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# THE ROLE OF RESEARCH IN INTERCROPPING OF GRAIN AND LEGUMINOUS FORAGE CROPS

q.x.f.d., A.A. Iminov

PhD student: **M.A. Karimova** PhD student: **E.M.Muminov** 

**Abstract:** The agrotechnics of growing forage crops suitable for the soil and climate of each region of our republic and the timely implementation of agrotechnical factors ensure not only the abundance of the harvest, but also the increase of its quality indicators, that is, the efficiency of this or that agrotechnical measure under study determines the general agrotechnics used in these conditions in many ways. This article examines the research of our scientists.

**Key words**: plant, green mass, silage mass, dry hay, succulent fodder and soft fodder, seeding rate.

According to the information of the State Statistics Committee of the Republic of Uzbekistan on April 1, 2020, there are 12,745,500 large-horned and 21,637,500 small-horned livestock in our Republic. Based on this information, it is necessary to provide livestock with continuous green mass, silage mass, dry hay, juicy fodder and soft fodder throughout the year. In our republic, the reserves of irrigated land and water resources are limited, and 55% of the land area is salinized to varying degrees, taking into account the low soil fertility, it is an important task to select the types of crops that provide high green mass, silage mass, grain and hay yield, and high nutritional value in the effective use of our irrigated land.

## The appearance of a triticale plant

Figure 1



In our republic, the reserves of irrigated land and water resources are limited, and 55% of the land area is salinized to varying degrees, taking into account the low soil fertility, it is an important task to select the types of crops that provide high green mass, silage mass, grain and hay yield, and high nutritional value in the effective use of our irrigated land. The effect of seeding rate, ratio and harvesting time on changes in forage growth, development, dry mass accumulation, leaf surface formation, blue mass yield and forage quality can be studied.

Planting several crops together is especially common in China. It has been used since ancient times in countries such as India, Pakistan, and Egypt, and is still widely used today. When

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several types of plants are grown together, their above-ground and below-ground parts also affect the development of microorganisms located in and near the rhizosphere. Therefore, the type of growing plant has its influence on the development of other types of plants growing there [1; 25-26]. When crops are planted in a mixture or in combination, their species and morphological-biological characteristics are taken into account.

Morphological proportions take into account the external structural features of leguminous and leguminous plants. For example, the stalks of vetch and blue peas tend to lie down, so the plant mixed with them should have an upright stem (oats, barley). Blue pea and vetch plants keep themselves upright by clinging to barley or oat stalks. Most leguminous crops also grow upright and do not lie down, but there is no need to combine them with leguminous plants that lie down, because they are interplanted to increase the protein in the food [2, p. 77].

In order to obtain the highest yield when the same plant is grown constantly, it is necessary to create the most favorable conditions for the growth and development of the crop. If several crops are planted together, a slightly better ground is created for the harvest. Because the conditions that are unfavorable for one type of crop are favorable for the second type of plant, as a result of which it is possible to get a crop that can replace one of the other [4; pp. 130-134].

In the rapid development of animal husbandry of our republic, the organization of nutritious arable land, the preparation of 100-150 tons of feed units per hectare remains one of the most important tasks of today. On this basis, the cultivation and preparation of different feeds creates opportunities to transfer animals to the same type of feeding throughout the year. In the winter and summer rations of cattle, it is necessary and necessary to have juicy (silage, hay and beetroot), coarse (alfalfa hay) and concentrate feed in the established standards. Taking this into account, 35% of the nutritious cultivated areas are alfalfa, 15% corn for grain, 5% beets for grain, and the remaining 45% are to be planted with a mixture of intermediate nutritious crops (triticale, oats, barley, rapeseed, chickpeas) for silage preparation in the areas cleared by growing corn silage. is considered favorable [3].

### Mixed cultivation of clover and corn

Figure 2



After alfalfa and corn, corn, sudan grass, barley, triticale, vetch are the main fodder crops in developed countries. It is known that the main part of the total feed balance in animal husbandry consists of feeds made from plant biomass, that is, they account for 95% of the feed unit.

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Therefore, the development of fodder cultivation in irrigated areas is of decisive importance in strengthening the livestock feed base.

**Research results and their discussion.** In our research, it was found that the seed sowing rates and proportions in the intercropping of barley, vetch and triticale crops affected the duration of the development periods of the plants. According to the data obtained from the researches, the period from germination to the ripening of the whole grain crop is 124 days for triticale in its pure state when seeds are sown at the rate of 150 kg per hectare, 116 days for barley in its pure state when seeds are sown at the rate of 150 kg per hectare, vetka is sown at the rate of 120 kg/ha, in the variant, it was found that the development period was 96 days.

#### **Summary**

It was found that the rates and proportions of seeding in the intercropping of fodder crops affect the duration of the development period of plants, and when intercropping with barley, vetch and triticale, the crops are extended by 2-7 days compared to pure sowing.

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