REMOTE MONITORING AND CONTROL OF AGRICULTURAL COOL STORAGE FACILITIES VIA INTERNET

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SUMMARY

Final quality and maximum time of Duration storing of agricultural materials in a cool storage depends on their maintaining conditions. The most important control parameters in cool storage are temperature and relative humidity of the cool storage environment. Technological progress and increase in data transferring speed are opened new horizons for use of Internet for monitoring and control of agricultural process. Monitoring and control of processes via Internet not only control the process more accurately but also remove time and place restrictions, decrease human label, decrease costs and consequently increase final quality and efficiency. In this thesis the design and evaluation of a remote monitoring and control system based on microcontroller in agricultural cool storage via Internet is performed. First, temperature and relative humidity data are collected by sensors in cool storage environment. Then the data are transferred to the programmed microcontroller by means of a RS232 serial port. Control commands from the server computer by means of serial port transferred to microcontroller and consequently control a humidifier and the motor of cool storage. In addition, data gathered from sensors and ability of control of cool storage can be done by any client via Internet.