

ANNOTATIONS

UDC 631.5: 633.34

Petrychenko V. F., Kolesnik S. I., Kobak S. Y., Panasyuk A. Y., Doroshkevych N. F. *No-till* effect on the soil nutrient status and level of soybean seed yield in the right-bank Forest-Steppe of Ukraine // Feeds and Feed Production. – 2014. – Issue 79. – P. 3–8.

Data of three-year researches on the influence of *No-till* technology on the content of essential nutrients (N, P₂O₅, K₂O) and the level of soybean seed yield in short crop rotations are highlighted. Ref. 9 titles.

Key words: *No-till* system, moving phosphorus, exchangeable potassium, nitrogen forms, crop rotation, soybean.

UDC 631.51

Malienko A. M., Havrylov S. A. No-till farming – prospects and ways of its implementation in Ukraine in light of general tendencies of agricultural development // Feeds and Feed Production. – 2014. – Issue 79. – P. 9–15.

The article represents author's views on the formation of minimum soil tillage, in particular *no-till* system as a result of manifestation of the general patterns of forming agricultural technologies. The concept is based on the idea of close relationship between socio-economic and technological factors.

The main driving force that initiates the process of change over time adopted the growth of the world population with changing relationship between urban population (the main consumers of agricultural products) and the number of working population in rural areas (involved in agricultural production).

Causes of different rates of development no-till farming around the world are established.

Regularities of the relationship between forms of organization of production, size of business units are determined. Ref. 4 titles.

Key words: system of minimum soil tillage, labor productivity, systems of pest, disease and weed control, fertilizing.

UDC 632.952:623.16

Zadorozhny V. S., Kolodiy S. V. Features of weed cenosis formation in longstanding sowings of maize for grain under different tillage methods // Feeds and Feed Production. – 2014. – Issue 79. – P. 16–22.

The effect of different tillage methods and herbicides on the formation of weed cenosis and potential weed infestation in longstanding sowings of maize for grain is highlighted. Dependence of yield of maize for grain on the efficiency of weed control and alternative methods of soil tillage under conditions of the right-bank Forest-Steppe of Ukraine is established.

Key words: corn, weeds, plowing, *No-till*, herbicides.

UDC 631.008:631.17.001.18

Kravchuk V. I., Pavlyshyn M. M., Husar V. G. Forecasting of the reduction of greenhouse gas emission through the system application of No-till technology // Feeds and Feed Production. – 2014. – Issue 79. – P. 23–27.

A new joint project aimed to reduce CO₂ emissions through regular application of No-till technology in agricultural production is considered. The project demands a complete technical and technological re-equipment of the enterprise, transfer of the experimental use of No-till in the systemic use that will result in reduction of anthropogenic greenhouse gas emission. This reduction is going to be achieved due to lower destruction of soil surface during tillage and, as a result, the increase of carbon sequestration in soil by transferring it from the atmosphere into the soil by plants in the process of their biological activity. Methodological approaches to calculation of the forecasted decrease of greenhouse gas emission and additional investments in the agricultural sector of Ukraine through the joint project are presented. Ref. 7 titles.

Key words: agriculture, greenhouse gases, No-till technology, joint projects, forecasting.

UDC 631.512:631.431.1

Dudchenko V. M., Krotinov O. P., Kosolap M. P., Ivanyuk M. F. Soil density under zero tillage (No-till) // Feeds and Feed Production. – 2014. – Issue 79. – P. 28–34.

The purpose of our research is to study soil density and moisture in the field of spring barley under conditions of 8-year application of No-till system. Experiments were conducted in the field laboratory of the Department of Farming and Herbology of the National University of Life and Environmental Sciences of Ukraine (at the Agricultural experimental station in Vasylykiv district, Kiev region) in short crop rotation with the rotation of crops: corn for grain - soybean – spring barley.

The results of two-year researches on the influence of tillage technologies on water and physical properties of the soil and spring barley productivity are highlighted. Expediency of spring barley cultivation under No-till technology in conditions of the right-bank Forest-Steppe of Ukraine is established.

Key words: spring barley, No-till, tillage technology, soil density, soil moisture, soil compactness, post-harvest crops, soil and climatic conditions, hydrothermal feature, yield.

UDC 631.811:631.51

Chaban V. I. Nutrient regime of the soil when growing grain crops under No-till system in the Steppe zone of Ukraine // Feeds and Feed Production. – 2014. – Issue 79. – P. 35–41.

The influence of soil tillage systems on the formation of the nutrient regime of typical chernozem, yield and grain quality of winter wheat and maize is shown. Methods of the research are field, laboratory-analytical, statistical. It is found that zero tillage does not worsen effective soil fertility when growing winter wheat. Maize cultivation under *No-till* system affected nitrogen regime - N-NO₃ content was 1.8

times less than under plowing. Yield of winter wheat was 5.46–5.62 t/ha, maize – under zero tillage - 0.29 t/ha lower than under plowing. Ref. 4 titles.

Key words: nutrient regime, typical chernozem, method of soil tillage, grain crops.

UDC 631.582.9:631.445.4 (477.43/44+477.85/86)

Yavorov V. M., Makalyuk V. V., Vakhnyak V. S., Pustova Z. V., Homovyi M. M. *No-till* as an alternative to conventional technology of crop cultivation on the chernozems of the south-west Forest-Steppe // Feeds and Feed Production. – 2014. – Issue 79. – P. 42–47.

The purpose of research was to analyse efficiency of No-till technology on typical mid-loamy chernozem of the south-west Forest-Steppe of Ukraine. Standard methods of the study of soil properties were applied in research. Trials were conducted at the farm «Makalyuk», Dunaevetsky district, Khmelnytsk region, where No-till technology has been applied since 2008 on 1350 hectares.

The results of researches showed that the positive effect of direct sowing is based on the organizational, agrotechnical and agroecological aspects. *No-till* technology allows to decrease machine and tractor park and number of workers. Ref. 8 titles.

Key words: *No-till*, direct sowing, typical mid-loamy chernozem, nutritious mode of soil, humus, productivity.

UDC 631.15:631.51

Kucher A. V., Kucher L. Y. Economic efficiency of *No-till* technology when growing winter wheat // Feeds and Feed Production. – 2014. – Issue 79. – P. 48–55.

The results of analysis of the economic efficiency of winter wheat growing applying *No-till* technology are highlighted. Ref. 11 titles.

Key words: winter wheat, conventional, minimal and zero technology of cultivation, economic effect.

UDC 631.51 (477.5)

Shevchenko M. V. Efficiency of minimum tillage technologies when growing grain crops in the left-bank Forest-Steppe // Feeds and Feed Production. – 2014. – Issue 79. – P. 56–61.

The aim of the research was to establish the efficiency of long-term use of minimum tillage technology when growing grain crops. The study was conducted in a stationary experiment of the Department of Farming named after A. Mozheiko according to the recommended program and standardized methods.

The results show deterioration of water-physical parameters of typical chernozem, increase of weed infestation of the crops and reduction of grain crop rotation productivity after application of *no-till* technology compared with conventional and minimal tillage technologies. Periodic use of direct seeding in differentiated system of tillage in crop rotation is recommended. Ref. 9 titles.

Key words: tillage, direct seeding, plowing, grain crops, productivity, efficiency.

UDC 631.4

Haponenko A. I. Key aspects of crop cultivation under technologies of minimum tillage // Feeds and Feed Production. – 2014. – Issue 79. – P. 62–65.

Key aspects determining the choice of machine and tractor park for implementation of the technology of minimum tillage are described. A universal seeding machine with a tillage part and disc working bodies is considered to be a basic technical tool. Seeding machine having 3m seeding width is effective on the area of 200 ha, and 6m one – 500 ha. Big farms operate differently applying several techniques. But it is appropriate to apply one technology in one field in order to avoid costs on elimination of lacks of both technologies. For harvesting it is better to use chopper harvesters and set them for the uniform distribution. Disc harrow copes with stubble better and provides good conditions for the universal seeding machine. Crop residues on the field surface play the role of fertilizers, but it should be considered that the organisms decomposing them consume a lot of nitrogen needed for crops. To compensate the lack of food for crop plants, nitrogen fertilizers are applied. Economic benefits of growing one crop year after year are lost because of diseases that lead to lower yields. Non-cereal crops should make up 20 – 25 % in crop rotation. Introduction of minimum soil tillage requires careful planning of organizational and economic activities on the technological operations. Ref. 2 titles.

Key words: non-plow; minimum tillage; crop residues; crushing.

UDC 631.5(477.292.486)

Demidenko O. V. Risks of the transition to subsurface loosening and long-term effects of its systematic implementation on the typical chernozem of the left-bank Forest-Steppe of Ukraine // Feeds and Feed Production. – 2014. – Issue 79. – P. 66–72.

Unstable response of the typical chernozem soils to critical weather and climatic conditions at the beginning of transition to 5–12 cm subsurface loosening is shown. Long-term effects of the minimization of soil tillage in agroecosystem of the left-bank Forest-Steppe of Ukraine are demonstrated. Ref. 6 titles.

Key words: typical chernozem, subsoil loosening, minimization of soil tillage, variable-depth soil protecting tillage, crop productivity.

UDC 631.427

Vilnyi R. P., Maklyuk O. I. Change of the structure of the microbial cenosis and microbiological activity of typical chernozem under the influence of different soil tillage methods // Feeds and Feed Production. – 2014. – Issue 79. – P. 73–81.

Soil tillage is a key element in the farming system, which determines the intensity and direction of microbiological processes. Quantitative composition and the ratio of major agronomically important groups of microorganisms and their activity allow us to estimate the activity of microbiological processes and biological condition

of the soil as a whole. Therefore, the aim of research was to estimate microbiological status of typical chernozem of the left-bank Forest-Steppe of Ukraine under the influence of various soil tillage practices. Our research has found that under the influence of mechanical tillage of various intensity there takes place reorganization in the structure and functioning of the microbial complex of typical chernozem. The tendency of clear differentiation of typical chernozem biogenesis in the root zone and inter-rows during the whole vegetation season is determined. Zero tillage of typical chernozem improves biological condition that indicates formation of the best conditions for the growth and development of crops and intensification of metabolism in agroecosystems. Ref. 10 titles.

Key words: soil tillage, microorganisms, typical chernozem, dehydrogenase, microbiological activity, cellulose destroying.

UDC 633.11:631.531:632.26

Voloschuk A., Voloschuk I., Hlyva V. Seed productivity and sowing quality of seed of winter wheat varieties depending on the sowing terms in conditions of the western Forest-Steppe // Feeds and Feed Production. – 2014. – Issue 79. – P. 82–88.

The results of researches on the effect of winter wheat sowing terms on the seed yield and sowing quality are highlighted. Ref. 17 titles.

Key words: winter wheat, variety, sowing terms, yield, weight of 1000 seeds, germinating power, laboratory germination.

UDC 633.11:631.559:631.53.048

Andreiko L.E. Grain yield of spring wheat depending on the sowing terms and seeding rates in the Precarpathians // Feeds and Feed Production. – 2014. – Issue 79. – P. 89–92.

In the Precarpathians spring wheat can be a valuable crop for replanting destructed winter wheat sowings. Its grain is of high baking and cereal quality. In recent years, domestic and foreign researchers have bred a number of varieties that provide high and stable yields of grain. However, in the Precarpathians spring wheat is poorly distributed. It is explained by its low grain productivity due to the lack of scientifically-grounded cultivation technology. In our opinion, the main technological methods aimed to increase the yield of spring wheat varieties are selection of intensive varieties and determination of sowing terms and seeding rates that are the most suitable for this zone. Spring wheat varieties are characterized by a high ability to absorb nutrients from organic and mineral fertilizers, soil, physiologically balanced system of absorption, transportation and metabolism of ions, high resistance to changes in abiotic and anthropogenic stress factors, stable internal environment despite external fluctuations if the fluctuations are compatible with life, high energy efficiency ratio.

The aim of our research was to improve technological methods of cultivation of zoned spring wheat (Struna Myronivska, Elegia Myronivska) with the yield of 4-5 t/ha of high baking quality grain in conditions of the Precarpathians. The results of studies on the impact of the biological characteristics of the variety, sowing terms and seeding

rates on the structural performance of spring wheat crop (*Triticum aestivum*) under conditions the Precarpathians are highlighted. In conditions of the Precarpathians the highest yield of spring wheat is provided by the early sowing term (April 5) and seed rate of 6.5 million seed /ha. Elegia Myronivska variety proved to be productive. Ref. 4 titles.

Key words: productivity, variety, spring wheat, sowing terms, seeding rate.

UDC 633.2.031:631.8

Mashchak Y.I., Kobyrenko Y.A. Efficacy of seeding perennial legume grasses in the undeveloped turf // Feeds and Feed Production. – 2014. – Issue 79. – P. 93–97.

The results of researches on the productivity of legume grass mixtures in the degenerated grass stands of the Western Forest-Steppe under minimal turf treatment are highlighted. It is established that the highest yield of dry matter (14.1 t/ha) was observed in option number 7 (red clover + hybrid clover + bird's foot trefoil + eastern goat's rue) when there was applied $R_{60}K_{90}N_{60}$ + Wuxal. Ref. 9 titles.

Key words: grass stands, yield, productivity, renovation, grass mixtures, fertilizers, *No-till*.

UDC: 631.48:631.82

Vasylenko M. H., Zosimov V. D., Andriychenko H. V., Kostiuchenko M. V. Current state of the lands of Kiev region and measures of its improvement // Feeds and Feed Production. – 2014. – Issue 79. – P. 98–106.

The article deals with the research of the current status of soil fertility of Kiev region, the main factors that have negative effect on the conservation of the potential of soil fertility recreation are established. Current mechanisms affecting soil fertility conservation are analysed and new mechanisms are proposed.

UDC 631.52

Babiy S. I., Honchar T. M., Ruda I. V., Yurchuk S. S. Correlation between the elements of productivity and environmental parameters of spring rape variety samples // Feeds and Feed Production. – 2014. – Issue 79. – P. 107–112.

The results of correlations between quantitative traits of productivity of spring rape collection samples are stated. Indexes of ecological plasticity in the years of conducted researches are established and the best variety samples are selected by the environmental parameters of adaptability.

UDC: 631.8:633.31

Antoniv S. F., Kolisnyk S. I., Zapruta O. A., Fostolovych S. I., Konovalchuk V. V., Klochanyuk A. V. Effectiveness of new types of fertilizers having growth-regulating and antistress effect on the sowing and yield properties of alfalfa seed // Feeds and Feed Production. – 2014. – Issue 79. – P. 113–119.

Data of scientific researches aimed at enhancing alfalfa seed productivity under conditions of high soil acidity in the Forest-Steppe of Ukraine are highlighted. It has been established that application of water-soluble fertilizers ("Raskaty") in different phases of growth and development of alfalfa reduces negative effects of the deficiency of essential nutrition elements of seed plants, especially calcium.

UDC: 631.5:633.361

Matkevych V. T., Reznichenko V. P., Mitsenko N. P. Symbiotic efficiency of sainfoin under different technological methods // Feeds and Feed Production. – 2014. – Issue 79. – P. 120–122.

The results of studies on the effect of sowing methods and seeding rates as well as mineral nutrition on symbiotic nitrogen accumulation in sainfoin plants are presented.

UDC: 636.04:633.2:631.6 (477.72)

Hetman N. Y., Vasylenko R. N., Stepanova I. N. Bioenergy efficiency of annual forage agrocenosis cultivation in the south of Ukraine // Feeds and Feed Production. – 2014. – Issue 79. – P. 123–127.

The studies examined bioenergy effectiveness of broomcorn agrocenosis cultivation depending on the fertilizer rates, both under conditions of natural moisturizing and irrigation. Basic elements of the technology that facilitate reduction of energy consumption for the formation of crop yield are established.

UDC: 633.31:636.086

Horensky V. M. Evaluation of forage productivity of collection variety samples of alfalfa // Feeds and Feed Production. – 2014. – Issue 79. – P. 128–133.

The results of studies of alfalfa collection samples under high soil acidity are highlighted and promising initial material is selected by the traits of forage productivity.

UDC: 633.16:631.526

Marenyuk O. B. Correlation and regression analysis of economic characteristics of spring barley variety samples // Feeds and Feed Production. – 2014. – Issue 79. – P. 134–138.

The results of experiments on the establishment of common coefficients of correlation between basic quantitative traits of productivity and grain quality of spring barley are presented.

Keywords: spring barley, correlation, regression equation, elements of the yield structure, protein.

UDC: 633.15

Samoilenko O. A. Cultivation of winter barley after spring mustard and spring barley under conditions of Pre-Sivash // Feeds and Feed Production. – 2014. – Issue 79. – P. 139–143.

The results of studies on the productivity of winter barley after such predecessors as spring barley and spring mustard depending on the background of mineral fertilization under conditions of Pre-Sivash are highlighted. It has been established that the highest yield growth is provided by the Background + N₃₀ + TMG + N₃₀ locally – 2.38-2.45 t/ha.

UDC: 635.655:631.5

Kushnir M. V. Formation of soybean symbiotic productivity and yield under conditions of the right-bank Forest-Steppe // Feeds and Feed Production. – 2014. – Issue 79. – P. 144–151.

The results of studies on the effect of the method of pre-sowing seed treatment and foliar nutrition on the symbiotic and seed productivity of different soybean varieties under conditions of the right-bank Forest-Steppe are stated. The influence of these factors on the formation and functioning of the value of symbiotic apparatus and the level of seed yield of soybean varieties KiVin and Hutoryanochka is studied. Strong positive correlation between the activity of symbiotic apparatus and the level of soybean seed yield is revealed.

Keywords: soybean, variety, pre-sowing treatment, foliar nutrition, nitrogen fixation, symbiotic potential, yield.

UDC 633.34:631.52

Kohanyuk N. V. Transgression manifestation by the main quantitative traits of soybean productivity in F₂ // Feeds and Feed Production. – 2014. – Issue 79. – P. 152–156.

Transgressive variability of twenty soybean hybrid combinations derived on the basis of diallel crossing of five cultivars is studied. Frequency and degree of manifestation of positive transgressions in soybean hybrids of the second generation (F₂) by quantitative traits: plant height, quantity of productive nodes, quantity of beans per plant, quantity of seeds per plant, seed mass per plant are assessed.

Keywords: soybean, hybrid combination, frequency and degree of transgression, quantitative traits.

UDC: 633.367.631.5

Holodna A. V., Pavlenko V. Y. Indices of the structure elements and yield of blue lupine grown with bare-grained oat // Feeds and Feed Production. – 2014. – Issue 79. – P. 157–163.

The results of researches on the study of the effect of blue lupine agrocoenosis densifying with bare-grained oat according to the scheme of adding, fertilizing and pre-sowing seed treatment with preparations on the basis of nitrogen-fixing bacteria on

the formation of the elements of yield structure of leguminous component both in mixtures and pure crops are highlighted.

Keywords: yield structure elements, blue lupine, seeding rate, bare-grained oat, pre-sowing seed treatment, fertilizer, yield.

UDC: 635.652:631.8

Holodna A. V., Akulenko V. V., Stoliar O. O. Common bean yield depending on the variety, fertilization, seed rate and seed treatment in the northern Forest-Steppe // Feeds and Feed Production. – 2014. – Issue 79. – P. 164–169.

The results of studies on the effects of common bean variety, fertilization system, seeding rates and pre-sowing seed treatment on the level of yield, its correlation dependence on the elements of yield structure, height of attachment of the lower bean on a plant are presented. On the average over three years of the research, cultivation technology which provided a yield of 2.88 t/ha and involved fertilization with $N_{60}P_{60}K_{60}$, seeding rate of 450 thousand seed per ha, mixed pre-sowing seed treatment with the agent based on the active strain №8 and preparation Phytocide-p appeared to be the best for Perlyna variety. Shchedra variety formed maximum yield (2.53 t/ha) when applying $N_{52}P_{35}K_{63}$, sowing under seeding rate of 450 thousand seed per ha, treating seed with the agent based on strain №8 and preparation Phytocide-p

Key words: common bean, seeding, pre-sowing seed inoculation, growth-regulating substances, variety, fertilizer, yield.

UDC: 632.51:93

Ivashchenko A. A., Ivashchenko A. A. Reaction of *Polygonum lapathifolium* L. plants on the induced thermal and mechanical dis-stresses // Feeds and Feed Production. – 2014. – Issue 79. – P. 170–176.

Researches of biological features of reaction of *Polygonum lapathifolium* L. young plants on the induced stresses have proved changes of the level of their sensitivity to thermal and mechanical effects depending on the development phases at the moment of application. Single induction of dis-stresses provides considerable oppression of the processes of photosynthesis in plants that have survived and their strategy of ontogenesis. Deep induced dis-stresses can reduce essentially biological productivity of plants and even lead to their destruction. Results of researches are perspective for the development of environmentally friendly methods of weed control.

Keywords: plants, sensitivity, development phases, dis-stress, destruction, biological productivity.

UDC 632.952:623.16

Zadorozhny V. S., Karasevych V. V., Rudska N. O., Kolodiy S. V. Influence of biological preparations on harmful organisms and spring barley productivity // Feeds and Feed Production. – 2014. – Issue 79. – P. 177–183.

The results of the study of biological preparations when growing spring barley are highlighted. The influence of microbial preparations on the expansion of diseases, pests, weed infestation and crop productivity is established.

Keywords: microbial preparations, spring barley, yield, pests, diseases, weeds.

UDC: 633.11:632

Bohoslovska M. S., Lilyk T. V. Affection of winter triticale with diseases under conditions of the right-bank Forest-Steppe of Ukraine // Feeds and Feed Production. – 2014. – Issue 79. – P. 184–189.

The results of the spread and development of the most harmful diseases of winter triticale collection samples in the natural conditions are presented. As a result of phytopathological surveys of winter triticale varieties the symptoms of affection with powdery mildew (*Erysiphe graminis f. Sp. Tritici*), pyrenophorose (*Pyrenophora tritici-repentis*), brown flaky rust (*Puccinia recondita f.sp*) and ear fusariose (*Fusarium spp*) have been established

Keywords: triticale, varieties, diseases, spread, development, pathogen.

635.657: 631.5: 631.6

Lavrenko N. N. Efficiency of water consumption by chickpea sowings depending on the technological methods of its cultivation under different moisture conditions // Feeds and Feed Production. – 2014. – Issue 79. – P. 190–194.

The results of research on the influence of the depth of primary tillage, mineral fertilizers, plant densifying on the total water consumption by chickpea and its coefficient under different moisture conditions in the south of Ukraine are highlighted.

UDC: 633.41:631.5(1.15)(292.485)

Bakhmat M. I., Ovcharuk O. V. // Feeds and Feed Production. – 2014. – Issue 79. – P. 195–199.

In the article the results of research varieties of fodder beet, yield and dry matter content in conditions of forest-steppe of West. The yield of root crops in an average 2010–2013 among the best varieties was sort of Adra – 64,6 t/ha, among hybrids were allocated hybrid Krakus – 62,4 t/ha, in comparison with control 1,3 t/ha below. The dry matter content among the studied cultivars, the highest was the grade of the Kievskiy – 14,9%, the highest in varieties of Adra – by 12,1%. Hybrids Solidar – 14,4% and Krakus and 12,0%, respectively.

UDC: 5,633.2: 631.8: 631

Kovtun E. P., Veklenko Y. A., Kopayhorodska A. A. Low-cost technological methods of surface improvement of old-sown herbages under conditions of the right-bank Forest-Steppe // Feeds and Feed Production. – 2014. – Issue 79. – P. 200–206.

The results of field studies on the effectiveness of various technological methods of surface improvement of old alfalfa- and galega-cereal grass stands under

pasture use are presented. Economic expediency of low-cost methods of pasture improvement and their impact on production costs, prime cost of the grown production and net profit is determined.

Keywords: technological methods, surface improvement, botanical composition, old legume-grass mixtures, production costs, prime cost, feed units.

UDC: 631.62.633. [361+37+39]

Savchuk O. I., Hurelya V. V., Didkovskiy H. P. Productivity formation of perennial grasses on the drained mineral soils // Feeds and Feed Production. – 2014. – Issue 79. – P. 207–212.

It has been established that drained soils that are not intensively cultivated any more should be sown with grass mixtures on the basis of sandy sainfoin. In particular, on the sod soils binary mixtures of sainfoin with bird's-foot trefoil, blue hybrid alfalfa and *Dactylis glomerata* have provided productivity of dry matter 9.1–11.7 t/ha with 26.3–35.5 kg of feed units in green fodder and 3.75–5.72 kg of digestible protein.

UDC: 632.76:633.31:632.9

Rudska N. O. Control of the number of *Contarinia medicaginis* Kieff. and *Bruchophagus roddi* Cuss. in alfalfa sowings under conditions of the right-bank Forest Steppe of Ukraine // Feeds and Feed Production. – 2014. – Issue 79. – P. 213–218.

The results of the study of modern insecticide in alfalfa sowings against *Contarinia medicaginis* Kieff and *Bruchophagus roddi* Cuss. are highlighted. It is noted that plant spraying with insecticides Enzhio 247 SC, (0.18 l/ha) and Karate Zeon 050 SC, (0.15 l/ha) ensures effective pest control resulting in yield preservation at the level of 124–131 kg/ha.

Keywords: alfalfa, *Contarinia medicaginis* Kieff., *Bruchophagus roddi* Cuss., insecticides.

UDC 633.34:604

Kulyk M. F., Kulyk Y. M., Obertyukh Y. V., Khimich A. V., Vigovska I. O. Method for determination of genetically modified soybean // Feeds and Feed Production. – 2014. – Issue 79. – P. 219–223.

Method for determination of genetically modified soybean is based on bean germination in Petri dishes. Soybean seeds with well-developed sprouts are selected and transferred into new Petri dishes and poured with 2% aqueous solution of glyphosate for 2 hours, then excess solution is poured out, dishes are covered with lids and kept for 4–6 days, that is followed by comparison of height and colour of soybean sprouts in two options. Sprouts of non-genetically modified soybean inhibits growth, green colour changes into yellow, and sprouts of genetically modified soybean continued to grow in dark green colour.

Keywords: method, genetically modified soybean, sprouts, Petri dishes, glyphosate.

UDC 636.086:636.22/28

Kulyk M. F., Korniychuk A. V., Skoromna O. I., Zhukov V. P., Obertyukh Y. V., Hryplyvy V. V., Tyahun O. V. Experimental substantiation of low productive effect of starch and protein of grain in maize silage compared to dry and whole canned wet used for feeding cows // Feeds and Feed Production. – 2014. – Issue 79. – P. 224–230.

Starch and protein of maize grain from silage have lower productive effect than dry and whole canned wet grain when used in feeding highly productive cows. In silage-concentrate diets energy value of starch and protein of silage grain is overestimated, because it does not meet energy demands for the growth of rumen microorganisms. It is explained by high acidity of silage grain. Along with this, silage grain, which gets into small intestine, also has a low level of fermentation that is explained by a smaller contact area with enzymes as compared with fine-grinded dry and canned grain.

Keywords: corn silage, wet corn grain, oat and vetch silage, milk cows, milk productivity.

UDC 636.087.636.4

Chornolata L. P., Novakovska V. Y. Change of the feeding value of wheat and rye bran under enzym effect // Feeds and Feed Production. – 2014. – Issue 79. – P. 231–237.

Materials on the chemical composition of wheat and rye bran are submitted. Its role in farm animal feeding is noted, and the results of research on the redivision of the amount of easily soluble carbohydrates, starch, sugar, hemicellulose, cellulose in carbon complexes of bran under the effect of different multienzyme cocktails is established.

Keywords: bran, amount of easily soluble carbon, sugar, cellulose, hemicellulose, lignin, amylase, cellulase, protease, multienzyme cocktail.

UDC 636.081

Zayats A., Mandryk M., Bihas O., Bilyk B. Relationship of milk productivity of cows of the basic herd of Simmental breed with milk yield of fresh cows in advanced breeding farms of Vinnitsa region // Feeds and Feed Production. – 2014. – Issue 79. – P. 238–241.

Researches have been conducted at the advanced farms of Vinnytsia region engaged in breeding Simmental breed. High direct correlation ($r = 0.72-0.77$) between milk productivity of cows of the basic herd and fresh cows has been established. The results have showed that average milk yield is 90-95% in the basic cow herd. It confirms appropriateness of the chosen direction in selection and breeding work at the farms being a precondition for milk production increase.

UDC: 631.117.4:633

Zadorozhna I. S. Growth of the innovative potential of scientific researches on forage production // Feeds and Feed Production. – 2014. – Issue 79. – P. 242–248.

The essence of the process of making scientific products on forage production commercial one is revealed. The method of risk analysis of innovative developments of the institute is studied, an example of the analysis of the factors that determine the need to protect intellectual property rights of the institute is given.

Keywords: legal protection, commercialization, innovation, innovative production, intellectual property, risk analysis, technology.