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**PROGRESS OF SCIENCE:
INNOVATIVE APPROACHES TO
SCIENCE AND STRATEGIC ANALYSES**

**ILM-FAN TARAQQIYOTI:
ILMIY INNOVATSION YONDASHUVLAR
VA STRATEGIK TAHLILLAR**

**ПРОГРЕСС НАУКИ:
ИННОВАЦИОННЫЕ ПОДХОДЫ К НАУКЕ
И СТРАТЕГИЧЕСКИЙ АНАЛИЗ**

international scientific and technical conference

xalqaro ilmiy-texnik anjuman

международная научно-техническая конференция

11
NOVEMBER
2024

**MATERIALS
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∴ Jizzax 2024 ∴



**O‘ZBEKISTON RESPUBLIKASI
OLIIY TA’LIM, FAN VA INNOVATSIYALAR VAZIRLIGI**

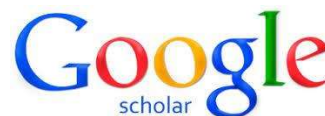
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**“ILM-FAN TARAQQIYOTI: ILMIY INNOVATSION
YONDASHUVLAR VA STRATEGIK TAHLILLAR”**

mavzusida xalqaro ilmiy- texnik konferensiya

2024-yil 11-noyabr

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**ПРОГРЕСС НАУКИ: ИННОВАЦИОННЫЕ ПОДХОДЫ К
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1 том

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Part 1

***Glycyrrhiza glabra* L. o'simligining urug' unuvchanligi**
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Annotatsiya

Ushbu maqolada ko'p tomanlama foydali bo'lgan dorivor o'simlik Tuksiz shirinmiyaning biologik xususiyatlaridan biri bo'lgan urug' unuvchanligi o'rganilgan. Ko'pchilik dukkakdoshlar oilasi vakillarida urug' po'sti qalin bo'lib, unuvchanlik juda past bo'lganligini tufayli turli vositalar orqali o'simlik urug' unuvchanligini oshirish muhim sanaladi. O'simlik urug'larining unuvchanligiga skarifikatsiya usullarining ta'siri aniqlandi. Olingan natijalar tahlil qilindi va tegishli xulosalar berildi.

Kalit so'zlar: *Glycyrrhiza glabra*, burchoqdoshlar, glitserizin, ildiz, urug', urug' unuvchanlik, skarifikatsiya, mis kuporosi, qum.

Аннотация

В данной статье изучается всхожесть семян, которая является одним из биологических свойств лекарственного растения, полезного во многих отношениях. В связи с тем, что большинство представителей семейства бобовых имеют толстую семенную кожуру и плодovitost' очень низкую, важно различными способами повышать семенную плодovitost' растений. Определено влияние методов скарификации на всхожесть семян растений. Полученные результаты были проанализированы и сделаны соответствующие выводы.

Ключевые слова: Солодка голая, бобовые, глицирризин, корень, семя, прорастание семян, скарификация, медный купорос, песок.

Annotation

In this article, seed germination, which is one of the biological properties of a medicinal plant that is useful in many ways, is studied. Due to the fact that most members of the leguminous family have a thick seed coat and the fertility is very low, it is important to increase the plant seed fertility through various means. The effect of scarification methods on the germination of plant seeds was determined. The obtained results were analyzed and relevant conclusions were given.

Key words: *Glycyrrhiza glabra*, legume, glycyrrhizin, root, seed, seed germination, scarification, copper sulfate, sand.

Kirish. Dukkakdoshlar oilasi 650 turkumga mansub 18000 turni o'z ichiga oladi. Bu oila vakillari Yer sharining hamma quruqliklarida uchratish mumkin. O'zbekistonda esa 35 turkumga oid 422 turi o'sadi. Bu oila 3 oilachaga bo'linadi. Bular: sezalpindoshlar, mimozadoshlar va burchoqdoshlar[8]. Biz o'raganayotgan o'simlik tuksiz shirinmiya burchoqdoshlar oilachasiga mansub. Ushbu o'simlikning qisqacha sistematik o'rni 1-jadvalda keltirilgan[3,10]. Fanda *Glycyrrhiza* L. turkumining 30 ta turi ma'lum. O'rta Osiyo florasida esa 9 ta tur(*Glycyrrhiza glabra*, *Glycyrrhiza aspera*, *Glycyrrhiza uralensis*, *Glycyrrhiza echinata*, *Glycyrrhiza korshinskiyi*, *Glycyrrhiza bucharica*, *Glycyrrhiza gontscharovii*, *Glycyrrhiza triphilla*, *Glycyrrhiza erythrocarpa*) uchraydi. Bulardan O'zbekiston florasida 5 ta tur(*Glycyrrhiza bucharica*, *Glycyrrhiza aspera*, *Glycyrrhiza lexisima*, *Glycyrrhiza uralensis*, *Glycyrrhiza glabra*) tarqalgan[2,5].

1-jadval

Tuksiz shirinmiya o'simligining sistematik o'rni

№	Sistematik o'rni		Nomlanishi	
	Lotincha	O'zbekcha	Lotincha	O'zbekcha
1	<i>Divisio</i>	Bo'lim	<i>Magnoliophyta</i>	Magnoliyatoifa
2	<i>Classis</i>	Sinf	<i>Magnoliopsida</i>	Magnoliyasimonlar

3	<i>Ordo</i>	Qabila	<i>Fabales</i>	Burchoqnomalar
4	<i>Familia</i>	Oila	<i>Fabaceae</i>	Burchoqdoshlar
5	<i>Genus</i>	Turkum	<i>Glycyrrhiza L.</i>	Shirinmiya
6	<i>Spesies</i>	Tur	<i>Glycyrrhiza glabra L.</i>	Tuksiz shirinmiya

Tuksiz shirinmiya(*Glycyrrhiza glabra*L.)-ko'p yillik, yo'g'on ildizpoyali o'tsimon o'simlik. Tuksiz shirinmiya (*G. glabra*) xo'jalik nuqtayi nazardan ahamiyatli. U ko'p yillik, ildizbachkili o'simlik, poyasi tik o'sadi, bo'yi 0,5 metr, barglari toqpatimon. Ildizi tuproqqa chuqur (10 metr) kiradi. Cho'llardagi qumliklarning chuqurlik joylari, daryo bo'ylari va havzalari, to'qaylarda o'sadi. Yaylov o'simligi sifatida ahamiyatsiz, chunki uni mevalaguncha qo'y, tuya va qoramollar yemaydi, faqat kuzgi, qishki davrda yeydi. Pichan va silos tayyorlaganda ozuqaligi yaxshi hisoblanadi. Har gektaridan 1-4 tonna pichan beradi. Pichanni, ayniqsa, shonalash-gullash fazasida tayyorlaganda hamma hayvonlar qoniqarli yeydi[2].

Ildizi tarkibida 4,6-20 % glitserizin, 10 % qand, 0,035 % efir moyi, bargida C vitamini, 14 % kraxmal, 8 % oshlovchi moddalar bor. Ibn Sino tuksiz shirinmiya ildizidan turli xastaliklarni davolashda foydalangan(8). Tuksiz shirinmiya ildizida 23% glisirridin, likvitozid, flavonoidlar, efir moyi, 4% asparagun, qand, 8,4% sirrizin achchiq moddasi, bargida C vitamin bor[3,8].

Glycyrrhiza L. turlaridan ko'p miqdordagi (400 dan ortiq) kimyoviy birikmalar ajratib olingan bo'lib, ularning tarkibi har xil, o'simlik turlari va geografik tarqalishiga qarab farq qilishi mumkin[9,1].

Tuksiz shirinmiya ildizida glitserizin mavjud bo'lib, u qamish (*Phragmites*) shakariga nisbatan 60 marta shirindir[6].

Ildizidagi shirin ta'mni beradigan komponent glizirrizik kislotasining kaliy-kalsiy-magniy tuzlari aralashmasi bo'lib, 2-25% oralig'ida o'zgarib turadi[7].

Tajriba qismi. Bizga ma'lumki dukkakdoshlar oilasining ko'pchilik vakillarining urug'i qattiq urug'lar tipiga kiradi. Urug' po'sti qalin bo'lganligi bois uzoq vaqtgacha ham tinim davri holatida qoladi. Shuning uchun bunday urug'larni undirishdan oldin turli yo'llar bilan ishlov berish tavsiya etilgan. Bunday ishlov berishning kimyoviy, fizik va mexanik usullari mavjud bo'lib, biz o'z tajribamiz davomida bu usullardan foydalandik va tuksiz shirinmiya urug'larining unib chiqishiga skarifikatsiya usullarining ta'siri o'rgandik. Laboratoriya va dala sharoitida turli yo'llar bilan skarifikatsiya qilingan o'simlik urug'larining urug' unuvchaligiga oid ma'lumotlar 2-jadvalda keltirilgan.

2-jadval

Tuksiz shirinmiya urug'larini laboratoriya va dala sharoitida unib chiqishiga skarifikatsiyaning tasiri(n=5).

T/r	Ishlov berish usullari	Labaratoriya sharoitida unuvchanlik %	Dala sharoitida unuvchanlik, %
1.	Ishlov berilmagan	42.3± 1.3	38.2± 0.7
2.	Sovuq bilan ishlov berish	51.7± 2.1	47.3± 1.9
3.	Qum bilan ishlov berish	46.3± 2.0	38.7± 2.0
4.	Mis kuporosi eritmasi	49.3± 1.7	35.7±1.5
5.	Sink eritmasi	38.7± 2.0	32.3±1.7

Xulosa. Tuksiz shirinmiyaning skarifikatsiyalangan urug'larnin glaboratoriya va dala sharoitida unuvchanligiga ta'siri sezilarli darajada. Ishlov berilmagan urug'lar unib chiqishi 42.3-38.2% natija bergan bo'lsa, turli yo'llar bilan ishlov berilgan urug'lar, laboratoriya sharoitida 37.2-51.7% ni, dala sharoitida esa, 32.3-47.3% ni tashkil etdi.

Tuksiz shirinmiyani yuqori hosil beradigan ko'p yillik, yem-xashak o'simligi hamda guli asal-shiraga boy bo'lganligi uchun olingan natijalarni asalarichilikda, fermer xo'jaliklari bilan shug'ullanuvchi xodimlar ishlarida qo'llanma sifatida foydalanishlari mumkin.

Foydalanilgan adabiyotlar

1. Hojiyeva A., Xurramov O. Ziziphora tenuior o'simligining dorivorlik xususiyatlari //Journal of Integrated Education and Research. – 2023. – T. 2. – №. 5. – C. 8-10.
2. Mirzayev O. "Yem-xashak yetishtirish" Toshkent-2014. 54-bet.
3. Nurboyev F.E. va boshqalar "Ibn Sino ta'limoti". Buxoro-2016. 135-bet.
4. O'rta Osiyo o'simliklar aniqlagichi. 4-tom. 1981-yil. 281-285-bet.
5. O'zbekiston florasini 3-tom. 1961-yil. 717-720-bet.
6. Rajurkar, N. & Hande, S. 2011. Estimation of Phytochemical Content and Antioxidant Activity of Some Selected Traditional Indian Medicinal Plants. *Indian Journal of Pharmaceutical Sciences*, 73(2): 146-151
7. Su XS, Chen HM, Wang LH, et al. Clinical and laboratory observation on the effect of glycyrrhizin in acute and chronic viral hepatitis. *J Tradit Chin Med* 1984;4:127-132.
8. Xolmatov H.X., Ahmedov O'.A., Musayeva N.A. "Farmakognoziya va botanika asoslari". Toshkent-2017. 14-bet.
9. Xurramov O. G. Islamov BS SAMARQAND VILOYATI SHAROITIDA GLYCYRRHIZA GLABRA L //NING BA'ZI BIOLOGIK XUSUSIYATLARI. – T. 257.
10. Xurramov O. G., Islamov B. S. SAMARQAND VILOYATI SHAROITIDA GLYCYRRHIZA GLABRA L. NING BA'ZI BIOLOGIK XUSUSIYATLARI //Журнал естественных наук. – 2021. – Т. 2. – №. 1.

LEARNING WITH A SMILE: GAMES AND EXPERIENCES IN ORGANIC CHEMISTRY

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Annotation

The pedagogical process is a set of lessons, extracurricular educational work, carried out by the teaching and student staff according to one plan. The training mainly uses seminar lessons, practical and laboratory work, in which various methods and means are used.

The increase in mental load in the classroom makes us think about how to maintain students' interest in the material being studied and their activity throughout the lesson. We have to look for effective teaching methods and methodological techniques that would activate the thoughts of schoolchildren and stimulate them to independently acquire knowledge. We must ensure that the student works actively and enthusiastically during lessons, and use this as a starting point for the emergence and development of curiosity and deep cognitive interest. The purpose of the article is to identify factors and pedagogical conditions for the successful use of games aimed at enhancing the cognitive activity of schoolchildren when studying organic chemistry.

Keywords: good feelings, noble aspirations, collective life skills, game problems, knowledge, horizons, learning process, upbringing system, student's personality.

Аннотация.

Педагогический процесс представляет собой совокупность уроков, внеклассной воспитательной работы, проводимых профессорско-преподавательским и студенческим коллективом по единому плану. В обучении преимущественно используются семинарские

