

AGRAARTEADUS

JOURNAL OF AGRICULTURAL SCIENCE

1 ♦ XXXIII ♦ 2022

Väljaandja: Akadeemiline Põllumajanduse Selts
 Peatoimetaja: pm-dr Alo Tänavots
 Aadress: Fr. R. Kreutzwaldi 1, 51006 Tartu
 e-post: jas@emu.ee
 www: https://aps.emu.ee, https://agrt.emu.ee

Agraarteaduses avaldatud teaduspublikatsioonid on retsenseeritud

SISUKORD

TEADUSARTIKLID

<i>A. Adegoke, K. Sanwo, L. Egbeyale, M. Abatan, M. Oluwasinmi, O. Adebisin, O. Williams</i> Carcass characteristics and meat quality of broiler chickens fed dietary white and cayenne pepper powders as additives	1
<i>M. N. A. Al-Falahi, K. H. Al-Dulaimi, E. T. A. Ghani, D. K. A. Al-Taey, K. J. Farhan</i> Effect of humic acids and the amount of mineral fertilizer on some characteristics of saline soil, growth and yield of broccoli plant under salt stress conditions	11
<i>E. Aliiev, S. Pavlenko, G. Golub, O. Bielka</i> Research of mechanized process of organic waste composting	21
<i>M. M. Aljumaily, H. M. Al-Hamandi, M. J. Farhan, H. A. Kareem</i> Relationship between Zn and Cd in soil and plant	33
<i>D. K. A. Al-Taey, Zahraa J. M. Al-Musawi</i> The impact of nano fertilization and salicylic acid on growth, yield and anti-oxidant contents in rocket plant under salt stress	43
<i>V. Bandura, L. Fialkovska, P. Osadchuk, Y. Levtrynskaia, A. Palvashova</i> Investigation of properties of sunflower and rapeseed oils obtained by the soxhlet and microwave extraction methods	48
<i>P. Bhattarai, B. Lamichhane, P. Subedi, A. Khanal, S. Burlakoti, J. Shrestha</i> Effect of different levels of charcoal and nitrogen on growth and yield traits of broccoli	59
<i>V. Bulgakov, J. Olt, S. Ivanovs, O. Trokhaniak, J. Gadzalo, V. Adamchuk, M. Chernovol, S. Pascuzzi, F. Santoro, M. Arak</i> Research of a contact stresses in swivel elements of flexible shaft in screw conveyor for transportation of agricultural materials	67
<i>N. Georgieva, V. Kosev, D. Mitev, I. Stoycheva</i> Productivity and stability of foothill meadow species in the Balkan Mountains conditions	74
<i>Y. Hryhoriv, V. Nechyporenko, A. Butenko, M. Lyshenko, M. Kozak, I. Onopriienko, O. Shumkova, V. Shumkova, L. Kriuchko</i> Economic efficiency of sweet corn growing with nutrition optimization	81
<i>S. Jalakas, M. Roasto, T. Kaart, K. Praakle, M. Mäesaar, T. Elias</i> Redutseerivate suhkrute sisaldus Eestis enimkasvatatud köögiviljades saagikoristusjärgselt ja pärast säilitamist	88
<i>M. Kokhia, M. Lortkipanidze, O. Gorgadze, M. Kuchava, D. Nebieridze</i> Earthworms (<i>Oligochaeta: Lumbricidae</i>) and heavy metals: content and bio-accumulation in the body	95

R. Kõlli, E. Leedu

Tehismullad eesti muldade klassifikatsioonis: nomenklatuur, rajamine ja erinevused-sarnasused normaalselt arenenud muldadega 101

E. Mamnoie, M. R. Karaminejad, A. Aliverdi, M. M. Moeini

Application efficacy of newly released pre-mixed herbicide in winter wheat: Joystick® 118

E. Nugis, J. Kuht

Short Communication: Guttation of oat and wheat and the results of its comparison with the yield 124

Z. Pacanoski, A. Saliji, A. Mehmeti

Effectiveness of different adjuvants on efficacy of stellar (topremazone plus dicamba) applied at reduced rates in maize (*Zea mays* L.) 128

O. Sayuk, N. Plotnytska, R. Troyachenko, O. Ovezmyradova

Effect of fungicides on mycosis progression and potato yields 139

V. Siriak, Y. Polupan, R. Stavetska

Retrospective: Duration and efficiency of dairy cows productive lifespan depending on age at first calving and first lactation milk productivity 146

Olexander Sobolev, Olexander O. Borshch, Ihor Riznychuk, Olena Kyshlaly

Fortification of meat products of geese farming with lithium by introducing it into poultry mixed feed 154

M. Stamatopoulou, I. Tzimitra-Kalogianni

Consumers' profile analysis for chicken meat, during the first wave of COVID-19 pandemic: Case of Northern Greece 162

Y. H. Tsytsiura

Estimation of species allelopathic susceptibility to perennial weeds by detailing the formation period of germinated seeds of oilseed radish (*Raphanus sativus* L. Var. *oleiformis* Pers.) as the test object 176

O. Tsyuk, M. Tkachenko, A. Butenko, Y. Mishchenko, I. Kondratiuk, D. Litvinov,

Y. Tsiuk, Y. Sleptsov

Changes in the nitrogen compound transformation processes of typical chernozem depending on the tillage systems and fertilizers 192

V. Yaropud, I. Honcharuk, D. Datsiuk, E. Aliiev

The model for random packaging of small-seeded crops' seeds in the reservoir of selection seeder's sowing unit 199

V. Yatsenko, S. Poltoretskyi, I. Mostoviak, N. Vorobiova, O. Lazariev, V. Kravchenko

The effect of superabsorbent and different rates of the local fertilizer on garlic productivity in the forest-steppe of Ukraine 209

KROONIKA

M. Kass, H. Kiiman

Akadeemilise Põllumajanduse Seltsi 2021. aasta tegevusaruanne 222

JUUBELID

Akadeemilise Põllumajanduse Seltsi liikmete juubelid 224

MÄLESTUSPÄEVAD

K. Kalamees

Ain-Ilmar Leesment – 100 225

H. Peterson

Professor Jüri Kuum – 100 226

ERRATA

Anne Lüpsik

Errata: 70 aastat Eesti Põllumajanduse Akadeemia moodustamisest. Arengud õppetegevuses 228

AGRAARTEADUS

JOURNAL OF AGRICULTURAL SCIENCE

1 ♦ XXXIII ♦ 2022

Published by: Estonian Academic Agricultural Society
 Editor in Chief: Alo Tänavots DSc (agriculture)
 Address: Fr. R. Kreutzwaldi 1, 51006 Tartu, Estonia
 e-mail: jas@emu.ee
 www: <https://aps.emu.ee>, <https://agrt.emu.ee>

Research articles published in *Agraarteadus* are peer-reviewed

CONTENTS

RESEARCH ARTICLES

<i>A. Adegoke, K. Sanwo, L. Egbeyale, M. Abatan, M. Oluwasinmi, O. Adebesein, O. Williams</i> Carcass characteristics and meat quality of broiler chickens fed dietary white and cayenne pepper powders as additives	1
<i>M. N. A. Al-Falahi, K. H. Al-Dulaimi, E. T. A. Ghani, D. K. A. Al-Taey, K. J. Farhan</i> Effect of humic acids and the amount of mineral fertilizer on some characteristics of saline soil, growth and yield of broccoli plant under salt stress conditions	11
<i>E. Aliiev, S. Pavlenko, G. Golub, O. Bielka</i> Research of mechanized process of organic waste composting	21
<i>M. M. Aljumaily, H. M. Al-Hamandi, M. J. Farhan, H. A. Kareem</i> Relationship between Zn and Cd in soil and plant	33
<i>Duraïd K. A. Al-Taey, Zahraa J. M. Al-Musawi</i> The impact of nano fertilization and salicylic acid on growth, yield and anti-oxidant contents in rocket plant under salt stress	43
<i>V. Bandura, L. Fialkovska, P. Osadchuk, Y. Levtrynskaia, A. Palvashova</i> Investigation of properties of sunflower and rapeseed oils obtained by the soxhlet and microwave extraction methods	48
<i>P. Bhattarai, B. Lamichhane, P. Subedi, A. Khanal, S. Burlakoti, J. Shrestha</i> Effect of different levels of charcoal and nitrogen on growth and yield traits of broccoli	59
<i>V. Bulgakov, J. Olt, S. Ivanovs, O. Trokhaniak, J. Gadzalo, V. Adamchuk, M. Chernovol, S. Pascuzzi, F. Santoro, M. Arak</i> Research of a contact stresses in swivel elements of flexible shaft in screw conveyor for transportation of agricultural materials	67
<i>N. Georgieva, V. Kosev, D. Mitev, I. Stoycheva</i> Productivity and stability of foothill meadow species in the Balkan Mountains conditions	74
<i>Y. Hryhoriv, V. Nechyporenko, A. Butenko, M. Lyshenko, M. Kozak, I. Onopriienko, O. Shumkova, V. Shumkova, L. Kriuchko</i> Economic efficiency of sweet corn growing with nutrition optimization	81
<i>S. Jalakas, M. Roasto, T. Kaart, K. Praakle, M. Mäesaar, T. Elias</i> Content of reducing sugars in mostly grown vegetables in Estonia after harvesting and after storage	88
<i>M. Kokhia, M. Lortkipanidze, O. Gorgadze, M. Kuchava, D. Nebieridze</i> Earthworms (<i>Oligochaeta: Lumbricidae</i>) and heavy metals: content and bio-accumulation in the body	95

R. Kõlli, E. Leedu

Technosols in Estonian soil classification: Nomenclature, establishment and differences-similarities with normally developed soils 101

E. Mamnoie, M. R. Karaminejad, A. Aliverdi, M. M. Moeini

Application efficacy of newly released pre-mixed herbicide in winter wheat: Joystick® 118

E. Nugis, J. Kuht

Short Communication: Guttation of oat and wheat and the results of its comparison with the yield 124

Z. Pacanoski, A. Saliji, A. Mehmeti

Effectiveness of different adjuvants on efficacy of stellar (topremazone plus dicamba) applied at reduced rates in maize (*Zea mays* L.) 128

O. Sayuk, N. Plotnytska, R. Troyachenko, O. Ovezmyradova

Effect of fungicides on mycosis progression and potato yields 139

V. Siriak, Y. Polupan, R. Stavetska

Retrospective: Duration and efficiency of dairy cows productive lifespan depending on age at first calving and first lactation milk productivity 146

Olexander Sobolev, Olexander O. Borshch, Ihor Riznychuk, Olena Kyshlaly

Fortification of meat products of geese farming with lithium by introducing it into poultry mixed feed 154

M. Stamatopoulou, I. Tzimitra-Kalogianni

Consumers' profile analysis for chicken meat, during the first wave of COVID-19 pandemic: Case of Northern Greece 162

Y. H. Tsytsiura

Estimation of species allelopathic susceptibility to perennial weeds by detailing the formation period of germinated seeds of oilseed radish (*Raphanus sativus* L. Var. *oleiformis* Pers.) as the test object 176

O. Tsyuk, M. Tkachenko, A. Butenko, Y. Mishchenko, I. Kondratiuk, D. Litvinov,

Y. Tsiuk, Y. Sleptsov

Changes in the nitrogen compound transformation processes of typical chernozem depending on the tillage systems and fertilizers 192

V. Yaropud, I. Honcharuk, D. Datsiuk, E. Aliiev

The model for random packaging of small-seeded crops' seeds in the reservoir of selection seeder's sowing unit 199

V. Yatsenko, S. Poltoretskyi, I. Mostoviak, N. Vorobiova, O. Lazariiev, V. Kravchenko

The effect of superabsorbent and different rates of the local fertilizer on garlic productivity in the forest-steppe of Ukraine 209