OF WINTER DURUM WHEAT IN THE CONDITIONS OF THE KABARDINO-BALKARIAN REPUBLIC .....	531
<i>Kishev A. Yu., Berbekov K. Z., Shibzukhova Z. S., Shibzukhov Z.-G. S., Mamsirov N. I.</i>	
EXPANSION OF THE GENETIC DIVERSITY OF COMMON SPRING WHEAT FOR RESISTANCE TO BIOTIC STRESS FACTORS AT THE CHELYABINSK RESEARCH INSTITUTE OF AGRICULTURE .....	539
<i>Kushnirenko Igor', Shreyder Ekaterina, Shaydayuk Ekaterina, Kovalenko Nadezhda, Gulyaeva Elena</i>	
MARKER-ASSISTED SCREENING OF PROMISING FORMS IN THE STRAWBERRY BREEDING.....	544
<i>Lyzhin Alexander, Luk'Yanchuk Irina</i>	
IMMUNOGENIC BREEDING PROGRAM. STAGE I-PHYTOPATHOLOGICAL SCREENING OF THE GRAPE GENE POOL .....	550
<i>Volynkin Vladimir, Gorislavets Svetlana, Volodin Vitaliy, Vasylyk Irina, Lushchay Ekaterina, Likhovskoi Vladimir, Potokina Elena</i>	
REALIZATION OF GENETIC POTENTIAL OF FIBER FLAX VARIETIES UNDER THE INFLUENCE OF GROWTH STIMULATORS OF ORGANIC ORIGIN.....	559
<i>Shuvar Antin, Rudavskaya Natalia, Shuvar Ivan, Korpita Hanna</i>	
COMPARATIVE ESTIMATION OF METROLOGICAL CHARACTERISTICS OF DIFFERENT PCR TYPES FOR QUANTITATIVE MATERIAL ASSESSMENT IN COMPLEX MATRICES ON THE EXAMPLE OF SOYBEANS' GM LINE .....	569
<i>Prasolova O. V., Soltynskaya I. V., Sukhoedova A. V., Gergel M. A., Kish L. K.</i>	
STUDY OF AMINO ACIDS IN ARTEMISIA HEPTAPOTAMICA POLJAK AND ARTEMISIA ALBIDA WILLD .....	576
<i>Mukatay U., Kemelbek M., Seilkhan A., Ross S. A., Zhubanova A. A.</i>	
OPTIMIZATION OF INDIVIDUAL ELEMENTS OF CLONAL MICRO-PROPAGATION OF FRUIT AND BERRY CROPS IN THE PRODUCTION SYSTEM OF HEALTHY PLANTING MATERIAL .....	581
<i>Tashmatova L. V., Matsneva O. V., Khromova T. M., Shakhev V. V.</i>	

INFLUENCE OF MICROBIAL COMPLEXES BASED ON MICROORGANISMS' POLYFUNCTIONAL STRAINS ON THE GRAPES' ROOTSTOCK RHIZOGENESIS STAGES PASSAGE .....	589
<i>Ivanchenko Viacheslav, Zotikov Anton, Zameta Oleg, Mikhailov Sergey, Potanin Dmitry</i>	
OPTIMIZATION OF THE TECHNOLOGY OF CLONAL MICRO-PROPAGATION OF CHERRY VARIETIES AND CLONAL ROOTSTOCKS AT THE INITIAL STAGES OF IN VITRO CULTIVATION .....	598
<i>Ostrikova O. V., Fedotova I. E., Kharkhardina E. L., Shakhev V. V.</i>	
OPTIMIZATION OF STAGES OF CLONAL MICROPROPAGATION OF GARDEN STRAWBERRY VARIETIES NELLY AND KEMIYA BREEDING OF NCFSCHVW.....	606
<i>Karpushina M. V., Vinter M. V.</i>	
SOME ASPECTS OF CLONAL MICROPROPAGATION OF AMELANCHIER MEDIK. GENUS REPRESENTATIVES .....	613
<i>Raeva-Bogoslovskaya Ekaterina N., Molkanova Olga I., Kryuchkova Viktoriya A.</i>	
ASSIMILATION SURFACE AND PHOTOSYNTHETIC ACTIVITY EVALUATION OF WINTER WHEAT PLANTING ACCORDING TO FORECROPS AND MINERAL FERTILIZERS .....	621
<i>Gurin Aleksandr, Ignatova Galina, Stepanova Elena, Tarakin Aleksey, Velkova Natalya</i>	
BIOLOGIZATION OF GRAPE GROWING TECHNOLOGIES TO OBTAIN SAFE AND HIGH-QUALITY PRODUCTS .....	629
<i>Ostroukhova Elena, Aleinikova Natalia, Peskova Irina, Galkina Evgenia, Bolotianskaia Elena, Zaitseva Olga</i>	
USE OF DIFFERENT CROP ROTATION MODELS AS A FACTOR OF AGRICULTURE BIOLOGIZATION.....	637
<i>Velkova Natalia, Bobkova Julia, Naumkin Vladimir</i>	
ANTIMYCOTIC ACTIVITY OF BACTERIAL STRAINS AGAINST THE PATHOGEN OF GRAPE NECROTIC LEAF SPOTTING ALTERNARIA SP. ....	645
<i>Burovinskaya Margarita, Maslienko Lyubov, Yurchenko Eugeniya</i>	
EFFECT OF COMBINED TREATMENTS AND CHEMICALIZATION AGENTS ON SOIL MYCOBIOTA IN SPRING BARLEY CROPS .....	652
<i>Lavrinnova V. A., Polunina T. S.</i>	
THE BALANCE OF ORGANIC MATTER AND SOIL NUTRIENTS, DEPENDING ON FERTILIZATION LEVEL OF SOYBEAN VARIETIES .....	660
<i>Kotlyarova Ekaterina, Gritsina Vitaliy, Litsukov Sergey, Stupakov Alexey</i>	
BIOCIDAL AND RESISTANCE-INDUCING EFFECTS OF CHITOSAN ON PHYTOPATHOGENS.....	668
<i>Tarakanova Rashit, Shagdarova Balzhima, Varlamov Valery, Dzhalilov Fevzi</i>	
THE SALINIZATION PROBLEMS AND SOIL HYDROMORPHISM AS COMPONENTS OF LAND DESERTIFICATION, IRRIGATED ZONE OF TAJIKISTAN AND THE LIQUIDATION WAYS OF THEM.....	674
<i>Salimzoda A. F., Mahmadyorzoda U. M., Boimurodov R. B., Bobokhonova Z. K.</i>	
CHANGE IN THE SOILS' FERTILITY LEVEL OF TEA AGROCENOSES IN THE TRANSITION TO CULTIVATION WITHOUT MINERAL FERTILIZERS IN THE HUMID-SUBTROPICAL ZONE OF RUSSIA .....	681
<i>Kozlova N. V., Malyukova L. S.</i>	

CALCIUM IN THE “SOIL-PLANT” SYSTEM OF APPLE ORCHARD WHEN USING NITROGEN AND POTASH FERTILIZERS .....	691
Leonicheva Elena, Stolyarov Maxim, Roeva Tatyana, Leonteva Larisa	
NEW INNOVATIVE TECHNOLOGIES FOR OBTAINING COMPOST USING FORESTRY AND AGRICULTURE WASTE.....	698
Pozyvaylo O. P., Kopytkov V. V., Kotovich I. V., Savchenko V. V.	
SOIL-PROTECTIVE TECHNOLOGIES AS AN IMPORTANT COMPONENT OF AGRICULTURAL BIOLOGIZATION IN THE CONDITIONS OF THE CENTRAL POLISSIA OF UKRAINE.....	703
Kravchuk N. N., Kropyvnytskyi R. B., Zhuravel S. V., Klymenko T. V., Trembitska O. I.	
THE EFFECT OF CO-APPLICATION OF MANURE ON THE EFFECTIVENESS OF PHOSPHORUS FERTILIZERS FOR POTATO CULTURE ON OLD-DUSTED OF DARK SEROZEMS SOIL .....	708
Bobokhonova Z. K., Boymurodov R. B.	
EFFICIENCY OF THE APPLICATION OF MINERAL FERTILIZERS ON THE PRODUCTIVITY OF SOY AND MUNG BEAN (MASH) IN THE CONDITIONS OF THE SOGD REGION OF THE REPUBLIC OF TAJIKISTAN .....	714
Nabiev T. N., Asrorov A. J.	
ECOLOGICAL AND BIOLOGICAL FEATURES OF THE DEVELOPMENT OF INTRODUCED SPECIES OF THE GENUS ABIES MILL .....	719
Masalova Lubov, Emelyanova Olga, Tsoty Mikhail, Pavlenkova Galina, Firsov Andrey	

## PART 2

SPATIAL VARIABILITY OF SMALL-LEAVED LINDEN ( <i>Tilia cordata</i> Mill.) LEAF BLADE.....	726
Baranov Sergey G., Zykov Igor E., Poloskova Elena Yu., Lipponen Irina N., Goncharova Oxana A., Kuznetsova Darya D.	
COMPREHENSIVE ASSESSMENT OF THE DEGREE OF LANDSCAPE COMPOSITIONS' ORNAMENTALITY .....	734
Emelyanova Olga, Masalova Lubov, Firsov Andrey	
THE CURRENT STATE AND BIODIVERSITY OF STEPPE PHYTOCENOSES IN THE TERRITORY OF THE KABARDINO-BALKARIAN REPUBLIC .....	740
Tamakhina Aida Ya.	
DYNAMICS OF PHYTOPHAGE INVASIONS AND PECULIARITIES OF THEIR PHENOLOGY IN THE PARKS OF THE SOUTH COAST OF THE CRIMEA.....	747
Sharmagiy A. K., Balykina E. B., Trikoz N. N., Korzh D. A., Yatskova E. V.	
COLLECTION OF RARE AND ENDANGERED PLANT SPECIES IN THE MERISTEM BANK OF THE RAS MAIN BOTANICAL GARDEN .....	755
Molkanova Olga, Gorbunov Yuri, Shirnina Irina, Egorova Daria	
ECOLOGICAL AND BIOLOGICAL CHARACTERISTICS OF TREE PLANTINGS OF THE OREL SAU ARBORETUM.....	761
Parakhina E. A., Silaeva Zh. G., Kiseleva L. L., Chaadaeva N. N., Tyapkina A. P.	

DISCUSSION OF SOME TAXONOMY ISSUES OF SPECIES OF THE GENUS IRIS L. BASED ON BIOMORPHOLOGICAL AND KARYOLOGICAL CHARACTERISTICS.....	771
Aukhadieva Elvira, Kalashnik Nadezhda, Ishbirdin Airat	
POPULATION OF TETRANYCHIDAE MITES ON APPLE TREES AND METHODS OF RESTRAINING THE NUMBER OF RESISTANT RACES IN CRIMEA .....	778
Balykina E. B., Rybareva T. S., Yagodinskaya L. P.	
THE POSSIBILITY OF USING NEW VARIETIES OF ESSENTIAL OIL PLANTS IN MEDICINAL PLANT PRODUCTION .....	784
Shevchuk Oksana, Konovalov Dmitry, Bakova Nadezhda, Suslova Anna, Orobinskaya Valeriya	
ARTEMISIA SCOPARIA WALDST. & KIT. AND ARTEMISIA ANNUA L. IN THE COLLECTION OF AROMATIC AND MEDICINAL PLANTS OF THE NIKITSKY BOTANICAL GARDEN .....	790
Shevchuk O. M., Logvinenko L. A., Mezenova T. D., Konovalov D. A.	
ANALYSIS OF THE COMPOSITION OF IRIS × HYBRIDA HORT. COLLECTION OF NIKITSKY BOTANICAL GARDENS - NATIONAL SCIENTIFIC CENTER BY VALUABLE DECORATIVE AND ECONOMIC-BIOLOGICAL FEATURES .....	797
Sheynina Alexandra, Ulanovskaya Irina	
QUANTIFICATION OF SOME ORNAMENTAL PLANT SPECIES CARBON DIOXIDE ABSORPTION FOR VARIOUS MOISTURE CONDITIONS .....	805
Korsakova Svetlana, Plugatar Yuri, Kovalev Maksim	
MONITORING OF THE BIOLOGICAL DIVERSITY OF VEGETATION IN THE VICINITY OF LAKE KRAVTSOVO .....	815
Seliverstova E. N., Volkova V. V.	
OPTIMIZATION OF GRAPE CULTIVATION BASED ON RESOURCE-SAVING ELEMENTS OF AGRICULTURAL TECHNOLOGY .....	823
Urdenko Natalia, Beibulatov Magomedsaigit, Tikhomirova Nadezhda, Buival Roman	
CURRENT GROWING TECHNOLOGY AND MECHANIZED HARVESTING-REVIEW.....	833
Panfilova Olga, Tsot Mikhail, Golyaeva Olga	
ASSESSMENT OF THE INFLUENCE OF A BIORATIONAL INSECTICIDE OF THE JUVENOID CLASS ON THE STATE OF FRUIT CENOSES .....	843
Podgornaya Marina, Prah Svetlana, Vasilchenko Anfisa, Didenko Nadezhda	
EVALUATION OF THE APPLICATION OF FUNGICIDES OF INORGANIC COPPER COMPOUNDS IN APPLE AND PLUM AGROECOSYSTEMS OF THE KRASNODAR TERRITORY.....	851
Yakuba Galina, Podgornaya Marina, Mishchenko Irina, Didenko Nadezhda, Chernov Vasily	
REDUCTION OF ENERGY CONSUMPTION AND DAMAGE OF TUBERS WHEN DIGGING POTATOES.....	860
Shishlov S. A., Chugaeva N. A., Shishlov A. N.	
EVALUATION OF THE INFLUENCE OF SOWING TIME ON YIELD AND QUALITY OF THE WHEAT GRAIN USING MULTIVARIATE DISPERSION ANALYSIS.....	866
Melnik A. F., Shumetov V. G., Kondrashin B. S., Mikhaylov M. R.	

QUALITY INDICATORS AND NITRATE ACCUMULATION IN WINTER WHEAT GRAIN WHEN APPLYING FERTILIZERS IN CONDITIONS OF PLAIN IRRIGATED ZONE OF DAGESTAN .....	875
<i>Ismailov A. B., Gimbatov A. Sh., Omarova E. K., Alimirzayeva G. A., Radzhabov R. A.</i>	
DEVELOPMENT OF BIOLOGIZED SYSTEM OF PROTECTION OF GARDEN STRAWBERRY AGAINST DOMINANT BERRY ROT IN THE CONDITIONS OF WESTERN CISCAUCASIA .....	880
<i>Kashchits Yulia, Yakuba Galina</i>	
RESPONSIVENESS OF SPRING BARLEY CULTIVARS TO TOP-DRESSING IN THE CONDITIONS OF THE VOLGA-VYATKA REGION .....	886
<i>Noskova E. N., Shchennikova I. N., Svetlakova E. V.</i>	
THEORETICAL STUDIES OF THE THERMAL STATE OF HEAT STORAGE ELEMENTS OF THE ELECTRIC THERMAL STORAGE IN THE MODES OF CHARGING AND HEAT OUTPUT .....	893
<i>Khimenko Aleksei, Tikhomirov Dmitry, Trunov Stanislav, Kuzmichov Aleksey</i>	
INFLUENCE OF POLYETHYLENE MULCHING FILM OF DIFFERENT COLOR AND THICKNESS ON PINE STRAWBERRY VARIETIES' YIELD.....	901
<i>Kozlova Irina</i>	
IMPROVEMENT OF TECHNOLOGICAL METHODS OF PRODUCTION AND CULTIVATION OF GRAFTED GRAPE SEEDLINGS .....	906
<i>Seget Olga, Avdeenko Irina, Aleynikova Galina</i>	
USE OF REGULATORS OF GROWTH IN INCREASE OF EFFICIENCY OF HYBRIDS OF SUNFLOWER IN KBR .....	912
<i>Haniyeva Irina, Abdulkhalikov Rustam, Shogenov Yury, Odizhev Andemirkan, Sabolirov Ahmed</i>	
SCIENTIFIC AND PRACTICAL ASPECTS OF INNOVATIVE TECHNOLOGY OF PELLETED SEEDS AND THEIR USE IN THE NATIONAL ECONOMY .....	918
<i>Kopytkov V. V.</i>	
INVESTIGATION OF THERMAL CONDUCTIVITY OF ORANGE AND TANGERINE JUICES IN NON-STATIONARY STATE .....	926
<i>Maharramov M. A.</i>	
THE CALCULATION OF PHENOTYPIC AND GENETIC PARAMETERS FOR MILK UREA CONCENTRATION IN HOLSTEIN BREEDS .....	933
<i>Budimir Draženka, Mijiæ Pero, Gantner Vesna</i>	
INFLUENCE OF FEED ADDITIVE ON THE BIOLOGICAL VALUE OF BROILER CHICKENS' WHITE MEAT PROTEIN IN TECHNOLOGICAL STRESS CONDITIONS .....	941
<i>Miftakhutdinov A. V., Saifulmulyukov E. R., Nogovitsina E. A.</i>	
EFFICIENCY OF COMBINED FODDER USE WITH REDUCED AMOUNT OF GRAIN IN FEEDING LACTATING COWS.....	947
<i>Zoteev V. S., Simonov G. A., Zoteev S. V., Kirichenko A. V., Nikulnikov V. S.</i>	
EXTERIOR FEATURES AND MEAT PRODUCTIVITY OF AUBRAC BREED CATTLE DURING ACCLIMATIZATION IN THE CONDITIONS OF NORTHERN TRANS-URALS .....	953
<i>Sheveleva O. M., Bakharev A. A., Lysenko L. A., Chasovshchikova M. A.</i>	

USE OF LOCAL RAW MATERIALS IN THE COMPOSITION OF PROTEIN-VITAMIN-MINERAL ADDITIVES.....	959
<i>Yarmots G. A.</i>	
VERMICULTURE AS A SOURCE OF ANIMAL PROTEIN .....	965
<i>Antonova Elena, Titov Igor, Pashkova Irina, Stom Devard</i>	
STRATEGY OF INNOVATIVE DEVELOPMENT OF ANIMAL HUSBANDRY IN THE BRYANSK REGION.....	974
<i>Vaskin V. F., Korosteleva O. N., Kuzmitskaya A. A., Repnikova V. I., Khvostenko T. M.</i>	
BEHAVIOR OF CHINCHILLA LANIGERA UNDER CAGE KEEPING WITH THE INTRODUCTION OF MOLECULAR HYDROGEN INTO THE DIET.....	982
<i>Panina Elena, Ivanov Alexey, Petrov Dmitry, Panteleev Sergey</i>	
ANATOMICAL AND HISTOLOGICAL STRUCTURE OF AORTIC VALVE IN BAIKAL SEAL.....	989
<i>Tarasevich V. N.</i>	
EFFECT OF TRANSCRANIAL ELECTROTHERAPY STIMULATION ON REPARATIVE REGENERATION OF THE DAMAGED SCIATIC NERVE IN THE EXPERIMENT .....	993
<i>Dashko Denis, Silkin Ivan</i>	
ASSESSMENT OF THE ADAPTABILITY OF DUTCH BREEDING HOLSTEIN CATTLE TO THE CONDITIONS OF THE STEPPE ZONE OF THE CENTRAL CISCAUCASIA .....	998
<i>Kurashev Zh. H., Gukezhev V. M., Getokov O. O., Zhekamukhov M. Kh., Aisanov Z. M.</i>	
INFLUENCE OF FEED ADDITIVES ON SOWS' REPRODUCTIVE FUNCTIONS .....	1004
<i>Gritsenko S. A., Ermolova E. M., Ruchai A. N., Ermolov S. M., Bochkarev A. K.</i>	
SCIENTIFIC SUPPORT FOR THE INNOVATIVE DEVELOPMENT OF SHEEP BREEDING IN THE RUSSIAN FEDERATION .....	1011
<i>Marinchenko Tatiana</i>	
CORRELATION BETWEEN MITOCHONDRIAL DYSFUNCTION OF SPERMATOZOA AND THEIR BIOLOGICAL ADEQUACY .....	1018
<i>Tadzhieva Anna, Iolchiev Baylar, Rystsova Katerina, Krotova Elena, Simonova Evgenia</i>	
INDICATORS OF THE INTERNAL ORGANS WEIGHT OF PUREBRED AND CROSSBRED YOUNG SHEEP WITH DIFFERENT METHODS OF FATTENING .....	1023
<i>Byamba D., Biltuev S., Achituev V., Zhamyanov B., Biltuev A.</i>	
DETERMINATION OF DESIGN AND OPERATION PARAMETERS INFLUENCE OF SCREW TYPE PELLETIZER ON CRUMBLING AND TEMPERATURE OF SOYBEAN CHAFF PELLETS .....	1029
<i>Penzin A. A., Tatarenko I. Yu., Shulzhenko E. A., Shishkin V. V., Usanov V. S.</i>	
SOME FEATURES OF GASTRIC LYMPH GLANDS IN FEMALE AND MALE CATS OF THE BRITISH BREED .....	1035
<i>Korableva M. S., Tkachenko L. V., Maltseva O. E., Kochetygova N. B., Burtseva S. V.</i>	
CORRECTION OF MINERAL METABOLISM IN THE BODY OF LACTATING COWS DURING CONSUMPTION OF ENERGY SUPPLEMENTS .....	1041
<i>Sycheva L. V., Yunusova O. Yu.</i>	

PROLONGING THE PRODUCTIVE USE PERIOD COWS GUARANTEE A REDUCTION IN THE COST OF MILK.....	1048
<i>Asharov A. A., Askarova A. A.</i>	
CONDITION AND FACTORS OF DEVELOPMENT OF THE STOCK-RAISING INDUSTRY IN UZBEKISTAN.....	1054
<i>Ashurmetova N. A.</i>	
VARIABILITY OF BASIC BLOOD PARAMETERS IN DEPENDENCE OF PHYSIOLOGICAL STATUS IN HIGHLY PRODUCTIVE COWS.....	1060
<i>Gukezhev V. M., Kurashev Jh. H., Zhekamukhov M. H., Genchev A. G., Taov I. Kh.</i>	
INFLUENCE OF GENETIC AND PARATYPICAL FACTORS ON LAMB'S RESISTANCE .....	1066
<i>Kazanchev S. Ch., Unazhakov A. M., Getokov O. O., Abdulkhalikov R. Z., Tleinsheva M. G.</i>	
DYNAMICS OF CORRELATION COEFFICIENTS OF ECONOMIC AND PRODUCTIVE CHARACTERISTICS DEPENDING ON THE AGE OF COWS.....	1071
<i>Harlap S. Yu., Gorelik A. S., Bitkeeva M. A., Demina N. A., Mullagulova G. M.</i>	
CHANGES IN THE LIVE WEIGHT OF COWS WITH AGE AND ITS IMPACT ON THEIR PRODUCTIVE QUALITIES .....	1077
<i>Gorelik O. V., Harlap S. Yu., Drobyshevsky M. V., Khramykh O. V., Larionova S. E.</i>	
MORPHOLOGICAL AND BIOCHEMICAL PARAMETERS OF COW BLOOD WHEN USING CHITOSAN PREPARATIONS .....	1082
<i>Gorelik V. S., Rebezov M. B., Lopaeva N. L., Smirnova E. S., Sultanova S. K.</i>	
THE RELATIONSHIP OF ECONOMIC AND USEFUL TRAITS IN THE URAL TYPE COWS OF THE BLACK-AND-WHITE BREED.....	1088
<i>Gorelik O. V., Pavlova J. S., Shvechikhina T. Yu., Arapova O. A., Ponomareva L. F.</i>	
ANALYSIS OF LIVER PATHOLOGIES IN STRAY DOGS IN THE AGE ASPECT (SECTIONAL STUDY).....	1094
<i>Tkachenko L. V.</i>	
THE EFFECT OF BENTONITE FEEDING FOR YOUNG CATTLE ON THE EXCHANGE OF NITROGEN, MINERAL ELEMENTS AND THE DIGESTIBILITY OF DIET NUTRIENTS .....	1100
<i>Dzagurov B. A., Eremenko V. I., Karlov A. G., Payukhina M. A., Suvorova V. N.</i>	
PROJECT DEVELOPMENT OF A "SMART" PREMISE SYSTEM FOR PIG KEEPING .....	1106
<i>Kostarev Sergey, Kochetova Oksana, Ivanova Anna, Sereda Tatyana</i>	
APPLICATION OF A PLANT-TISSUE COMPOSITION IN COMBINATION WITH THE USE OF AN AEROSOL OF AN ELECTROCHEMICAL ACTIVATED SOLUTION OF NEUTRAL ANOLYTE IN THE ASSOCIATION OF RESPIRATORY TRACT INFECTIONS AND WOUND INFECTIONS OF THE DISTAL EXTREMITIES OF CATTLE.....	1112
<i>Alekseev Anatoly, Petrova Olga, Usevich Vera, Barashkin Mikhail, Milstein Igor</i>	
METHODS OF INCREASING EFFICIENCY AND ACCELERATION OF SELECTION PROCESS IN BREEDING OF NEW BREEDS, TYPES, AND LINES IN PIG HUSBANDRY .....	1124
<i>Novikov A. A., Pokhodnya G. S., Breslavets P. I., Zhabinskaya V. P., Breslavets Yu. P.</i>	
SPREAD OF ALIMENTARY-TOXIC PAROXYSMAL MYOGLOBINURIA-HAFF DISEASE (LITERATURE REVIEW) .....	1132
<i>Glazunova L. A., Musina A. R., Yurchenko A. A., Glazunov Y. V., Gagarin E. M.</i>	

THE EFFECT OF CRUDE OIL ON THE BIOCHEMICAL PARAMETERS OF THE BLOOD OF WHITE RATS.....	1140
<i>Ydyrys Alibek, Ablaikhanova Nurzhaniyat, Amanbay Balgyn, Seiykadyr Kalamkas, Demeuova Dana</i>	
ANALYSIS OF THE EFFECTIVENESS OF THERAPEUTIC AND PROPHYLACTIC MEASURES FOR FINGER DERMATITIS OF COWS .....	1146
<i>Ivanova Svetlana, Ivanova Vitalina, Mukhitov Asgat, Mukhitov Azat</i>	
PHENOTYPIC AND GENOTYPIC FEATURES OF STRAINS OF ACTINOBACULUM SUIS- THE CAUSATIVE AGENT OF URINARY TRACT INFECTIONS IN PIGS .....	1153
<i>Pleshakova V. I., Lescheva N. A., Lorengel T. I., Konev A. V.</i>	
ON THE EFFECTIVENESS OF PREVENTIVE SERVICES .....	1159
<i>Momot Nadezhda, Kolina Yuliya, Trebukhov Aleksey, Kamliya Igor, Trebukhov Andrey</i>	
CARBOHYDRAT-FAT METABOLISM DISORDER IN COWS AND CALVES .....	1163
<i>Trebukhov Aleksey, Momot Nadezhda, Kolina Yuliya, Trebukhov Andrey, Kamliya Igor</i>	
MOIST WOUND HEALING AFTER MAST CELL TUMOR SURGICAL REMOVAL IN A DOG .....	1169
<i>Semenov Boris, Nazarova Anna, Kuznetsova Tatiana, Sergeeva Maria, Kozitcyna Anna</i>	
SIMULATION OF CHOROIDAL NEOVASCULARIZATION IN RABBITS USING INDIRECT TRANSPUPILLARY LASER COAGULATION.....	1175
<i>Prudnikova E. V., Katelnikova A. E., Ustenko Zh. Yu.</i>	
JUSTIFICATION OF A SYNPBIOtic PREPARATION (“PROBIOTIC+PREBIOTIC”) COMPOSITION FOR USE IN VETERINARY PRACTICE .....	1183
<i>Gneusheva I. A., Pavlovskaya N. E., Solokhina I. Yu., Ageeva N. Yu.</i>	
TOXIC ACTION OF SUBSTANCES FROM MALE FERN DRYOPTERIS FILIX-MAS (L.) SCHOTT (1834) ON FREE-LIVING SOIL NEMATODE CAENORHABDITIS ELEGANS MAUPAS (1900).....	1189
<i>Egorova Anastasia, Gatiyatullina Alsu, Terenzhev Dmitriy, Belov Timur, Kalinnikova Tatiana</i>	
NEMATICIDAL ACTIVITY OF MENTHOL AND ITS DITHIOPHOSPHORIC DERIVATIVES .....	1196
<i>Nikitin Evgeny, Shumatbaev Georgiy, Gatiyatullina Alsu, Egorova Anastasia, Salikhov Ramazan</i>	
ULTRASTRUCTURAL CHARACTERISTICS OF THE ANTERIOR PITUITARY GLAND OF CATTLE IN THE DEFINITIVE PERIOD OF POSTNATAL ONTOGENESIS .....	1203
<i>Khasaev A. N., Dzhambulatov Z. M., Zubairova M. M., Astarkhanov F. G., Gadzhiev N. M.</i>	
PHYSIOTHERAPY IN THE REHABILITATION OF SLEDGE DOGS .....	1210
<i>Trudova Liliya, Stekolnikov Anatoliy, Smolin Alexandr, Bluzma Anastasiya, Titova Elizaveta</i>	
TREATMENT OF PURULO-NECROTIC PATHOLOGY COMPLICATED BY ASSOCIATED BACTERIAL MICROFLORA IN THE HOOF AREA IN COWS .....	1216
<i>Dashko D. V.</i>	
FEATURES OF THE THYROID GLAND MORPHOLOGY OF SOME REPRESENTATIVES OF THE CERVIDAE FAMILY, LIVING IN THE ALTAI .....	1221
<i>Maltseva O. E., Ovcharenko N. D., Semenikhina N. M., Gribanova O. G., Pleshakova I. N.</i>	

FEATURES OF THE REPARATIVE CHONDROGENESIS COURSE IN INDUCED JOINT CARTILAGE DEFECT AND APPLICATION OF CARTILAGE PROTECTOR .....	1228
<i>Slesarenko N. A., Borhunova E. N., Shirokova E. O., Ivantsov V. A., Kuznetsov T. Yu.</i>	
HEPATOPROTECTIVE EFFICIENCY OF SELENOLIN STUDIED ON THE MODEL OF ACUTE LIVER FAILURE IN RATS.....	1236
<i>Semenenko Marina P., Grin Vladimir A., Semenenko Ksenia A., Kuzminova Elena V., Rogaleva Eugenia V.</i>	
THE RELATIONSHIP BETWEEN SNP-POLYMORPHISMS OF THE LEPTIN GENE AND THE DEVELOPMENT OF FATTY LIVER DISEASE IN DAIRY COWS.....	1242
<i>Kovalyuk Natalia V., Kuzminova Elena V., Semenenko Marina P., Abramov Andrey A., Yakusheva Ludmila I.</i>	
COMPARATIVE CHARACTERISTICS OF MYOHISTOGENESIS OF MUSCULOSKELETAL TISSUE IN HENS AND QUAILS.....	1248
<i>Shakirova G. R., Borkhunova E. N., Kondratov G. V., Stepanishin V. V.</i>	
POST-TRAUMATIC REHABILITATION OF DOGS AFTER LIMB FRACTURES WITH CORRECTION OF VITAMIN AND MINERAL METABOLISM .....	1258
<i>Shamsutdinova N. V., Shalamova G. G., Smelkova E. V., Papaev R. M., Kasanova N. R.</i>	
THE EFFECT OF TOBACCO HAWKMOTH CATERPILLAR EXTRACT (MANDUCA SEXTA) ON THE GROWTH AND STRESS RESISTANCE OF YOUNG ANIMALS.....	1265
<i>Khudyakova Nina, Uschakov Evgeniy, Belial Eva, Antonova Liubov</i>	
AGRICULTURAL DEVELOPMENT OF THE KURGAN REGION IN MODERN CONDITIONS .....	1272
<i>Roznina Nina, Karpova Maria, Shulgina Alla, Borovinskikh Valentina, Volkova Alevtina</i>	
THE ROLE OF THE STATE IN INCREASING LABOR PRODUCTIVITY IN AGRICULTURAL ENTERPRISES OF UKRAINE .....	1279
<i>Yekimov Sergey, Sarychev Volidymyr, Malyuga Natalya, Shkulipa Liudmyla, Poltorak Anastasiia</i>	
ANALYTICAL REVIEW OF ISSUES OF CREATION OF THE AGRO-DIGITAL COOPERATION PLATFORM AS AN ECONOMIC MECHANISM FOR SUSTAINABLE DEVELOPMENT OF AGRICULTURAL PRODUCTION .....	1285
<i>Amirova E. F., Zolkin A. L., Podolko P. M., Baldina Å. I., Kosnikov S. N.</i>	
SOCIO-ECONOMIC FACTORS IN STIMULATING AGRICULTURE IN A CRISIS .....	1291
<i>Namitulina Anzhela, Gorlov Viktor, Soklakova Irina, Kuzmina Elena, Ermilina Diana</i>	
RESULTS ANALYSIS OF AGRICULTURAL ORGANIZATIONS SUBSIDY .....	1300
<i>Shestakov R. B., Yakovlev N. A., Lovchikova E. I., Zvereva G. P., Volchenkova A. S.</i>	
USING GRADING TO MOTIVATE STAFF IN AGRICULTURAL ENTERPRISES.....	1306
<i>Yekimov Sergey, Otroshchenko Nataliia, Voytsekhovska Yuliya, Nak Hod Svitlana, Gavrilko Tetiana</i>	
SUSTAINABLE DEVELOPMENT MANAGEMENT OF INDUSTRIAL FRUIT GROWING .....	1312
<i>Egorov Evgeniy, Shadrina Zhanna, Kochyan Gayane, Kudryakov Vladimir</i>	
MATERIAL AND TECHNICAL BASE OF THE AGRO-INDUSTRIAL COMPLEX: TRENDS AND PROSPECTS ON THE WAY OF INNOVATION-ORIENTED DEVELOPMENT .....	1319
<i>Gusev A. Yu.</i>	

ANALYSIS OF THE CURRENT SITUATION AND DEVELOPMENT PROSPECTS OF CONSUMERS' COOPERATION OF VOLOGDA REGION'S RURAL AREAS.....	1328
<i>Selina Marina, Selin Vladimir</i>	
PROSPECTS OF USING CORDON-FREE BUSH TECHNOLOGY IN THE COMMERCIAL PRODUCTION OF BLACK SATIN VARIETY BLACKBERRY .....	1334
<i>Podorozhny Vladimir</i>	
ECOLOGICAL AND ECONOMIC ASPECT OF SUSTAINABLE AGRICULTURE DEVELOPMENT ON THE BASIS OF EFFECTIVE LAND USE PLANNING AND LAND CADASTRAL WORKS.....	1340
<i>Denisova Elena, Silova Viktoriya</i>	
SUSTAINABLE GRAIN COMPLEX DEVELOPMENT OF RUSSIA: FORMATION OF GRAIN CLUSTERS.....	1347
<i>Meleshkina E. P., Bundina O. I., Khuhrin A. S.</i>	
IMPROVEMENT OF BUDGETING SUBSYSTEM IN AGRICULTURE OF THE "ADEPTIS: AGROCOMPLEX" CONFIGURATION .....	1355
<i>Butyugina Anastasiya, Gorbunova Elena</i>	
IMPROVEMENT OF RURAL DEVELOPMENT SYSTEM THROUGH INTERACTION WITH PENITENTIARY INSTITUTIONS .....	1361
<i>Olesiyuk Olga, Fazliyev Ildar, Svetlakov Andrey</i>	
TAXATION FEATURES IN THE CONTEXT OF ECONOMIC SECTORS OF THE CONSTITUENT ENTITY OF THE RUSSIAN FEDERATION.....	1367
<i>Vasilyeva T. Yu., Romanova O. A., Pavlova S. Yu., Savinova L. A.</i>	
INNOVATIVE FUNCTIONAL PRODUCTS DEVELOPMENT AS AN ELEMENT FOR THE RUSSIAN FEDERATION POPULATION HEALTH PRESERVATION .....	1375
<i>Zavorokhina Natalia, Minnihanova Ekaterina, Feofilaktova Olga, Chugunova Olga</i>	
SERVICES OF NON-PROFIT ORGANISATIONS IN SUSTAINABLE DEVELOPMENT AND ECONOMIC SECURITY OF RURAL AREAS.....	1382
<i>Dvoryadkina Elena, Prostova Dina, Eliseeva Alexandra</i>	
THE ROLE OF BIOTECHNOLOGY IN ENSURING THE PRESERVATION OF DRY COMPOSITE MIXTURES .....	1389
<i>Timakova Roza, Akulich Alexander, Samuylenko Tatyana</i>	
MECHANISMS AND SOURCES OF INVESTMENT DEVELOPMENT OF AGRICULTURE IN RESOURCE-DEFICIENT REGIONS: RUSSIAN AND FOREIGN EXPERIENCE .....	1396
<i>Sorokina Ekaterina</i>	
SUSTAINABLE AGRICULTURAL DEVELOPMENT: FROM SECTORAL TO ECOSYSTEM APPROACH.....	1402
<i>Misyura Andrey, Orehova Svetlana</i>	
ASSESSMENT OF FOOD SECURITY IN THE REGION IN THE CONTEXT OF THE DEVELOPMENT OF THE AGRO-INDUSTRIAL COMPLEX (ON THE EXAMPLE OF THE SVERDLOVSK REGION) .....	1408
<i>Pestryakov Aleksey, Reutova Ekaterina, Sbrodova Nadezhda, Titovets Alisa</i>	
THE HUMAN FACTOR IN THE DEVELOPMENT OF AGRICULTURE IN RUSSIA IN MODERN CONDITIONS .....	1417
<i>Ilyashenko V. V.</i>	

THE ANALYSIS OF BIOCATALYTIC PROPERTIES OF A PROTEOLYTIC ENZYME UNDER THE INFLUENCE OF PHYSICAL FACTORS .....	1423
<i>Brashko Ivan, Tretyakova Irina, Tikhonov Sergey, Tikhonova Natalya, Lazarev Vladimir</i>	
COMPREHENSIVE INSURANCE PROTECTION OF HUMAN CAPITAL IN AGRICULTURE .....	1429
<i>Odinokova Tatiana, Dvoryadkina Elena, Istomina Natalia</i>	
SUSTAINABLE DEVELOPMENT OF AGRICULTURE IN A LARGE INDUSTRIAL REGION .....	1436
<i>Ilukhin Aleksey, Ilukhina Svetlana</i>	
IMPROVING COMMUNICATION BETWEEN CITIZENS AND AUTHORITIES IN THE PROCESS OF PROVIDING MUNICIPAL SERVICES IN URBAN AND RURAL AREAS.....	1441
<i>Chevtaeva Natalya, Kachanova Elena, Ruchkin Aleksey, Kukhar Viktor</i>	
SOCIOLOGY OF NUTRITION: THEORY AND PRACTICE .....	1445
<i>Zhuravleva Larisa, Zarubina Elena, Ruchkin Aleksey, Simachkova Natalya, Chupina Irina</i>	

**Author Index**