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# UZBEKISTAN IN THE CONDITIONS OF TRIGONELLA FOENUM-GRAECUM L. (EKOFOROMASI PAKISTAN) WHICH MORPHOLOGICAL ANALYSIS OF SEEDS

Mardonov Fozilbek Mardon ugli 1
Tashkent State Agrarian University, "Medicinal Plants" Department Assistant"
Tel. +99899-026-41-41. email: fozilbek@bk.ru

Qaysarov Vahob Tukhtamishevich 2
Tashkent State Agrarian University of the Professor

Ubaydullaev Farkhod Bakhtiyarullaevich 3
Tashkent State Agrarian University of the Professor

**Abstract**:
this research T. foenum-graecum (Greek shambalasi) morphological features of the plant was conducted in the conditions of uzbekistan, made a deep analysis on the basis of experimental studies. Research for
T. foenum-graecum seed plant which study morphological indicators, and identified specific biological features biomorfologik. In particular, the weight of 1000 pieces hawthorn seeds 15,4-15,7 g, determines that it is around. In terms of appearance the seeds of his size and highlights. Their length
5-6 mm and 2-3 mm in width, have them in brown or dark brown color, pink colored seed hawthorn seems to be on the end of a sign. Also, half the seeds in the form of black dots on the basis of the presence of oysimon, was dedicated as foreign to the specific characteristics of its. Morphological indicators and provides accurate information about their research, which image of the seeds of this plant allows us to form a more complete picture about the features of specific biomorfologik more.
The results of this research, T. foenum-graecum plant in uzbekistan in the context of the development of morphological changes and be applied in practice gives important knowledge about its. These changes of the plant, agricultural and effective to be applied in the pharmaceutical industry is of great importance. Practical importance of research results in the planting of plants, their growth will help to control and use resources effectively.

**Keywords**. Medicinal herbs, seeds, unuvchanlik, Trigonella, biomorfologiya, biomass, temperature, planting, growth, optimal, seed size, burmali shell.

## Introduction

**Today the republic of uzbekistan the plants that grow in the high number of 4380 reaches more than type.** Their ecological significance of plant species diversity and stand out with this. Among the plants that grow in the republic of medicinal, food, ornamental, bo'yoqbop, azerbaijanis, and start, there are other types of plants pitches and broadcast. If each plant has the characteristics of the specific type of biological and practical, each of them is widely applied in different areas. In particular, medicinal plants, because they improve the life of people plays an important role in human health and is used as an effective tool in the treatment of various diseases.

In the territory of uzbekistan, more than 750 type that are specific to the science of medicinal plants is common. If the majority of these plants is known for his medical properties, has been used for centuries in folk medicine. Research and scientific developments, according to the constructionof this plant 112 different raw materialsused in official medicine in the present day I active. They pharmacological trials passed, are used in clinical and clinical testing before today.

Medicinal plants not only for medical purposes, but also for food, cosmetics and pharmaceutical networkis also widely used at. Also, some species with both significant bo'yoqbop and decorative qualities. These plants are also environmentally very important, their role in maintaining the natural balance of play. Uzbekistan the scientific study of natural resources and practice including the wide application this plant and their biodiversiteti to create.

Thus, medicinal plants, medical, food and other areas of importance is very great. During the research, being used of these plants are expanding and international options more options in their community has increased. This, in turn, allows you to operate more effectively and on a sustainable basis uzbekistan's natural riches.

**Of the relevance of the topic.** Modern medicines on the list of medicinal drugs obtained from plants of approximately 40% to make up for.

These plants are produced on the basis of medicines in the health care system because they have natural resources plays an important role in medicine is used effectively. Medicinal plants, without damage to the human body, helps in the treatment of various diseases with a natural approach. In some diseases medicines used close to 80% is obtained from plant raw materials. This, in turn, is of great importance in medicine and in other areas of medicinal plants shows that how. Thus, these plants not only health, but also in the pharmaceutical network, is also widely used in food and cosmetics. In the last times the increase in demand for medicinal plants, their use in medicine further expansion is expected.

In particular, yalig'lanish internal diseases, the composition of mother's milk, the increase in the applied plants, as well as other medicinal plants for medical purposes through the establishment of plantations introduksiya uzbekistan culture needed to be produced. Such

plants enter the territory of the republic, through the process of them be produced and meet the needs of the pharmaceutical.

The president of the republic of uzbekistan 2022-year 20-may “the effective use of raw materials of medicinal plants from the base, to create added value through a chain process on measures to support”up-139-decree dated and “without the cultivation and processing of medicinal plants in the treatment and cultural organization on measures for the wide use of them”pp-251-dated, is focused on the development of further work in this direction. Their execution in order to ensure the establishment of cultural plantations of medicinal plants, to launch on the delivery of raw materials to the domestic market measures are being implemented. This, in turn, to increase efficiency in the production of medicinal plants, essential raw materials and economic expansion of the base network, the medical cost-effective results.

Another medicinal plant in the republic to adapt to the climate conditions introduksiya we have been working on and make it their own. For example, tashkent and Syrdarya shambalasi soil and climatic conditions of the region is carrying out the reproduction of the plant in Greek. This plant, medicinal and pharmaceutical raw materials necessary for the production of quality to meet the needs of the network if the network produced its pharmaceutical Uzbekistani serves the further development. Greek shambalasi iqlimlashtirish its plant and agronomicnolon an efficient ensuring grown, as well as to create a solid base of pharmaceutical raw material production, will contribute to the science and industry of uzbekistan.

Without the cultivation of medicinal plants and their cultural processing, not only the development of the medical sector, but also create new jobs in the country, ensuring sustainable development in the field of agriculture and allows you to increase the efficient use of natural resources. This increases the size of the country through the production of medicinal plants in the international market to export options will appear.

**Experience (research) objects and methods.** As objects for research **Dukkakdoshlar (*Fabaceae* Linda.) belonging to the family, an annual plant, which is one of** *trigonella foenum-graecum* L. (shambalasi Greek) of the plant was chosen. This plant, not only as a natural resource with its high medical and agronomik features, but also is also of great importance in the field of medicines. *T.foenum-graecum* has many useful properties of plants, it is not just food, but also is widely used in folk medicine. This plant morphological, phenological and agricultural properties we study in his practice, how effectively will help you to understand how it may be used.

The research was conducted in two main conditions. **In laboratory conditions** , and through this experience, the option of 4 units is held in the process of growth and development of plants, the seed sprouts and other important parameters was studied however out of phase. In laboratory conditions, a separate control for each option and observations were conducted. **In field conditions** in spring and autumn, while 2 was

carried out on the basis of recurrence of experiences. The organisation of experience in the field of plant development and adapted to soil and climate conditions in the natural environment more clearly how briefly how to show you will help. Carefully prepared in order to provide suitable conditions for every plant of the field of experience, and teach students the proper growth of the plant: provided that the indicators would be measured.

Experience in the process of **phenological, morphological and we're tracking method** has been widely applied. This method gave me the opportunity to carefully study the changes of the plants at different stages of development. The process of development of plants, its morphological and ecological indicators in identifying the features of high accuracy and led to the methodological approach. Through the analysis of soil and plant samples from the area of experience, T. *foenum-graecum* L. plant growth adapted to the conditions created opportunities to learn briefly how.

**The study of the properties of plants bioekologik**at **t. a. Rabotnov** [6], **a. a. Uranov** [8] and **i. g. Serebryakov** [7] was conducted on the basis of the methods of scientific research scientists such as. The methods of these scientists, the ecological adaptation of plants to grow in its natural conditions and achieving greater interoperability will help you learn exactly how. They approach developed by the through T. *foenum-graecum* L. plants was studied in the perfect way certain features and bioekologik.

Experience in the area of **Tashkent state agrarian University information and advice centre (extension center)** organized **and financed experience in the area** located in this area, I was able to suitable conditions for the study of plants. On the basis of phenological indicators for research in this area and we will collect comprehensive data.

**We and bioekologik observations, statistical methods** of analysis using the data obtained will make it clear. Statistical developments for **ms-excel software** was used and the general methodology adopted all the criteria on the basis of data obtained from the analysis of process and plant development indicators was.

Data obtained during the experience, ***trigonella foenum-graecum* L.** how to use plants in agriculture, and environmental agronomik itsgik will help you to understand the deeper properties. Through this plant has developed effective new approaches and methods of cultivation on the adjustment, as well as comparison with other similar plants, mutual options appear.

In addition, the data obtained T. *foenum-graecum* L. plant of uzbekistan different soil-climatic conditions serves to identify the potential for adaptation. The surveys on the scale of the industry in the future of this plant is expected to give the opportunity to produce this drugs may contribute to the development of the industry in the country.

**Experience (research) and discuss their results.** During the research, trigonella foenum-graecum l. (Greek shambalasi) the seeds of the plant in the city of Tashkent “Ajva market dates” Llc received from the organizationwas l. This organization derived from the

seeds of materials and quality of research prepared for the research to fit all of the criteria necessary for use come. The seeds that have been applied in the research and development process that allows you to track its quality is clearly a high-quality model is presented. Research used the weight of 1000 pieces hawthorn seeds 15,4-15,7 g is around, however, these seeds will help in determining the specific physical and biological properties. Seed weight in the process and the results of the hawthorn plant growth as the main factors which influence the biological characteristics of the obtained results was studied.

*T. foenum-graecum* L. seeds also its morphological features of plants that differ from other shows. The seeds qiyshiq rombsfaith in the form of uneven facets are there. The appearance of the hawthorn plant this seed defines the characteristics of adaptation to certain conditions. However the seeds are 5-6 mm 2-3 mm wide, while the length if it is in the process of its growth, the development of which will help you determine how effective. Seeds brown or dark brown in color, this consists of the external features typical of him. Plant the seeds of this color is extremely important in determining the differences between them which be chosen on. However the seeds of certain external signs, for example, a small point which is in pink color, will help in determining the type of plant. This pink spot monitoring in the development process of the plant is used as an additional check.

While half the seeds in the form of black point is the basis of oysimon to be able to choose this feature plays an important role in determining the conditions and inhibits suit him. This is the black point of the plant, and the plant is made up of specific morphological features of seeds of the main distinguishing other similar character. This point, the seeds, however briefly studying how they will adapt to changing environmental conditions is important.

Research taken morfo index and * biometric features through trigonella foenum-graecum plant the seeds of deep learning process and created the possibility for the growth of its quality. However, the quality of the seeds and morphological indicators to identify an analysis of the important stages in the growth process of the plant will help to make. Optimal conditions for the effective use of this plant in cultivation, and it provides the necessary knowledge. Research results obtained shows that the growth process and how you can manage hawthorn seeds sprouts output stage. Also, T. foenum-graecum seeds have morphological and * biometric features will help you to learn more deeply all the factors which affect its growth.

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**1-table Pakistan which is related ekoformasiga trigonella foenum-graecum L. seedof the products in the conditions of uzbekistan morphological indicators**

| The name of the plant, | but the seeds are color | dimensions (mm) | | 1000 pieces which seed weight, g |
|---|---|---|---|---|
| | | Length | width | |
| *trigonella foenum-graecum* L. | Brown (dark brown) | 5-6 | 2-3 | 15,4-15,7 |

That's in addition to that, this research o‘simlik of o‘rga caused morphological characteristics and their classification offer which case, o‘simlik of rural receives the ambassador‘in jalik methodology‘llab directions to the particular e'tibor focus to help will. However, the seeds grow and the complexity of the content and their properties, as well as gives you a full understanding of how the plant's about to be used in practice.

***1-picture. T. foenum-graecum plant the seedsto morphological ko'rininshi***

**Summary:**
This research uzbekistan in the conditions of *trigonella foenum-graecum* L. (shambalasi Greek) was a deep analysis of the morphological properties of the plant. Morphological indicators which plant seeds for research, for example, the length of hawthorn seed (5-6 mm), width (2-3 mm), and the weight of 1000 pieces hawthorn seeds (15,4-15,7 g) identify and biomorfologik and specific biological features has been identified. The seeds are dark brown or brown in color they will be, with his appearance highlights, including pink and black dots on the end of hawthorn seed oysimon the presence of half a point distinguishes the characteristics of the plant.
Research results obtained, T. foenum-graecum and its effective agriculture and plant cultivation in the conditions of uzbekistan that can be applied in the pharmaceutical industry shows. Learn briefly how to configure their morphological features and

environmental conditions of this plant in uzbekistan in the field of medicinal plants is of great importance in the development of approaches to increase the efficiency and agronomic.

Research, trigonella foenum-graecum seed which the quality unuvchanlik through the process of determining and growth of this plant makes it possible to use more effective. Also, the culture of this plant in plantations and planting of uzbekistan in the development of pharmaceutical raw materials from pharmaceutical industry as an important step.

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