UDC 630*233

ADAPTATION REACTIONS OF SEEDLINGS OF WILD ASH ORDINARY TO INSUFFICIENT LEVEL OF MOISTENING OF SOILS

P. P. Javorovsky, doctor of agricultural sciences
O. F. Brovko, candidate of biological sciences

Insufficient level of moistening of soil, substantially ($t_ф$ = 2,7–3,1) affects above-ground organs of seedlings of wild ash. Thus, it is necessary to notice that in a time of inspection content of water in leaves of experience plants was on 29 % and in branches on 28 % lower, than in control plants, and the difference in watering of roots arrived at only 14 % on 0,05-level probability was estimated, as unsufficient ($t_ф$ = 1,6).

It is found out, that dehydration of leaves of in seedlings of wild ash, that was grown in the conditions of the insufficient providing water, took place due to reduction of all factions of water, that was subject to determination. Thus, the least losses (13 %) were in faction of bound-water, and most (52 %) is in faction of free-drying water.

Lack of water in soil affected anatomic-morphology structure of leaves and general mass of seedlings that are the adaptive reaction of investigational plants on an insufficient water of y level to the ground layer. At the seedlings of wild ash, that was grown at the insufficient mode of moistening on puff plates, from a calculation on unit of area, length of veins increased on 59 % and amount of stoma – on 58 %. Here, there was an increase of thickness of leaves (on 7 %) and insufficient reduction of length of stoma (on 13 %) and substantial degrowth of seedlings osvell (on 27 %).

The greatest content of carbohydrates was observed in leaves of seedlings of wild ash. Thus it is necessary to notice that under act of action of the insufficient moistening the increase of productive (took place on 7 %) and general (on 9 %) of sugars and saccharoses (on 6 %) and also reduction (on to 64 %) of contents of saccharose. In branches and roots, under act of droughty terms, in opposite, content

of sugars and saccharose diminished on 9–32 % and 17–47 % respectively. Content of starch in branches grew on 100 % and in a root diminished on 64 %.

Wild ash ordinary, soil, water regimme, sugars, saccharose, starch.