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Plant Cultivation under Low Pressure on Space Agriculture

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In order to carry out the space agriculture on Mars, plant cultivation under low pressure is examined. From a few experimental results, components of atmosphere and the partial pressures in the greenhouse on Mars are determined. Those are oxygen of 10kPa, nitrogen of 10kPa, and carbon dioxide of 0.1kPa. The total pressure in the Martian greenhouse is about 20kPa. In future, cultivation examinations under low pressure in more species of plants should be conducted. Influence on plant of low gravity, ultra violet, and cosmic ray under low pressure should be also studied.