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DETERMINATION OF GERMINATION OF FOREIGN AND LOCAL CHEESE SEEDS IN LABORATORY CONDITIONS

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Abstract
Comparative analysis of horticultural characteristics of samples of imported and local pea varieties and the use of advanced foreign and local science, techniques and innovative agrotechnologies in pea cultivation are considered very important. For this reason, this article provides information on the comparative analysis of pea seeds in the laboratory with determination of their germination.

Keywords: Laboratory, conditions, foreign, local, pea, seed.

Introduction

LABORATORIYA SHAROITIDA XORIJIY VA MAHALLIY NO‘XAT URUG’LARINI UNUVCHANLIGINI ANIQLASH

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Annotatsiya:
Xorijdan keltirilgan va mahalliy no‘xat navlari namunalarini marfoxo‘jalik belgilarini qiyosiy tahlil qilish hamda no‘xat yetishtirishda ilg‘or xorijiy va mahalliy fan, texnika va innovatsion agrotexnologiyalarini qo‘llash orqali yuqori va sifatli hosil yetishtirish juda muhim sanaladi. Shu sababdan ham bu maqolada no’xot urug’larini labarotoryada unuvchanligini aniqlab qiyosiy taxlili haqida malumotlar eltirilgan.

Kalit so’zlar: laboratoriya, sharoit, xorij, mahalliy, no’xat, urug’.

Introduction

Among legumes, peas occupy the most important place, are distinguished by their high adaptability, drought resistance, and relative ease of cultivation and harvesting. Peas are considered a promising legume, with high drought and heat resistance, and the high protein content of their seeds ensures a significant stable germination of the plant. Due to the strong root system of peas and the economical use of moisture, they are often grown in areas prone to drought in the summer. In our country, in recent years, the area under cotton has been reduced,

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and the area under grain crops has expanded significantly. Farms that used to grow cotton and alfalfa are now planting legumes along with corn, sorghum, and grain crops. Grain crops solve three tasks at once. Firstly, it is an important factor in increasing grain production, secondly, it makes it possible to solve the problem of fodder in livestock farming, and finally, thirdly, it is a source of increasing soil fertility.

Main Part

In order to obtain high and stable yields from crops, it is important to sow them in a timely and high-quality manner, along with varietal seeds. Full compliance with all necessary measures before sowing seeds, as well as uniform harvesting of seedlings, ensures complete seedlings in all areas.

As is known, yield is directly dependent on the seedling thickness of the crop. The seedling thickness, depending on the biological characteristics of crops, varies in different crops and varieties and can be controlled by the method of planting crops.

Correct planting is one of the most necessary factors for obtaining high and stable yields. Choosing the most profitable planting date, the necessary planting method, the actual planting rate and planting depth means correct planting.

Also, germination is one of the main indicators determining the quality of grain. High germination of grain is a guarantee of high yield.

We know that pea seeds begin to germinate at a temperature of 3-4 ° C, but at this temperature, seed germination is very slow, as a result of low temperatures, a certain part of the seeds rot, and the grass becomes sparse. Despite the fact that the pea plant is drought-resistant during the growth period, sufficient moisture must be available during the sowing and germination period.

The qualitative and quantitative indicators of the grain also play an important role. One of the unique features of marjoram is that it blooms during the growth period, and the seeds formed from pollinated flowers undergo physiological maturation, and then begin to go through a dormant period. Therefore, marjoram seeds have a short dormant period, and the morphological and physiological maturation periods occur almost at the same time. From the marjoram crop planted in spring, the best ones can be selected and used as seeds. For this, it is advisable to store seeds from the spring crop used as a repeated crop for 3-6 days after harvesting for uniform, even germination. Storage conditions for seeds should be at room temperature around 18-20 ℃ in special airtight bags in glued paper bags.

Most of the organic matter in plants is spent on the formation of reproductive organs. Based on this, plant yield depends primarily on the amount of organic matter spent on physiological processes, as well as on external and internal factors. The germination rate of foreign pea varieties CW-102, CW-106, CW-119, CW-126 and the local Zumrad variety was studied in 2021-2022 (Tables 3.1, 3.2).

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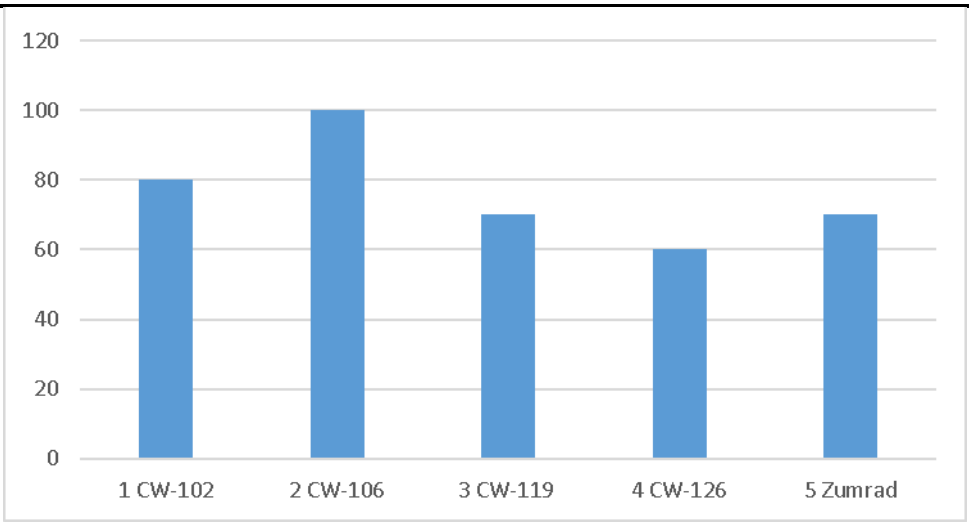
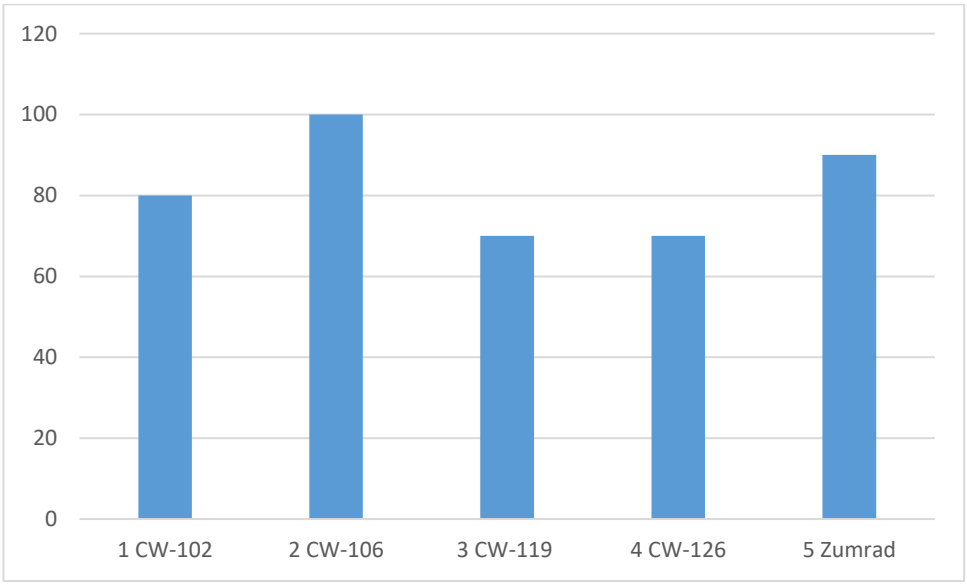


Figure 3.1. Seed germination of foreign and local varieties and samples of winter peas in laboratory conditions (2021).

The average germination rate of foreign and local pea samples in laboratory conditions was 60% -100%. The highest indicator was the foreign CW-106 sample, 100%, and the lowest indicator was CW-126, 60%. In addition, the foreign CW-102 showed 80%, CW-119 70%, and the local Zumrad sample 70%.



1SW-102, 2 CW-106,3 CW-119,4CW-126, 5Emerald

Figure 3.2. Seed germination of foreign and local varieties and samples of winter peas in laboratory conditions (2022).

Foreign and domestic pea samples showed an average seed germination of 70% -100% in laboratory conditions. The highest indicator was 100% in the foreign CW-106 sample, and the lowest indicator was 60% in CW-126. In addition, foreign CW-102 showed 80%, CW-119 70%, and the domestic Zumrad sample showed 90%.

Winter pea samples showed high seed germination in laboratory conditions. This indicates that

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high seed germination is highly effective in conducting field experiments. The experiment was conducted at different temperature levels. It was found that as the temperature increases, the germination of seeds accelerates, but the shoots soon die, which was confirmed in the experiments.

Conclusion

The chickpea samples from the world collection showed high seed germination rates in laboratory conditions. This suggests that high seed germination rates are highly effective in field experiments. It was found that although seed germination speeds up as temperature increases, the seedlings soon die, as confirmed in the experiments.

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