

Estimate Dynamics of Growth of Corn and Bean Plants in Mixed Culture

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Abstract—Interplanting involves growing two different vegetables in an area at the same time. This method of planting is another way to save space. Some gardeners believe that certain plants perform better when grown together. This type of interplanting is called companion planting. When water is the limiting factor as a mixed culture of water was consumptive. Has the advantage. Corn is a plant that most plants can be grown as a mixture and is highly beneficial. For example, corn and cotton in India, Brazil and Nigeria. With corn, castor beans and corn with beans grown in Brazil and Mexico, and finally one of the most common methods of mixed cultures in South America and North America were planting. The study split plot design complete block with four replications martyr healthy farm located in the city of Ahvaz was executed. In this study, hybrid varieties of maize and beans called local varieties are used. Physiological indices to calculate the leaf dry weight, total dry weight and leaf area index every 14 days once the three plants as a destructive number of plot lines and sub-marginal cultures as examples taken from the field after calculating their leaf area, the parcel was. In this manner treatment of drought stress based on time (irrigation) shall be admitted that irrigation use, including 7 days (control) and 10 days, 13 days and 16 days as the levels of the main factor in the plot core considered to be and ratios (100% corn), (100% BEAN), (50% corn and beans 50%), (80% corn and beans 20%), (80% and 20% corn, beans) as the operating level in the side sub-plot will be.

Keywords—Interplanting, Maize and beans, dynamics of growth

I. INTRODUCTION

THIS document seems unlikely that the grain crop plants first domesticated by humans are fragile because the spike of wild grass and wild fruits legume. Although there is no recorded history for the mixed culture is probably the earliest periods of history that goes back farming was introduced. Amazon River basin and the area drained as an agricultural center, a few ships, consisting of grain and forage plants have been identified [3, 2].

Mixed culture from about 900 to 1,500 years before Christ Mila common in Mexico and product beans, squash and corn

Have been successful enough to their sometimes of birth (Mexico) has been welcomed in other countries. Stated that the Kerr Iran based on traditional agricultural and environmental use struggle with the relationships between plants, pests and

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diseases begin to run student mixed cultures. According to Iranian farmers emotional relationship between the encapsulation plant and this plant is to produce more products. Today a few more ships in the Caspian Sea and Khuzestan showed, as is common with winter cereals, legumes (beans) and grains fall plants[7, 1].

The payment of assistance is called simply the time when this A useful way of changing the environment that are directly caused by any other is mixed. If the interaction leads to the contribution due to the assistance of the mixed culture would be more advantageous. The disadvantages of using a mixed culture can be neutralized by the roots of some plants, like sorghum root cause is the weakening of soil structure, improve soil physical conditions, while soybean and keeps it soft. The mixed culture of these plants in soil conservation has an important. Culture mixed with a greater volume of soil used and the residue in this type of farming the soil is left more and more varied. If planted in a mixture of air nitrogen fixation in plants, these plants may be used Leguminosae that some of the same growing season and some adjacent plants available in the next available planting the next crop will be converted into compounds of plants with non- dissolved in soil solution to soil fertility would result[8].

II. MATERIAL AND METHOD

In this search, design was split plot with use CRBD, In this manner treatment of drought stress based on time (irrigation) shall be admitted that irrigation use, including 7 days (control) and 10 days, 13 days and 16 days as the levels of the main factor in the plot core considered to be and ratios (100% corn), (100% BEAN), (50% corn and beans 50%), (80% corn and beans 20%), (80% and 20% corn, beans) as the operating level in the side sub-plot will be. Rows 4 m in length and distance between rows 75 cm planting m and plant distance on the row at planting culture (100% corn, 18 cm \rightarrow m), (9 cm in 100% bean m) (50% corn and 50% of beans as a 9 cm distance between m), (80% and 20% corn, beans, corn as three numbers on the stack distance of 18 cm meters and the number of beans in a 9 cm distance yards from corn), (80% and 20% corn beans as bean in the stack 4 \times 9 cm apart \rightarrow meters and 1 \times 9 cm corn \rightarrow meters away from the bean) will be considered. Each line has five experimental plots will be planting. During the growing season, including required notes emerged on any of the developmental stages based on 50% plants reaching the desired stage will be recorded. Lines A and five from each treatment as margins are considered. Physiological indices to calculate the leaf dry weight (LDW), total dry weight (TDW) and leaf area index (LAI) every 14 days once the three plants as a destructive number of plot lines

and sub-marginal cultures as examples taken from the field after calculating their leaf area, the parcel will be. The envelopes for 72 hours in air oven having temperature will be 75 degrees.

III. RESULT

Equality of the Earth (LER)

Which is calculated based on the ground and it is characterized by a gain from mixture is obtained, what agriculture land as a single ship needed to harvest the same amount.

The reasons for the increase in agricultural water mixture

It is widely known that competition for water in one any combination of plants that are grown together.

This is the second crop to the addition of some single vessels. By reducing the evaporation of water use efficiency is better than that of the two is a practical way:

- 1) Through increased soil cover
- 2) Create a carminative, which reduces the energy input.

There is also evidence that in the mixed farming Capillary water used by the Aztecs, there are ships that are:

- 1) The morphology of the roots of different plants in mixed culture
- 2) Roots of different plant species may have run away from each other and the roots are distributed in a greater volume of soil.
- 3) Implantation of plants with long roots in plants with shallow roots that are sinking roots in the soil layers below [7, 2].

Corn and bean mixture in the depth of their different origins, different morphology of the root causes of increasing water use efficiency in mixed farming them.

IV. DISCUSSION

One of the most common methods are mixed, usually in areas cultivated by Black Eye Beans and corn, and corn are grown progressively uphill from the beans[4].

Francis and colleagues in the mixed cultures of beneficial dry beans and corn is 30% and 39% in humid areas.

Considering that approximately 90-80 days during the growing beans and corn growing period is about 150-120 days in favorable weather conditions, after harvesting the beans can be planted in between the rows of corn to beans.

The planting lines and plant density effect on the cultivation of beans and corn mixture, depending on weather conditions and facilities and farmer's needs.

Maize in areas that have special importance was and high yield potential (5-3 ha), beans and corn as the main plant is considered as a new plant [7, 2].

Favorable conditions in the corn and beans mixed with a density of 50-40 thousand plants per acre with a density of 150-100 plants per hectare is cultivated in the case of corn, corn increased 94% single-ship product, the product of a single ship beans was 40 percent.

In adverse weather conditions such as semi-arid areas where corn does not grow well and mixed cultures is vital for the farmers, the cultivation of maize density in a single vessel are mixed at half the density.

Black Eye Beans and corn mixed cultures were examined and concluded that the mixture of corn and beans 27 to 32 percent compared to pure cultures of each Showed an increase in performance.

Research on mixed cropping of maize and beans had concluded that the net displacement mixed row planting of corn increased. Increase the yield of corn grown in mixed culture compared with pure row due to be competitive in attracting food resources compared with the beans and the mixture was leaf.

The maximum yield is obtained when the mixed culture forming a mixture of plants and how the uses of natural resources are quite different from each other. The plant species with different morphological characteristics in the vicinity of each culture are able to optimum use of environmental Mel and thus increase total yield per unit area. Moreover, given the level of cultivation in mixed cultures are better used in place of soil and roots of plants is covered by the organs of the air and thus soil erosion is minimized [3].

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