

## THE ANNOTATION

As part of the bachelor's thesis, a unique development of an automated system for controlling the microclimate of mushroom-growing greenhouses was conducted. The work includes a detailed description of the technological process used for cultivating mushrooms.

One of the main achievements of this project is the creation of a system that provides extremely precise regulation of the greenhouse climate. This has been achieved through the use of modern technologies and high-precision components such as microcontrollers and sensors. Accurate control of temperature, humidity, and ventilation enables the creation of optimal conditions for mushroom cultivation.

To implement the automated system, functional, structural, and electrical schematic diagrams were developed. The functional diagram defines the main functions of the system and the interconnections between its components. The structural diagram reflects the organization and hierarchy of the system's components. The electrical schematic diagram describes the electrical connections between system elements.

During the development of the system, a modern set of components was selected, including microcontrollers, sensors, and other components. The choice of these components was based on their compatibility, reliability, and ability to provide high accuracy in controlling all parameters. Thus, the system ensures precise control of temperature regimes, enhancing the efficiency of mushroom cultivation.

By using this unique automated system for controlling the microclimate of mushroom-growing greenhouses, an optimal environment is achieved, leading to increased yields and improved product quality. This development opens up new possibilities for agriculture and supports sustainable mushroom cultivation.