

























Table 1. Recommended frequencies  $\nu$  vibrations of the vibrational digging working organ, Hz.

Used weight of the working organ (m, kg)	Depth of motion of a working body in the soil (z, m)								
	0.08			0.10			0.12		
	Amplitude of vibrations (a, m)								
	0.008-0.016	0.018-0.020	0.008-0.024	0.008-0.024	0.008-0.018	0.020-0.024	0.008-0.010	0.012	0.008-0.024
0.8	–	–	18.0	10.0	–	–	–	–	9.0
1.0	–	–	16.4	–	10.0	8.3	–	–	–
1.5	–	–	10.0	–	–	–	10.0	8.0	–
2.0	10.0	8.1	–	–	–	–	–	–	–

Based on the results of the experimental studies it has been found that it is expedient to use a design of the vibratory digging organ that would ensure that in the range of translational velocities 1.3-2.1 m.s<sup>-1</sup> and the vibration amplitude of the vibratory digging organ in the range 0.008-0.024 m frequency oscillations of 10-18 Hz and the depth of travel in the soil of digging organ 0.08-0.10 m. The specified kinematic parameters of the work ensure high-quality performance of the technological process of vibrating digging of sugar beet roots, which satisfies the existing agrotechnical requirements regarding losses and damage of sugar beet roots.

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