

The effect of drip irrigation on the productivity of white cabbage

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Summary: Productivity is the result of biological and biophysical processes that take place in a plant depending on its genetic characteristics and external environmental factors

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Productivity is the result of biological and biophysical processes that take place in a plant depending on its genetic characteristics and external environmental factors.

According to P. I. Patron (1981), productivity is not an absolute concept, but the result of the interrelationship between the productivity of the plant and its resistance to adverse factors of the external environment. These signs are transmitted from generation to generation and not only each species, but each variety has its own characteristics.

Based on this, studies were conducted to study the effect of drip irrigation technology on the yield of white cabbage.

The subject of our research was the Termiz-2500 variety, suitable for the hot climate of Surkhandarya region. Physical properties of the soil: volumetric mass was determined using a cylinder (by the Kachinsky method, cylinder volume - 500 cm³), porosity by the Doyarenko method, physical properties of water, water capacity (by the Rozov method), water permeability of the soil was determined by the square-Rom method.

The obtained yield data were mathematically processed based on the method of B.A. Dospikhov (1985).

If we analyze the data presented in Table 1, it can be seen that when CHDNS is increased from 70% to 80%, the white cabbage Termiz 2500 variety has a higher yield of 4.5 t/h (8.6%). A similar situation was observed when this indicator was increased from 70% to 90% and when it was increased from 80% to 90%, and respectively 5.9 t/ha (11.3%) and 1.4 t/ha (2.5%) high yield was achieved.

Table 3.1.2.1
Cabbage Termiz 2500 of drip irrigation method
effect on the productivity of the variety

Irrigation order, % compared to CHDNS	Productivity, t/ga	Added yield to increase CHDNS					
		70 → 80		70 → 90		80 → 90	
		t/ga	%	t/ga	%	t/ga	%
70	52,3	-	100	-	100	-	-
80	56,8	4,5	108,6	-	-	-	100
90	58,2	-	-	5,9	111,3	1,4	102,5

A factor that affects productivity and can be easily controlled is the irrigation method.

Thus, when studying the effect of drip irrigation on the productivity of white cabbage Termiz-2500 variety, the highest productivity was achieved when the CHDNS was 90% and was 58.8 t/ha.

List of used literature:

1. Dospikhov B.A. Metodika polevogo opyta, 5-e izd-e, M.: Agropromizdat, 1985. - 351 p.

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2. Patron P.I. Kompleksnoye deystviye agropriyomov v ovoshevodstve/Otv. ed. prof. M.V. Alekseeva, - Chisinau: Shtiintsa, 1981. - 284 p.