Proceedings of International Conference on Scientific Research in Natural and Social Sciences
Hosted online from Toronto, Canada.
Date: 5th June, 2024
ISSN: 2835-5326 **Website:** econferenceseries.com

THE IMPACT OF SEED QUANTITY ON THE DEVELOPMENT AND GROWTH OF DOUBLE CROPS

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Abstract

Today, there is a pressing need to create affordable and efficient technology for agricultural product production and widespread crop care application. In the study, which was carried out in fields that utilized drip irrigation technology, the growth and development of plants were examined when mung beans, peas, and beans were grown in two distinct thicknesses of 166 and 83 thousand plants. The collected data showed that plant height, number of leaves, number of seeds, number of pods, and number of grains in pods are all higher when the number of seedlings is lower. In this instance, there were 166,000 bushels of mung, pea, and bean seedlings as opposed to 83,000 bushels.Number of leaves 3.9; 81.4; 4.0 pieces, number of pods 4.8; 0.9; plant height 4.1; 1.6; 2.8 cm; it was discovered that it was 0.9 pieces more. One plant can produce 11.1, 7.0, 3.1, and 0.4 grains per pod throughout the ripening phase. It was noted that this number of pods was greater than 0.5 units. The investigation's findings indicate that excessive seedling thickness has a detrimental impact on plants' ability to grow and develop.

Keywords: cowpea, pea, bean, height, leaf, yield king, seedling thickness, pod, number of grains

INTRODUCTION

Global issues like population growth, abrupt climate change, and the availability of food are becoming more widespread. The issue of water from farmed land used for agriculture is getting worse as a result of the changing climate. Developing novel technologies that take a fresh perspective to agricultural product production is imperative in light of the impending and ongoing challenges facing the agricultural sector. In the world and in our nation, cotton growing is significant. However, feeding the populace is a crucial concern.

Chickpeas are a suitable ancestor crop for many plants, including cotton, because they are essential for food, animal feed, and soil fertility. Pea grain comprises 2.4–12.8% fiber, 4–7% oil, 47–60% nitrogen-free extractives, 19–30% protein, and miscellaneous materials. Every hectare, a pea plant yields 40 kg of pure nitrogen. [1]

When planting mung, two rows are spaced 90 centimeters apart, with 15 cm separating each plant. 30 kg of seed is used per hectare, yielding 400,000 plants per hectare. Plants of the ertapishar "Durdona" variety can withstand dense seedlings. Thirty kg of seed are used each acre, depending on how thickly you plant. Planting plan: 70 cm is divided into two rows, with a gap of 15-20 cm between each row and 15 cm separating each plant. They stressed that seeds should be planted three to five centimeters deep. [3]

When managing crops using mixed and combined mung and seed sowing techniques. Crop height is influenced by planting techniques and strategies, and plant height rose as cotton and mung bean planting rates increased. It was observed that the mash and row-planted cotton were relatively low in height. [5]

In irrigated agriculture, peas are a valuable crop that boost soil fertility and have a high food value. [4]

It was discovered that when the planting rate increased, the number of pods, weight, length, number, and weight of grains, as well as the weight of 1000 grains of mung variations, all dropped. It was discovered that the biometric markers of mung varieties are high when planted in the spring. [2]

The researchers mentioned above concluded that by keeping mung, peas, and beans at the ideal seedling thickness, a high and high-quality yield might be achieved. The goal of the research being done is to examine how plants grow, develop, and yield

when cultivated together at varying seedling thicknesses, including cotton, mung beans, peas, and beans.

MATERIALS AND METHODS

Drip irrigation technology was applied under the film during the research conducted in the fields of the Scientific Research Institute of Cotton Selection, Seeding, and Agrotechnology of Cultivation's Namangan scientific-experimental station. The experiment was conducted in three stages with three repetitions, and it included seven varieties. The seed was nurtured after being planted in a 60 cm scheme. In this instance, a film was placed 60 centimeters below the cotton rows. In 60(20x20x20)x10x1 and 60(30x30)x10x1 schemes, double crops were grown with 166 and 83 thousand bushes for seedling thickness, respectively.

RESEARCH RESULTS AND DISCUSSION

Drip irrigation technology was applied under the film during the research conducted in the fields of the Scientific Research Institute of Cotton Selection, Seeding, and Agrotechnology of Cultivation's Namangan scientific-experimental station. The experiment was conducted in three stages with three repetitions, and it included seven varieties. The seed was nurtured after being planted in a 60 cm scheme. In this instance, a film was placed 60 centimeters below the cotton rows. 60(20x20x20)x10x1 and 60(30x30)x10x1 schemes were used to develop double harvests, with 166 and 83 thousand bushes of seedling thickness, respectively.

When mash, peas, and beans were grown alongside cotton, the length of the growth season was observed, and the following findings were made. In this instance, variations in the duration of vegetative days were noted between the plant thicknesses of 166 and 83 thousand bushes. The time it takes for the plants to reach full maturity when mung is kept at a seedling thickness of 166 and 83 thousand bush is 93 and 96 days for the pea plant and 86–89 days for the bean plant, respectively.There was a 66-69 day water period. 166,000 bushes with a large number of seedlings throughout the mung, peas, and bean growing season as opposed to choices with a low number of seedlings; 3; It was short for three days.

The height, leaf, stem, comb, and quantity of pods during the ripening, flowering, and harvesting stages of mung beans, peas, and beans were counted in order to make

the observations. In this instance, the calculating region for each choice included 25 bushes of permanently identified plants. The growth and development of the 60(20x20x20)x10x1 and 60(30x30)x10x1 plots of cotton, mung beans, and peas did not differ significantly from one another. When mung is grown at 166 and 83,000 bushels of seedling thickness, the plants reach a height of 14.5–16.7 cm during the pruning period, yielding 0.9–1.2 pieces; there are 12.8–13.5 grains of leaves, 2.6–3.3 grains of combs, and 39.6-32.5 cm for the height of beans and peas; the harvest king was 3.0-3.3 units, the number of leaves was 523.0-574.0 units, and there were 2.5–3.4 units of combs. When the bean is healthy, it grows to a height of 14.4–15.5 cm, yields 2.1–3.3 pieces, and has 10.0-9.7 pieces of leaves.In the cotton rows, it was found that the mung parameters, which were grown at a thickness of 83 thousand bushes, were comparatively higher than those of the mung, which was grown at a thickness of 166 thousand bushes.This condition was noted in both the cultivated pea and bean varieties as well as during the mung bean's flowering season. The plants were counted for height, number of leaves, and pod count during the ripening stage. Mung measured 38.1-42.2 cm in height, the leaves 19.5-23.4 pieces, and the pods 6.4-11.2 pieces in this instance. A pea plant in this condition is 45.3–46.9 cm tall; it has 657.2–7388.6 pieces of leaves and 13.8–14.7 pieces of pods. The bean ranges in height from 36.8 to 46.9 cm, with 22.8 to 26.8 leaves, and 5.9 to 6.8 pods total. At the conclusion of the growth season, the quantity of pods developed and the quantity of grains within the pods were counted.

The quantity of pods and grains within them mirrored the conditions noted throughout the mung bean, pea, and bean growth seasons. In this instance, when mung was produced at a seedling thickness of 166 and 83 thousand bushels, the number of pods was 47.4-58.5 units, and the quantity of grains in a pod was 10.1-10.5 units. A single grain constituted 1.1 pieces within each of the 26.5–33.5 pods that the pea plant produced. A single bean plant produced 11.0–14.1 units of pods, with 6.0–6.5 units of grains within each pod.

CONCLUSION

In general, it can be observed that rather than a conclusion. When 166 thousand plants of mung, peas, and beans are planted between cotton rows, the plants develop quickly when there are a lot of seedlings and ripen three days later when there are

few seedlings. Height, number of leaves, number of pods, and number of grains in the pods all decrease with the number of seedlings; this phenomenon is more pronounced when the number of seedlings is lower.

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