

Effects of Closed Low Pressure Environment on Germination Rate of White Radish, Buckwheat and Qing-gen-cai

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In order to investigate the effect of low pressure on a germination of a plant, the germination rates of white radish, buckwheat and qing-gen-cai were measured under low pressure in closed environment. The germination experiments result of white radish under low pressure of the normal atmosphere, low oxygen partial pressure and condition of pure oxygen were showed that the germination rate was mainly affected by the oxygen partial pressure. This indicates that it is possible to germinate the seeds in lower pressure of pure oxygen. The germination rate of white radish in pure oxygen was 75% at 6kPa. It was 31% at 4kPa, which was so different from that at 6kPa. The tendency to the germination rates of qing-gen-cai was almost same as those of white radish. In the case of buckwheat, the tendency was different from those of white radish and qing-gen-cai. The germination rate of buckwheat at 4kPa was the highest in three species of plant. The germination rate at 6kPa was 73% in 20 degrees centigrade, which was higher than that in 25 degrees centigrade.