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Correlative relationship of amounts of chlorophyll "a" and "b" pigments in plants with anthocyanin ridges L-2, L-3, F_1, F_b, F_2

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Annotation. In the article: Based on the results of the experiments, the following scientific opinion is expressed. Experiments have shown that the separate actions of salinization and alkalization did not significantly affect the value of the ratio of chlorophyll a to chlorophyll b. The absence of significant changes in the value of this indicator indicates that these factors do not affect the light collection complex of the thylakoid membranes of this test crop.

Keywords: recessive, lethal, mutant, selection, viresens, xanthoviresens, havirs, phenotype, heterozygote.

Introduction

In the course of the experiment, mutual relative bonds between the amounts of chlorophyll “A” and “b” pigments were studied even in plants F_1, F_b, F_2, obtained by hybridization of anthocyan cave ridges of different types..

The effectiveness of the pigment system depends on the correspondence of its structure and function to climatic and environmental conditions, especially lighting conditions. Plants that grow under forest shade are usually more light-loving than plants that are light-loving due to their chloroplasts content [1] and have a higher proportion of chloroplast b, which increases the Leaf's ability to collect light in conditions of long red light.

Most of the scientific research is devoted to the study of the composition of plant pigments in a certain extreme living conditions - deserts, high mountains and tundra, in the extreme northern Taiga [2-4]. Existing data on the composition of pigments in Steppe plants in Mongolia and the Povolj region [3-8] also did not allow to reveal the exact laws of changes in the composition of the pigment due to changes in the width of growth, since not all forms of pigments are analyzed, or caused by insufficiently expanded clouds with a low number of dots [4-10].

Maintaining the structure and function of chloroplast membranes in a stable state under the influence of unfavorable environmental factors ensures a more coordinated operation of the components of the electronic transport chain [5-9].

The results of determining the composition of green pigments indicate that the amount of chlorophylls A and B in variants with an increased level of alkalization of the root medium was much higher than in the control option [6-11].

The data obtained indicate that the increase in the composition of the pigment correlates with a decrease in plant growth. A strong inverse relationship has been established between height, mass and chlorophyll in its composition. The accumulation of pigments can be the result of ingesting growth processes under the influence of the toxic effects of salts during the ongoing biosynthesis of pigments [7-9]. An increase in the amount of these compounds is an active reaction of plants, in contrast to the negative effects of salt ions.

Results and mukhokamas

The results of the experiments showed that even individual actions of salinity and alkalization did not significantly affect the value of the ratio of chlorophyll a to chlorophyll B. The absence of significant changes in the value of this indicator indicates that these factors do not affect the light collection complex of thylakoid membranes of this test crop.

In the course of the experiment, mutual relative bonds between the amounts of chlorophyll “A” and “b” pigments were studied even in plants F1, Fb, F2, obtained by hybridization of anthocyan cave ridges of different types. The data obtained were presented in Table 1.

On the L-2 Ridge obtained as a material, the anthocian color developed in all morphobiological parts of the plant. On the L-3 Ridge, the anthocian developed on the STEM and on the veins of the true leaves. The beak is green, the flower does not show anthocyanin in the cosachabarg.

The amount of pigments chlorophyll “A” and “b” in plants L-2, L-3, F1(L-2XL-3), Fb(L-2XL-3)showed a positive indicator of strength in all of their relative interactions (- table).

Correlative dependence of the amounts of chlorophyll “A” and “b” pigments in anthocian ridges L-2, L-3, F1, Fb, F2 plants.

Table 1

№ Material color chlorophyll " a " + " B "chlorophyll" a”
Chlorophyll “a” chlorophyll “B” "B"
R r R R
1 L-2 Antosian 0,90 0,87 0,89
2 L-3 Antosian 0,78 0,78 0,95
3 F1 (L-2XL-3) Antasian 0,85 0,89 0,90
4 Fb (L-2XL-3)XL-3 Antasian 0,84 0,94 0,87
5 F2 (L-2XL-3) Antasian 0,83 0,95 0,94
6 F2 (Antosian: dark red) Antosian 0,89 0,79 0,93
7 F2 (Antosian: L-2 Type) Antosian 0,90 0,65 0,68
8 F2 (Antosian: L-3 type) Antosian 0,87 0,84 0,92
9 Green Green 0,93 0,95 0,96

Plants F2 (L-2XL-3) were separated from phenotypic quixate into four groups. They are anthocian-dark red, anthocian-L-2 Type, anthocian-L-3 type and green plants. The highest positive correlation between the amounts of chlorophyll “A” and “b” pigments in these plants was recorded in green-colored F2 plants. Even in plants of the anthocian-dark red, anthocian-L-3 type, the amounts of chlorophyll “A” and “b” pigments were observed in all cases of mutual strength positive correlative dependence.

Plants of the anthocian-L-2 Type showed a positive (r=0.90) relative relationship of strength between the amounts of chlorophyll “a”+“B” and “a” pigments, and a medium positive relative relationship between the amounts of chlorophyll “a”+“b” and “b” (r=0.65) and chlorophyll “A” and “b” (r=0.68) pigments.

Conclusion

In place of conclusion, it can be argued that in all plants L-2, L-3, F1, Fb, F2 of anthocian ridges of different types, chlorophyll “A” and “b” pigments have a positive correlation relationship of mutual strength

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