



PLANNING OF REMOTE EXPERIMENTAL RESEARCH ON EFFECTS OF GREENHOUSE MICROCLIMATE PARAMETERS ON VEGETABLE CROP-PRODUCING

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Abstract – the article presents a plan on experimental studies on substantiation of structural and algorithmic organization of computer-aided systems of remote adaptive monitoring and control of microclimate parameters of commercial greenhouses. There was developed a program component for remote monitoring of physicochemical parameters of greenhouse microclimate using the ‘Internet of Thing’ technology and modern mobile devices. There was offered a hardware component architecture of the system of monitoring and control of greenhouse microclimate parameters. Mathematical model of experimental research of the system was developed for five independent factors based on rotatable design planning of the second order. There were substantiated trends of priority research on efficiency improvement of commercial greenhouse complexes through realization and implementation of adaptive control algorithms of modes for vegetable crops growing.

Index terms: plan of experiment, microclimate, greenhouse, monitoring, control.