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БИОЛОГИЧЕСКИЕ НАУКИ / BIOLOGY

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РАСПРЕДЕЛЕНИЕ РОДСВЕННЫХ КУЛЬТУРНЫМ ДИКИХ РАСТЕНИЙ В ЭКОНОМИЧЕСКИ ВАЖНЫЕ ГРУППЫ В РЕСПУБЛИКЕ КАРАКАЛПАКСТАН

Научная статья

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Аннотация

Обоснование: Виды родственных культурным диким растений используются человеком не в одинаковой мере, их экономическая значимость различна. Большая часть представлена широко распространенными кормами, популяции которых введены в одинаково стабилизированные условия. Однако ряд видов относится к разным категориям редкости и уязвимости, т. е. они нуждаются в защите. Определенная часть этих видов имеет высокий приоритет в процессе селекции, но есть такие, которые также нуждаются в немедленных защитных мерах как значительная часть источника ингредиентов для корма.

Результаты. Анализ состава высших сосудистых растений в пределах Республики Каракалпакстан показал, что здесь есть 24 семейства, 85 сортов и 128 видов родственных культурным диким растений, также выявлено наличие как минимум 6 ценных групп различных культурных растений. Из них: 102-кормовые, 43-пищевые, 31-медоносные, 54-лекарственные и 33-технические виды растений.

Доступность: результаты исследований позволят глубже проанализировать составы родственных культурным диким растений Республики Каракалпакстан. Данные могут использоваться при составлении классификаторов, при чтении лекций и проведении практических занятий в вузах, колледжах, лицеях.

Ключевые слова: родственные культурным диким растения, флора, экономически ценные виды растений, экологические характеристики.

DISTRIBUTION OF CROP WILD RELATIVES PLANTS INTO ECONOMICALLY IMPORTANT GROUPS IN THE REPUBLIC OF KARAKALPAKSTAN

Research article

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Abstract

Motivation: Species of Crop wild relatives plants are not the same by the degree of usage by human and economic importance. The major part is represented by broadly spread forages, populations of which are introduced equally stabilized conditions. However a number of species belong to various categories of rarity and vulnerability i.e need protection. A definite part of these species in a high priority in selection process, but which also need immediate protective measures as great part of ingredient source of podder resources.

Results: The analysis of composition of higher vascular plants are found within the limits of the Republic of Karakalpakstan the compendium of crop wild relatives plants consist of 24-families, 85-sorts and 128-species, and educed a presence at least 6 different economic-valuable groups of these species. From them: 102-forage, 43-food, 31-melliferous, 54-medicinal and 33-technical species of plants.

Availability: The results of researches will enable more deeply to analyze structures of crop wild relatives cultural plants of the Republic of Karakalpakstan. The data can be used at drawing up of qualifiers, at reading lectures and realizations of practical classes in high schools, colleges, Lyceums.

Keywords: Wild relatives of cultivated plants, flora, economically valuable plant species, ecological characteristics

Introduction

The course adopted by the President of the Republic of Uzbekistan on the intensification of the agricultural industry and realization of the food programme of Uzbekistan obligate the agricultural science widely involve into use. In its turn this concerns forages equaled to cultural forage crops having an invaluable significance in selecting cultural forages. Because the success of selectioners in the investigation of best sorts of agricultural crops based on the great possibility of choosing a broad material from wild-growing species of flora and firstly, from the account of wild-growing species of cultural crops.

Our country possesses innumerable resources of wealth and many of them are the real natural materials for crops selectioners. Investing the new sorts, selectioners more often approach to wild-growing plants of either species [1].

Species of Crop wild relatives plants (CWRP) are not the same by the degree of usage by human and economic importance. The major part is represented by broadly spread forages, populations of which are introduced equally stabilized conditions. However a number of species belong to various categories of rarity and vulnerability i.e need protection. A definite part of these species in a high priority in selection process, but which also need immediate protective measures as great part of ingredient source of podder resources [2], [3], [4].

In order to preserve the gene fund of rare forages it is firstly needed to completely or partially limit their forage and sale. There should be conducted expeditionary collections of germoplasma, measures on a regeneration and reintroduction. In this concern, wild subspecies of cultural plants should be simply saved for growing and multiplying the conditions of *exsitu*, including in botanical gardens and only if it is necessary to organize special reserves [5].

Within the limits of The Republic of Karakalpakstan there it can be distinguished 4 different districts on totality of environmental conditions (on relief, geological structure, irrigation, climate, soil and vegetation) and modern economic use: lower Reaches of Amudarya, Karakalpak Kizilkum and Karakalpak Ustyurt and Aralkums.

Methods

The generally accepted methodologies of geobotanical and ecological researches were used in research works.

A vegetable cover is studied by geobotanical, rout-field and by semioportable and stationary methods. The life form was determined on the methods of overwintering buds of renewal.

Results

The Flora of the Republic of Karakalpakstan counts about 1100 types of the high by growing plants related to 467 sorts and 97 families. From them 137 kinds from 93 sorts and 39 families belong to the cultural plants. Wholly cultural plants make 12.4 % of all flora. Only cultural plants are added to composition of flora of Karakalpakstan by 15 families and 74 sorts [6].

Actually to the kinds of aborigines 968 kinds are attributed from 387 sorts and 82 families.

Thus it should be noted that relief of the examined territory is unhomogeneous enough. So, in Karakalpakstan the next basic types of landscapes are distinguished: the desert, tugays, river-delta zone, plateau, spoil sublimities, chinks, internal-drainage hollows, sands and seashore plains [7]. Every type of landscape differs in the structure of vegetable cover and specific set of biotopes.

The preliminary analysis of ecological coincidence of economic-valuable plants showed that places of their dense concentration are in the river-delta zone of lower reaches of Amudarya.

Perceptible difference of specific composition of flora of the different territories of Karakalpakstan, must be reflected and in the horticultural districting. The chart of the horticultural districting of Karakalpakstan, being the next stage in the study of specific variety of Karakalpakstan, envisages more detailed consideration of features of composition of flora of different regions of the Republic of Karakalpakstan.

Taking into account insignificance from one side, and with other the specificity of specific composition of the deserted flora of the Republic of Karakalpakstan, knowledge about the use of useful internals of plants presents particular interest [8].

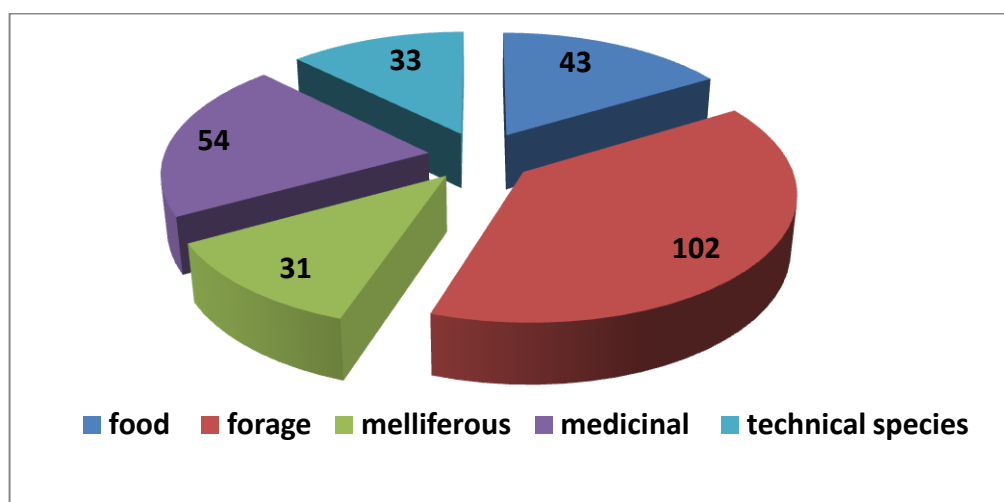


Fig. 1 – Distribution of crop wild relatives plants into economically important groups in the republic of Karakalpakstan

The analysis of composition of higher vascular plants are found within the limits of the Republic of Karakalpakstan the compendium of relatives of wild crop relatives plants consist of 24-families, 85-sorts and 128-species, and educed a presence at least 6 different economic-valuable groups of these species. From them: 102-forage, 43-food, 31-melliferous, 54-medicinal and 33-technical species of plants (pic. 1) [9].

The group of wild crop relative plants counting 102 species turned to be the most numerous one. Thus the most number of forage plants belonging to the family of *Chenopodiaceae* are presented by 22 species. Another 21 species are represent the family of *Poaceae* and 14 species – the family of *Fabaceae*. The family of *Polygonaceae* follows from 11, *Asteraceae* with 10 species and *Brassicaceae* with 6 species of the plants eaten up by cattle and other animals.

The next group on the amount of species are technical plants the share of which consists of 33 species. The plants taken in this category are distributed within the next families: *Polygonaceae* including 6 species, *Salicaceae* including 5 species, *Chenopodiaceae* including 4 species. It should be noted that the use of majority of them is related to the presence of tannic and colorific substances.

A bit less species are contained in the group of decorative plants besides, a part of which is also melliferous. It is made by 31 species, part from that offered directly by the authors of the article.

The group of medical plants is introduced by 54 -species, from which 6 -species are the representatives of the family of *Fabaceae*, per 5-species are from *Asteraceae* and *Chenopodiaceae* and per 4-species in the families of *Brassicaceae*, *Poaceae*, *Polygonaceae* and *Rosaceae*.

Food plants include 43- species and have a wide spectrum of distribution on groups. Besides the representatives of *Brassicaceae* (7 kinds), *Apiaceae* (5), *Poaceae* and *Rosaceae* (4), *Alliaceae*, *Asteraceae*, *Capparaceae*, *Elaeagnaceae*, *Fabaceae* and *Solonaceae* (2), and other families contain per each species.

Regarding to distinguishing families, then on the account of economic-valuable species they were distributed as follows: *Chenopodiaceae* - 22 further *Poaceae* - 21, *Fabaceae* - 14 *Brassicaceae* - 11 and *Polygonaceae* include 10 species. The family of *Asteraceae* is presented by 8 sorts and 9 species.

The analysis of distribution of economic-valuable species showed by their life form, that overwhelming majority of them are grassy plants. Arboreal plants: trees, bushes and dwarf semi shrubs are presented very insignificantly [10].

Discussion and Conclusion

It is necessary to notice that the enumerated figures on the composition of CWRP of flora of Karakalpakstan are not final yet. The further detailed study of flora of separate districts of certain territories, undoubtedly, must result in clarification of the number of sorts and types of flora of the republic, having an economic value [11].

The results of researches will enable more deeply to analyze structures of crop wild relatives cultural plants of the Republic of Karakalpakstan. The data can be used at drawing up of qualifiers, at reading lectures and realizations of practical classes in high schools, colleges, Lyceums.

Конфликт интересов

Не указан.

Conflict of Interest

None declared.

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