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**THE INFLUENCE OF PRESOWING TREATMENT OF SEEDS
AND OUTSIDE ROOTS FERTILIZING OF PLANTS ON
CONTENT OF SUGARS IN THE ROOT NECK OF WINTER RAPE**

One of the main reasons for low yields of winter rape seeds is a weak overwintering of plants which in separate unfavorable years leads to a complete loss of sowing. Therefore, the problem of increasing the winter hardiness of this crop is actual.

The necessary condition of successful wintering of oilseed rape is the accumulation in a process of tempering the substances-cryoprotectant that serve a protective function: saccharose, monosaccharides, soluble proteins etc. An important role is played sugars which are necessary nutrient and energy reserves for the winter.

The impact of sugars on increasing of plants frost resistance is multilateral. Accumulating in cells, they increase the concentration of cell sap, reduce water potential and thus prevent their intensive dehydration. Sugars protect proteins from the inactivation under conditions of dehydration. Particular importance is their protective effect on proteins that are concentrated in superficial membranes of cells.

The root neck of winter rape is the most important part of the plant, which accumulates the maximum number of substances rich in energy. State of root neck determines the further development of plant when it is damaged by frost. Therefore, it is important to explore the carbohydrate metabolism which takes place in the root neck.

As a result of research it is found that presowing treatment of winter rape seeds by insecticidal protectants Cruiser (3,0 l/t) combined with growth stimulator Vypel-K (500 g/t) increases the sugars content in the root neck of winter rape in 2,5 % and with microfertilizer Orakul seeds (1,0 l/t) in 2,8 % compared with the control. Outside roots fertilizing of plant with growth regulator Vypel (500 g/ha), microfertilizers Orakul boron chelate (1,5 l/ha) and Oracle sulfur aktyv (2,0 l/ha) based on presowing treatment of seeds with preparations Cruiser (3,0 l/t) and Vypel-K (500 g/t) promotes the additional growth of this indicator by 3,6 %.