

# RESUMES

## ACTUAL PROBLEMS, REVIEWS, AND TOTALS OF AGRICULTURAL SCIENCE

### Zhuchenko A.A.

MOBILIZATION OF WORLD FLOWERING PLANTS SUPPLIES BASED ON DEVELOPMENT OF SYSTEMATIZED GENETIC COLLECTION OF ADAPTIVE AND AGRONOMIC VALUABLE TRAITS

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The problems of study and utilization of plant germplasm collections and arrangement of genetic resources based on botanical, functional, morphological, biochemical, and genetical principles are underlined in the article. The types of identified and systemized germplasm collections and genetic resources of flowering plants are described. The search path and methods of identification, differentiation, arrangement, and selection of genetic donors and germplasm collections of traits of ontogenetic and phylogenetic adaptation are shown in the article.

**Keywords:** genetic resources, genetic donors, germplasm collections

## RUSSIAN AGRICULTURAL ACADEMY

### Savchenko I.V., Bocharnikova N.I.

VEGETABLE AND CUCURBITS CROPS. RESULTS OF INVESTIGATION IN 2012.

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The short results of investigation in 2012 of the Institutes of Russian Academy of Agricultural Science, Russian Academy of Science, and Institutions of Higher Education in the field of development of new varieties and high-precision and environmentally safe technologies of zonal agriculture of vegetable and cucurbits crops with utilization of new cultivars and hybrids, high-quality seeds, modern types of growing and mechanical equipment are described in the article.

**Keywords:** vegetable growing, breeding, seed production, vegetable and cucurbits crops, potato.

## MODERN TRENDS IN VEGETABLE CROPS BREEDING

### Pivovarov V.F., Sirota S.M., Nosova S.M.

THE MAIN TRENDS OF BREEDING AND SEED PRODUCTION OF VEGETABLE CROPS

IN THE NONCHERNOSEM ZONE BY 2020

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The main directions of basic and applied researches in plant breeding and seed production of vegetable crops are presented up to 2020. The ways of improvement of organizational effectiveness are proposed.

**Keywords:** breeding, hybrid, variety, competitive, innovative, initial breeding material, adaptability, heterosis, seed quality.

### Snigiry E.A., Kochieva E.Z., Mamedov M.I.,

### Suprunova T.P., Shmykova N.A., Pishnaya O.N.

STUDY OF HETEROSIS EFFECT OF SWEET PEPPER AT SELECTION OF PARENTAL LINES USING OF DATA OF MOLECULAR ANALYSIS

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Based on the results of molecular-genetic analysis of pepper accessions of VNISSOK's breeding, the parental lines were selected. The diallel crossing among them has been conducted. The F<sub>1</sub> hybrids were developed. The hybrids vigor (heterosis) for main agronomic traits was estimated. The best pepper hybrids were selected. The potential correlation between genetic divergence determined by molecular markers and heterosis effect is speculated.

**Keywords:** F<sub>1</sub> pepper hybrids, heterosis, AFLP- and SSR-markers.

## AGRARIAN SCIENCE IN THE WORLD

### Shmykova N.A., Suprunova T.P.

INTERNATIONAL CONFERENCE «INNOVATIVE BIOTECHNOLOGIES IN COUNTRIES OF EUROASIAN ECONOMIC COMMUNITY» AND EXHIBITION «BIOINDUSTRY 2012»

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October 10-13, 2012 in Saint-Petersburg (Russia) the International Conference «Innovative biotechnologies in countries of EuroAsian Economic Community» and Exhibition «Bioindustry 2012» were held. These meetings were devoted to the development and extension of fundamental and applied biotechnologies in countries of EuroAsian Economic Community.

**Keywords:** innovative biotechnologies, bioindustry, EuroAsian Economic Community.

### Molchanova A.V.

THE INTERNATIONAL CONFERENCE OF YOUNG SCIENTISTS «ADVANCES IN BOTANY AND ECOLOGY»

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The International Conference of Young Scientists «Advances in Botany and Ecology» was held in September 19-23, 2012, Uzhgorod, Ukraine. The meeting was devoted to achievements of botany, physiology, mycology, bryology and lichenology, plant physiology and biochemistry, systematic of vascular plants, plant ecology and phytosociology. The organizers of the conference are M.G. Kholodny Institute of Botany of National Academy of Sciences of Ukraine and Uzhgorod National University/

**Keywords:** botany, ecology, young scientists

### Startsev V.I., Bondareva L.L.

6th INTERNATIONAL SYMPOSIUM ON BRASSICA AND 18th CRUCIFER GENETIC WORKSHOP – CATANIA (ITALY), 12-16 NOVEMBER, 2012

Laboratory of breeding and seed production of cabbage crops,

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November 10-13, 2012 in Catania (Italy) the 6th International Symposium on Brassica and 18th Crucifer Genetic Workshop was held. The meeting was devoted to achievements of breeding and seed production of cabbage crops, Brassica genome research, molecular genetics, development of new lines with a high content of biological active substances, and seed quality. Scientists of VNISSOK took an active part in the conference and presented three oral and poster presentations.

**Keywords:** cabbage crops, genomics, breeding, seed production.

## SEED PRODUCTION AND SEED STUDIES OF VEGETABLE CROPS

### Dobrutskaya E.G., Baranova E.G., Orlova V.I.,

### Startsev V.I., Bondareva L.L.

RESULTS OF POLYMORPHISM STUDIES OF POPULATION

OF WHITE HEAD CABBAGE CV. AMAGER 611

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The results of complex estimation of structure of variety population Amager 611, the genetic analysis by inbreeding (J<sub>1</sub>-J<sub>3</sub>) and RAPD-markers are shown. The role of 17 phenotype groups in the variety population was determined. The suggestions for agriculture and maintaining of cv. Amager 611 are proposed.

**Keywords:** white head cabbage, structure of variety population, polymorphism, inbreeding, phenotype, variety maintaining.

### Musaev F.B.,<sup>1</sup> Prosorova O.A.,<sup>1</sup> Arkhipov M.V.,<sup>2</sup>

### Velikanov L.P.,<sup>2</sup> Potrakhov E.N.,<sup>3</sup> Bessonov V.B.<sup>3</sup>

RADIOGRAPHY ANALYSIS OF VEGETABLE SEEDS QUALITY

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<sup>3</sup> St. Petersburg State Electrotechnical University «LETI», 197376, Russia, St. Petersburg, Professor Popov street, 5.

The possibility of application of radiography in production and study of vegetable seeds and its advantages (rapid test method, multipurpose application etc.) are described in the article.

**Keywords:** radiography of seeds, seed production of vegetable crops, embryo, seed defect, seed plumpness.

## AGROTECHNICS OF VEGETABLE CROPS

### Koshevarov A.A., Nadezhkin S.M., Agafonov A.F.

THE INFLUENCE OF MINERAL FEEDING ON SEED PRODUCTIVITY AND SOWING QUALITY OF SEEDS OF ALLIUM PORRUM IN CONDITION OF CENTRAL NONCHERNOSEM ZONE

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The influence of mineral fertilizers (nitric, phosphoric and potassium) on Allium porrum were evaluated in the trials. Optimum doses and combinations were installed for development of seed plants, receptions of the most output and quality of seed product.

**Keywords:** Allium porrum, mineral fertilizers, seed productivity.

## PLANT PROTECTION

### Golubev A.S.

MODERN ASSORTMENT OF HERBICIDES TO PROTECT TOMATO

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The group of annual and perennial grasses and dicotyledonous weeds of tomato was presented. Against each of group of the weeds the modern herbicides are recommended. The possible direction of improving of the assortment of herbicides is shown.

**Keywords:** assortment of herbicides, weeds, tomato.

## VARIETIES OF VEGETABLE CROPS

### Korotseva I.B.

NEW CUCUMBER VARIETIES OF VNISSOK SELECTION

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Cucumber is the one of the leading vegetable crops grown in the open and protected ground of the Russian Federation. However, in recent years the production area of this crop decreased because of a number of reasons, one of which is the loss of cucumber crops from diseases. The most economical and environmentally safe method of cucumber protection from diseases is the development and utilization of resistant varieties. By selection on artificial and natural infective zones in VNISSOK a new variety of cucumber Vodopad and parthenocarpic hybrid F<sub>1</sub> Krasotka have been developed.

**Keywords:** cucumber, variety, hybrid F<sub>1</sub>.

## VARIETY TESTING

### Tumanyan A.F., Tyutyuma N.V., Shcherbakova N.A.

VARIETY STUDYING AND ADAPTATION OF SORTS AND

EARLY POTATOES MEDIUM EARLY IN THE ARID CONDITIONS

OF THE LOWER VOLGA TO DRIP IRRIGATION

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Potatoes are high-plastic plants that can be grown in almost all climates. In the Lower Volga, in the conditions of strong spring drought, high temperatures and soil throughout the growing season, lack of rainfall, potatoes can be grown only for irrigation. To obtain high and stable yields in these difficult conditions it is necessary to research varieties and its adaptation.

**Keywords:** potato, variety studying, adaptation, arid conditions, drip irrigation

## STANDARDS FOR VEGETABLE PRODUCTS

### Puchkov M.Y., Sannikova T.A., Machulkin V.A.,

### Bochkarev V.N., Kisileva N.N., Pavlov L.V.

### Kondratieva I.Y., Shilo L.M.

CUCUMBER FOR MARKETING. TYPICAL TECHNOLOGICAL PROCESS – NEW STANDARDS OF MANAGEMENT

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The technological procedure requirements for cultivation, mechanized harvest, storage and processing of cucumber are determined.

**Keywords:** cucumber, typical technological process, soil, fertilizers, cultivation, harvest, assortment, storage, control quality, packaging.

## INFORMATION MESSAGES

### Kamenskaya K.

SUMMARIES OF MEETING OF FRESH PRODUCTS

AND READY-TO-EAT FOOD IN MODERN FAST FOOD CHAIN –

FRESH FOOD RUSSIA 2012

Tel.:(495) 785-22-06, e-mail: www.b2bcg.ru

In November 22-23, 2012, in Moscow («Borodino» hotel) the III Business Forum Fresh Food Russia 2012, fresh products, ready-to-eat food in modern fast food chains was held.

## HAPPY ANNIVERSARY

### Pivovarov V.F.

PROFESSOR V.A. LUDILOV IS 75!

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On the 12th October of 2012 Vyacheslav Alekseevich Ludilov is celebrating his 75th Birthday and 55 years of his scientific and pedagogical activity. Professor Ludilov is one of the well-known scientists in field of breeding and vegetable growing. He is Honoured Science Worker of Russian Federation. V.A. Ludilov is head of the Department of seed studies and production of the All-Russian Research Institute of Vegetable Growing of RAAS.

## AGRICULTURAL MANAGEMENT

### Titova E.S.

PRACTICAL AND ECONOMIC REASONABILITY OF AGRICULTURAL CONSULTING COMPLEX CREATION AT THE PRESENT STAGE

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The key note of this article is reasonability of agricultural consulting complex creation. The analysis of agricultural consulting complex potential effect for the agricultural enterprises is carried out. The main idea is production quality growth because of the local process science explanation and support.

**Keywords:** agro-consulting corporations, agribusiness, quality management, cycle of PDCA, philosophy of business.