



## THE INFLUENCE OF SEED SOWING DATES AND FEEDING RATES WITH MINERAL FERTILIZERS ON THE FORMATION OF THE BAR SURFACE OF PEA VARIETIES

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**Annotation:** This article describes the scientific researches and the obtained results on the most important physiological processes in plants.

**Key words;** variety, selection, plant, Emerald, physiological process

The most valuable quality of the pea plant is its ability to retain moisture in the leaves and stems for a long time, which is determined by the structural features of the aboveground organs. Pea stalks are erect, ribbed, rigid, branched, 25-75 cm high. Stems become woody when ripe, so pea stalks are not considered prone to deposition. Branches of the first order depart from the main stem pea leaves are distinguished by a short stripe, mixed, unpaired, pubescent. The number of leaves on the stems of peas varies depending on the height of the stem: in the lower part 4-8, in the middle-14-16 pieces. Small pea leaves can retain moisture for a long time even in the heat. Studies conducted by scientists of the Krasnokutsk breeding and Experimental station have shown that the content of bound water in pea leaves during the entire growing season is significantly higher than that of other legumes-its content from germination to full maturity ranges from 40.4%-36.3%. (Germantseva, N.I.-2001)

It was found that the drought resistance and heat resistance of peas are associated with the highest osmotic pressure of cell juice in the leaves compared to other legumes.

A.A. Nichiporovich the basis of the production process of field crops is that the greatest photosynthetic activity of plants in crops optimally perceives the yield of grain crops due to a combination of the following elements:

- the size of the suction working surface;
- the lifespan of all leaves and buds of the fruiting organ tiers;
- photosynthesis-determines the intensity of net productivity;
- the cutting speed of suckers; an indicator that determines the share of the economically

valuable part of the biological crop in its entire mass. The analysis of domestic and foreign literature shows that today, grain, industrial and vegetable crops predominate in the detailed study of photosynthesis.

Characteristic crops for these groups are the achievement of the most important successes, the breeding of new high-yielding varieties, increasing yields and product quality. Thus, the analysis shows that their synthetic activity is of great theoretical and practical importance for the optimization of pea crops. As a result of the conducted studies of the regularities of the formation of the leaf area of pea varieties, the general branching in the formation, the beginning of the formation of peas on the pod with a gradual decrease in the

maximum area of the leaf apparatus by the end of flowering, the number of leaves on plants decreased due to the dying and drying of part of the leaves of the lower tier.

Since the surface area of the pea leaf is small, its active absorption of carbon dioxide is slow consequently, causing water evaporation and oxygen production, the large size of the leaf surface of plants is important for photosynthesis, transpiration, gas exchange and accumulation of organic dry matter. In our study (2017-2019.), phenological observations were carried out for each variant to determine the impact of agro-industrial measures on the level of pea leaves.

The data of the study showed that the seeds of peas of the variety "emerald" in 2017, when studying the changes in the level of leaves of plants that are cared for in the 1st variant of sowing nitrogen fertilizers early (N30), at the intersection of the phases of development, during the branching period of 7.8 thousand m<sup>2</sup> / ha, during the flowering period-15.9 thousand m<sup>2</sup>/ga,during the formation of pods-21.5 thousand m<sup>2</sup>, the photosynthetic potential of leaves formed when applying 1-varinate N30 kg/ha with early application of nitrogen fertilizers while observing the photosynthetic potential was 16.2 thousand m<sup>2</sup>/ha during fruiting, 6.7 thousand m<sup>2</sup>/ha during maturation-877 thousand m<sup>2</sup> days/ ha.

During plant photosynthesis, it is observed that the best use of sunlight was revealed by the plant during the early planting of peas in the Zumrad variety, the net productivity of photosynthesis calculated for the entire growing season of the plant in the Zumrad variety is 3.40 g/m<sup>2</sup> days has a cost.

In our experience on the cut of the phases of development of changes in the level of vegetation of peas leaving in the 5th varna, sown with nitrogen angles (N45) of this period, during the branching period 6.7 thousand m<sup>2</sup>/ha, 14.4 thousand m<sup>2</sup>/ha during flowering, 17.7 thousand m<sup>2</sup>/ha during flowering, 12.9 thousand m<sup>2</sup>/ha during ripening, 5.4 thousand m<sup>2</sup>/ha during ripening, for the photosynthetic potential of the same variant. With the relative observation of the formed leaves with a photosynthetic potential equal to 690 thousand m<sup>2</sup> days, during photosynthesis it was noticed that the plant used the sun's rays well, the net photosynthetic productivity of -2.50 g/m<sup>2</sup> day, calculated for the entire growing season of the plant has a cost.

### References:

1. Германцева Н.И. Биологические особенности, селекция и семеноводство нута в засушливом Поволжье: Аннотация. дис.... доктора с.-х. наук. – Пенза, 2001. – 54 с
2. Ничипорович А.А. Фотосинтез и теория получения высоких урожаев // В книге "XV Тимирязевские чтения". -М.: Изд-во Академии наук СССР, 1956.-94 с.
3. Ничипорович А.А. Фотосинтетическая активность растений в сельскохозяйственных культурах / Изд-во Академии наук СССР, Москва, 1961.
4. Корнилов А.А. Соя, полюшка, нут, чин в Ставропольском крае. – Ставрополь: Изд-во, 1960. – 56 с.
5. Г.С. Посыпанов, В.Е. Долгодворов и др. "Растениеводство" - Москва. Колосс, 2007.-612 с

