THE AMOUNT OF PLASTID PIGMENTS IN THE LEAVES OF SOY VARIETIES

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Anotation: this article presents the results of experimental work on the amount of plastid pigments in the leaves of soy varieties.

Keywords: Oyjamol variety, photosynthesis,chlorophyll,seed inoculation, plastid, pigments, Nitragin, dream variety.

In the process of photosynthesis, pigments are considered acceptors of light, their physical and chemical properties determine the primary reactions of photosynthesis, that is, the effectiveness of the activity of the photosynthetic apparatus in green plants is determined by the state and amount of pigments contained in the membranes of chloroplasts chlorophylls are the main photosynthetic pigments. Chlorophyll "a "(XL A) is a universal pigment that converts light energy into charge separation energy, that is, in the process of oxygen photosynthesis, the first stage of Energy Exchange is chlorophyll" b" (XL b), a special chlorophyll of light collecting antenna complexes, which enhances the accumulation of light in low light and distributes excess absorbed energy in high light In chloroplasts, NADF and ATF are formed, which are necessary for reactions that ensure the production process. The main processes of light energy storage are related to the metabolism of plant cells and can be involved in the adaptation of plants not only to light conditions, but also to other environmental factors

With the onset of grain saturation, the amount of pigments in soy varieties decreases sharply, and at the stage of green ripening of the pods, it becomes 1.6 times less than in the yassian phase of the pods. In this case, the ratio of chlorophyll "a"to "b"varies from 8.1 to 10.5 the amount and ratio of pigments in Leaves is used as indicators of general resistance in plants. The ability of the photosynthetic apparatus, in particular its pigment complex, to adapt to changing external conditions, is the most important property of plant resistance and adaptation inoculation of seeds and potassium Humate coordinates the physiological processes that take place in the soybean plant, improves the activity of the enzyme catalase, chlorophyll and carotenoid content in the leaves of the shade.

In studies carried out in the conditions of the Soz-alluvial soils of the irrigated meadow of the Fergana region, the timing of planting and the effect of Nitragin on the amount of plastid pigments in the leaves of soy varieties studied during the period of grain saturation were determined. From the results of the analysis, it was found that the amount of chlorophyll "a" (XL A) was 1.77-2.64 mg/g on average in experimental variants.

Seeds 10-15.VI the amount of chlorophyll "a" (XL A) in the leaves of the dream variety planted in (control) was 1.92 in the nitragin-free option and 2.64 mg/g in the option where Nitragin was applied, or 1.38 times more than in the nitragin-free option. In the oyjamol variety, however, these indicators were 1.84; 2.40 mg/g and 1.30 times higher, respectively.

Seeds 20-25.VI while the amount of chlorophyll "a" (XL A) in the leaves of the dream variety planted at nitragin was 1.90 mg/g in the unused variant and 2.63 mg/g in the variant where Niragin was applied, 1.38 times more than in the nitragin-free variant, the indicators in the Oyjamol variety were

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1.83; 2.37 mg / g and 1.30 times higher, respectively. With the postponement of the planting period, it was found that the amount of chlorophyll “a” decreased in both varieties.

- table

The amount of plastid pigments in the leaves of soy varieties, mg/g in dry matter (during the period of grain saturation, 2018-2020.)

№	Экиш муддати (А)	Навлар (В)	Бактериал ўғит (С)	Хл a	Хл b	Хл a+Хл b	кароти-ноидлар
1	10-15.VI (назорат)	Орзу (назорат)	Нитрагинсиз	1,92	1,36	3,28	0,73
2			Нитрагин	2,64	1,89	4,53	0,84
3		Ойжамол	Нитрагинсиз	1,84	1,32	3,16	0,85
4			Нитрагин	2,40	1,71	4,11	0,98
5	20-25.VI	Орзу (назорат)	Нитрагинсиз	1,90	1,35	3,25	0,57
6			Нитрагин	2,63	1,88	4,50	0,66
7		Ойжамол	Нитрагинсиз	1,83	1,31	3,13	0,75
8			Нитрагин	2,37	1,69	4,06	0,86
9	01-05.VII	Орзу (назорат)	Нитрагинсиз	1,88	1,34	3,22	0,53
10			Нитрагин	2,62	1,86	4,48	0,62
11		Ойжамол	Нитрагинсиз	1,80	1,29	3,09	0,72
12			Нитрагин	2,35	1,67	4,02	0,83
13	10-15.VII	Орзу (назорат)	Нитрагинсиз	1,86	1,32	3,19	0,48
14			Нитрагин	2,60	1,85	4,45	0,55
15		Ойжамол	Нитрагинсиз	1,77	1,27	3,04	0,68
16			Нитрагин	2,33	1,66	3,98	0,77

It was taken into account that the amount of chlorophyll “b” (XL b) in the leaves of soy varieties was 1.27-1.89 mg/g on average in experimental variants, and the amount of chlorophyll “a” was 1.39 times higher than the amount of chlorophyll “b”, respectively.

It has been found that the amount of chlorophyll “b” in the leaves of soy varieties has changed, just like the amount of chlorophyll “a”, due to the timing of planting and the action of Nitragin. Seeds 10-15.VI while the amount of chlorophyll “b” in the dream variety planted at (Control) was 1.36 mg/g in the nitragin-free variant, the seeds were found to be 1.89 mg/g in the inoculated variant with Nitragin, or 1.16 times more than in the nitragin-free variant. Likewise, in the Oyjamol Variety, the indicators were 1.32; 1.71 mg/g and 1.30 times, respectively. Of the planting period 10-15.VI with the postponement from (control), there was a tendency to decrease the amount of chlorophyll “b”, as in the case of chlorophyll “a” in the leaves of soy varieties.

The main function of chloroplasts is photosynthesis, that is, the production of organic substances from carbon dioxide using the energy of sunlight. Chloroplast membranes contain protein-pigment complexes-photosystems I and II, which contain various proteins, as well as pigments - chlorophylls and carotenoids contain carotenoids that perform light collection and light protection functions, remove excess excitation energy carotenoids absorb blue-green light and transfer its energy to chlorophylls carotenoids are not only photoprotectors, but also light collectors as components of

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the antenna complex, they contribute to a more efficient use of sunlight with less insolation. Therefore, an increase in the level of yellow pigments in soy leaves in cool, excessively humid conditions can be considered as an adaptation reaction of the shadow varieties of the northern ecotype, since the second function of carotenoids in chloroplasts is to protect against light. They protect photosystems from light - "overloads", which can lead to excessive excitation and incorrect operation of photosystems. Carotenoids serve as specific "emergency valves", which allows you to accumulate excess energy, turning it into heat. Carotenoids carry out this task in different ways, that is, simply by "filtering" unwanted light, obtaining excess light energy, or removing energy from overexcited chlorophyll. Carotenoids can also "quench" reactive oxygen species, that is, they also serve as antioxidants the third function of carotenoids is the structure. Carotenoids are an important component of photosynthetic chloroplast membranes. It has been experimentally proven that photosystems without carotenoids remain unstable. Carotenoid molecules occupy strictly defined poses in photosystems, and without them the entire structure simply disintegrates.

In conclusion, when growing soy varieties in areas freed from autumn wheat in the conditions of the Soz-alluvial soils of the irrigated meadow of the Fergana region, the amount of chlorophyll “a” in the leaves of soy varieties is 1.39 times higher than the amount of chlorophyll “b”, sowing seeds 10-15.VI with the postponement from (control), the amount of plastid pigments decreases. When seeds are sown by inoculation with Nitragin, the amount of plastid pigments, carotenoids increases in both varieties. The amount of plastid pigments in the leaves of the plant will be higher in the dream variety than in the Oyjamol variety.

Used literature:

1. Атабаева Х.Н., Умарова Н.С. Соя биологияси. –Тошкент, Наврўз, 2020. -228 б.
2. Бабаяров М.Х. Продуктивность сои в зависимости от уровня азотного питания на типичных сероземах почвах при орошении: Автореф. дисс. на соиск. уч. степ. канд. с.-х. наук. –Самарканд, 1986. -24 с.
3. Баранов В.Ф., Лукомец В.И. Соя – биология и технология возделывания. –Краснодар, 2005. -433 с.
4. “Бугунги кундаги биозарарланиш муаммоси – инсон фаолияти доирасидаги муҳим муаммо” ТШ Рузиевна “Илм ва таълимнинг ривожланиш истиқболлари” 4 (www.openscience.uz), 157-160 p.
5. “Ўқувчиларнинг касбга йўналтиришнинг педагогик асослари” ТШ Рузиевна Наманган давлат университети илмий ахборотномаси 8 (Наманган давлат …
6. A healthy lifestyle and its importance RN Mominova, D Ibragimova The American Journal of Applied sciences 3 (03), 1-6
7. A HEALTHY LIFESTYLE IS A KEY FACTOR IN THE EDUCATION OF DEVELOPED PERSONS R Inoyatkhon, A Mohiyatkhon Innovative Technologica: Methodical Research Journal 2 (05), 147-150
8. About the practice of using excursions in natural lessons GM Mahkamov, RY Ruzmatov ACADEMICIA: An International Multidisciplinary Research Journal 11 (3), 2066 …
9. Absolution Capacity of Irrigated Gray-Brown Fulvous Soils IZ Jaloldinovich INTERNATIONAL CONFERENCE ON MULTIDISCIPLINARY RESEARCH AND INNOVATIVE …
10. ALGOFLORA OF TYPICAL GRAY SOILS FOR CONTINUOUS TILLAGE SA Tursunova, ST Mamasoliev Chief Editor
11. Alkaloids from Convolvulus lineatus and C. olgae growing in Uzbekistan AM Gapparov, NA Razzakov, SM Abdullabekov, SF Aripova Chemistry of Natural Compounds 44 (2), 270-271
12. Alkaloids from the aerial part and roots of Convolvulus pseudocanthabrica indigenous to Uzbekistan AM Gapparov, SF Aripova Chemistry of Natural Compounds 47 (4), 673-674

ISSN 2277-3630 (online), Published by International journal of Social Sciences & Interdisciplinary Research., under Volume: 11 Issue: 12 in December-2022
https://www.gejournal.net/index.php/IJSSIR

13. Biogeochemistry of the onion (Allium cepa L.) in irrigated soils M Isagaliev, I Zokirjon Journal of Natural Remedie 21 (12), 2
14. Biological aspects of human adaptation to environmental conditions SR Toshmatova, SO Usmonov ACADEMICIA: An International Multidisciplinary Research Journal 11 (3), 2185 …
15. BIOXILMA XILLIKNI SAQLASH VA QO'RIQLANADIGAN MINTAQALARNING AHAMIYATI ZJ Isomiddinov, XA Ma'murov Научная дискуссия: вопросы математики, физики, химии, биологии, 89-93
16. Derivatives of the alkaloid convolvine and their pharmacological activity AM Gapparov, II Okhunov, SF Aripova, A Nabiev, VU Khuzhaev Chemistry of Natural Compounds 47 (4), 608-611
17. DEVELOPMENT OF STUDENTS'CREATIVITY TD Sobirhonovna ASIA PACIFIC JOURNAL OF MARKETING & MANAGEMENT REVIEW ISSN: 2319-2836 Impact …
18. Development of the Parasite Nematode Echinuria Uncinata (Nematoda: Acuariidae) in the Intermediate Host in Uzbekistan MJMAE Kuchboev, HK Abdunazarov, AO Olimlonovich Annals of the Romanian Society for Cell Biology 25 (6), 3118-3124
19. Distribution of the Pulicario salviifolia, P.gnaphalodes,P.uliginosa in the Fergana valley СКА Н.К.Алиева International Journal of Botany Studies, 1234-1238
20. DUDUQLANISHNING KELIB CHIQISH SABABLARI VA OLDINI OLISH SM Umarova, X Murodova Интернаука, 57-58
21. Genetic diversity in Gossypium genus IY Abdurakhmonov, A Abdukarimov, AE Pepper, AA Abdullaev, ... IntechOpen 338, 313
22. Geografiya Ta'limida Geografik Axborot Tizimlaridan Foydalanish OA Qo'chqorov, SE Otajonov, XA Ma'murov Интернаука, 66-68
23. HEPATOPROTECTIVE POTENTIAL OF POLYPHENOLS IN CCL4-INDUCED HEPATIC DAMAGE TO Mamirovna, PM Komiljonovich, MR Rasuljonovich European science review, 3-8
24. HISTORY OF BIOINFORMATICS YI Mirsaydaliyevich INTERNATIONAL JOURNAL OF SOCIAL SCIENCE & INTERDISCIPLINARY RESEARCH ISSN …
25. INTERNATIONAL JOURNAL ON INTEGRATED EDUCATION SYS Ravshanova Inoyatkhon Erkinovna Natural emergencies 3 (e-ISSN : 26203502), 170-171
26. KASB BU-HAYOT U Muxayyoxon, U Xilolaxon Yosh Tadqiqotchi Jurnali 1 (5), 327-333
27. METHODS OF DETERMINING THE MINERALIZATION OF THE SOIL: https://doi. org/10.47100/conferences. v1i1. 1393 I Yusupov RESEARCH SUPPORT CENTER CONFERENCES
28. Molecular mapping of photoperiodic flowering in cotton F Kushanov, U Shapulatov, H Urmonov, O Turaev, SE Shermatov, ... Proceedings of the International Cotton Genome Initiative 2010 Conference …
29. Morphological and ecological features of some nematodes of the genus Rhabdochona in marinka obtained from Fergana Valley, Uzbekistan AE Kuchboev, EK Najmidinov, MA Mukhamediev, RR Karimova, K Yildiz Journal of Parasitic Diseases 45 (4), 1084-1089
30. ON ANALYSIS OF CHEMICAL ELEMENTS IN THE SOIL-ONION SYSTEM: https://doi. org/10.47100/conferences. v1i1. 1343 Z Isomiddinov RESEARCH SUPPORT CENTER CONFERENCES
31. O'SMIRLAR UCHUN KELAJAK KASBINI TANLASHDA INDIVIDUAL MAYLLARINI ANIQLASH UMS Qizi, UX Yuldashevna Ta'lim fidoyilari, 481-487
32. Pedagogical factors of preparation of future teachers of biology for professional-pedagogical activities MM Isabayeva, SR Otajonova ACADEMICIA: An International Multidisciplinary Research Journal 11 (6), 48-51

ISSN 2277-3630 (online), Published by International journal of Social Sciences & Interdisciplinary Research., under Volume: 11 Issue: 12 in December-2022
https://www.gejournal.net/index.php/IJSSIR

33. PESTS OF FRUIT ORCHARDS IN THE TERRITORY OF KOKAND: https://doi. org/10.47100/conferences. v1i1. 1318 S Otajonova RESEARCH SUPPORT CENTER CONFERENCES
34. Phytoecdysteroids-containing extract from *Stachys hissarica* plant and its wound-healing activity NS Ramazanov, ID Bobayev, UY Yusupova, NK Aliyeva, FR Egamova, ... Natural product research 31 (5), 593-597
35. PROFESSIONAL COMPETENCY BUILDING FUTURE BIOLOGY TEACHER M Usmonova European Journal of Research and Reflection in Educational Sciences Vol 7 (12)
36. Protecting the Environment of Uzbekistan from Environmental Emergencies SM Umarova Journal of New Century Innovations 3 (4), 130-135
37. READING-INTELLIGENCE AS A CAPACITY-BUILDING TOOL MA Асқарова, CP Отажонова, МБ Алимова, МД Ирматова Scientific Bulletin of Namangan State University 2 (7), 398-402
38. REPRODUCTIVE HEALTH IS THE GUARANTEE OF A HEALTHY FAMILY ID Adxamovna, MT Turgunovich Modern Journal of Social Sciences and Humanities 4, 374-377
39. Role of physiological and psychological characteristics of a person in life safety IE Ravshanova, MS Ahmadjanova, YS Shermatova European Journal of Research and Reflection in Educational Sciences Vol 8 (1)
40. RTA MAXSUS TA'LIM VAZIRLIGI Yusupov Ibragim Mirsaydalievich UMUMIY MIKROBIOLOGIYA 5110400-Biologiya o'qitish metodikasi DARSLIK Toshkent-2020 138-139 бетлар OVAO O'ZBEKISTON RESPUBLIKASI Мувофиқлаштирувчи кенгашнинг ўқув-услубий бирлашма ва комиссиялари томонидан …
41. Science of Genetics and a Brief History of Its Creation. the Creation of the Laws of Heredity AM Sadriyevna European Scholar Journal 1 (3), 14-15
42. SPECIES DIVERSITY AND PROSPECTS FOR CULTIVATION OF DECORATIVE SHRUBS OF JIZAK DU Ishankulova, KK Khaidarov Scientific Bulletin of Namangan State University 2 (9), 100-104
43. Technology for Introducing a Healthy Lifestyle Into the Minds of Young People TT Meliboyev, DA Ibragimova European Journal of Research Development and Sustainability 2 (2), 56-58
44. The Impact of Mental Disorder on Childrens' Health MFR S. M. Umarova1 EURASIAN JOURNAL OF ACADEMIC RESEARCH 2 (5), 528-531
45. THE IMPORTANCE OF USING THE SCIENTIFIC HERITAGE OF IBN SINA IN THE TEACHING OF BIOLOGY IN GENERAL SECONDARY EDUCATION TS Xayrullaevna European Journal of Research and Reflection in Educational Sciences 8 (12), 146
46. THE ROLE OF ALGAE IN WATER TREATMENT R Muminova, RY Ro'zmatov Scientific Bulletin of Namangan State University 2 (9), 96-100
47. THE USE OF MENTAL MAPS IN TEACHING THE TOPIC OF EPISTASIS MC Ахмаджанова Актуальные научные исследования в современном мире, 9-11
48. Theoretical foundations of the organization of the agency for youth affairs AM Mansurovich, AD Gayratovna Asian Journal of Research in Social Sciences and Humanities 12 (4), 510-511
49. Use of Innovations and Foreign Experiences in Education of Students on Life Safety SY Sabirovna Eurasian Research Bulletin 7, 58-61
50. YER YUZASIDA TARQALGAN BIOSENOZ VA POPULYASIYANING ASOSIY XUSUSIYATLARI ZJ Isomiddinov, XA Ma'murov Интернаука, 38-40
51. Zooplankton of Sarikamish Lake (Uzbekistan) XX Abdinazarov, MJ Madumarov, SM Haydarov Open Access Library Journal 6 (3), 1-8

ISSN 2277-3630 (online), Published by International journal of Social Sciences & Interdisciplinary Research., under Volume: 11 Issue: 12 in December-2022
https://www.gejournal.net/index.php/IJSSIR

52. Биологическая очистка сточных вод гидролизных производств путем культивирования высших водных растений РШ Шоякубов, РН Муминова Узбекский биологический журнал, 35-38
53. Биология дарсларида Абу Али ибн Синонинг табиат ва инсон саломатлигига оид қарашларидан фойдаланиш усуллари СХ Тожибоева Современное образование (Узбекистан), 42-47
54. ВЛИЯНИЕ АБИОТИЧЕСКИХ ФАКТОРОВ НА РАСПРОСТРАНЕННОСТЬ И ПЛОТНОСТЬ ВИДОВ СЕМЕЙСТВ UNIONIDAE, PISIDIDAE, EUGLESIDAE И CORBICULIDAE В ВЫСОКОГОРНЫХ РАЙОНАХ ПРИБРЕЖНОЙ ЗОНЫ … НЖ Ходжаева, ХТ Боймуродов, ХХ Абдиназаров, БХ Алиев Бюллетень науки и практики 7 (11), 28-33
55. Воспитание информационной и нравственной культуры у современной молодежи в интернете КД Облабердиева, ГМ Махкамов, РЯ Рузметов, ХА Абдупаттоев Сборники конференций НИЦ Социосфера, 116-118
56. ДЕВИАЦИЯ КАК СОЦИАЛЬНО-ПЕДАГОГИЧЕСКАЯ ПРОБЛЕМА ДШ Вахобова, ДА Ибрагимова, ЯС Шерматова Исследование инновационного потенциала общества и формирование направлений …
57. ИЗБИРАТЕЛЬНАЯ СИСТЕМА РЕСПУБЛИКИ УЗБЕКИСТАН." КОДЕКС О ВЫБОРАХ" И ЕГО ЗНАЧЕНИЕ СО Усмонов, АА Мирзарахмонов Ученый XXI века, 21-25
58. Инновацион таълим муҳитида соғлом турмуш тарзи кўникмаларини таркиб топтириш технологияси ММ Исабаева Современное образование (Узбекистан), 46-51
59. Использование информационно-коммуникационных технологий на уроках биологии ХМ Рустамовна Life Sciences and Agriculture 1 (1), 149
60. КЕЙСЛАРДАН ФОЙДАЛАНИБ “НУКЛЕИН КИСЛОТАЛАР, ДНК ВА РНК МОЛЕКУЛАСИ” МОДУЛИНИ ЎҚИТИШ ММ Азимов, ХН Урманов, СО Усмонов, РЁ Рўзиматов Интернаука, 54-55
61. КОМНАТНЫЕ РАСТЕНИЯ И ЭКОЛОГИЯ ЖИЛИЩА СС АРТЫКОВ, МР ХАЛИМОВА, ДС ТАШПУЛАТОВА МОЛОДЕЖЬ И НАУКА: ШАГ К УСПЕХУ, 138-140
62. О ПРЕДОТВРАЩЕНИИ УСТАЛОСТИ У ШКОЛЬНИКОВ ОМ ТУРДИЕВА, СХ ТОЖИБОЕВА, ША ТУРСУНОВА БУДУЩЕЕ НАУКИ-2015, 422-426
63. ОТНОШЕНИЕ УЧИТЕЛЕЙ К ИНКЛЮЗИВНОМУ ОБРАЗОВАНИЮ В КАЗАХСТАНЕ: КЕЙС ОБЩЕОБРАЗОВАТЕЛЬНЫХ ШКОЛ ГОРОДА АЛМАТЫ ДШ Юсупова, ММ Исабаев Central Asian Economic Review, 76-89
64. ОХРАНА ОКРУЖАЮЩЕЙ СРЕДЫ КАК СРЕДСТВО ФОРМИРОВАНИЯ БИОЛОГИЧЕСКОЙ КУЛЬТУРЫ ОМ ТУРДИЕВА БУДУЩЕЕ НАУКИ-2015, 419-422
65. ОХРАНА РЕДКИХ И ИСЧЕЗАЮЩИХ ПТИЦ СС АРТЫКОВ, МР ХАЛИМОВА, ДС ТАШПУЛАТОВА МОЛОДЕЖЬ И НАУКА: ШАГ К УСПЕХУ, 140-141
66. Педагогические и психологические проблемы обучения детей с нарушениями зрения ГМ Махкамов, РЯ Рузматов Наука и мир 2 (4), 84-86
67. ПЛАНЕТАМИЗДА ТИРИК ОРГАНИЗМЛАРНИ ТАРҚАЛИШ ЧЕГАРАЛАРИНИНГ АСОСИЙ ҚОНУНИЯТЛАРИ ҒХ Бердиев, ХА Маъмуров, ХН Урманов, ШЭ Отажонов, ММ Азимов Интернаука, 52-54
68. ПОВЫШЕНИЕ КОНКУРЕНТОСПОСОБНОСТИ ФИРМЫ В РАМКАХ ИНДУСТРИАЛЬНОЙ ПОЛИТИКИ: ЛИТЕРАТУРНЫЙ ОБЗОР АМ Сейтказиева, ММ Исабаев, ЕМ Раушанов Economics: the strategy and practice 14 (4), 43-52
69. Развитие креативных способностей учащихся на уроках биологии ДС Тошпулатова Образование, наука, карьера 4 (4), 16-19

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https://www.gejournal.net/index.php/IJSSIR

70. Редкие и исчезающие растения ДС ТАШПУЛАТОВА, МР ХАЛИМОВА Будущее науки-2017, 330-331
71. Республика худудларида интродукция килинадиган яхлит баргли Содак усимлигининг агротехнологияси ИДБ Н.К.Алиева актуальные вопросы защиты, производства переработки лекарственных и пряных …
72. Состояние окружающей среды и её влияние на здоровье человека МС Ахмаджонова Инновационная экономика: перспективы развития и совершенствования, 29-31
73. ТАЛАБАЛАРНИНГ ПСИХОЛОГИК САЛОМАТЛИГИНИ ТАЪМИНЛАШНИНГ АСОСИЙ МЕЗОНЛАРИ ИЭ Равшанова, ЁС Шерматова Интернаука, 87-89
74. ТЕХНОЛОГИЯ КОНСТРУИРОВАНИЯ УЧЕНИЯ АВИЦЕННЫ НА УРОКАХ БИОЛОГИИ CTS Tojiboyeva) ПЕДАГОГИЧЕСКИЕ НАУКИ 101 (2), 12
75. Forms of organizing the cognitive activity of students in the process of solving problems and exercises in biology AM Mahmudovna, MM Isaboeva Web of Scientist: International Scientific Research Journal 3 (7), 68-76
76. МЕВАЛИ ДАРАХТЛАРНИ ЗАРАРКУНАНДАЛАРИГА УЙҒУНЛАШГАН КУРАШ ЧОРАЛАРИ МН Юсупова, ММ Ахмедова ЖУРНАЛ АГРО ПРОЦЕССИНГ 2 (8)
77. ЗАРАРКУНАНДАЛАРГА ҚАРШИ ФОЙДАЛАНАДИГАН ЙИРТҚИЧ ЭНТОМОФАГЛАР ММ Аҳмедова Интернаука, 43-44

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