Рисунок 2 – Интерфейс взаимодействия пользователя с РТК

РТК позволяет проводить измерение кислотности почвы в соответствии с установленными ГОСТами. Его высокая производительность в 600 образцов почвы в смену позволяет значительно увеличить эффективность работы и снизить влияние человеческого фактора на результаты измерений. Такой подход позволит оптимизировать процесс измерения кислотности почвы и повысить урожайность на аграрных предприятиях.

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AUTOMATED INVENTORY MANAGEMENT

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Summary. *Inventory management is one of the accounting activities regarding ordering, storing, using and selling a company's inventory. It is carried out by a company in order to avoid the risk of material shortage at the moment when they are needed. A common problem faced by supply chain managers is the lack of a sufficient number of components in stock for the needs of production, which leads to downtime in production and delays in the delivery of goods to customers [1].*

This article describes a software package designed to automate inventory management in a warehouse. The artificial intelligence-based technological

system tracks the actual amount of inventory, and in case this amount reaches critical level, the above-mentioned software generates a notification to the manager or/and an automatic order to the supplier [2]. The proposed software is an additional tool for supply chain managers that will help to control stocks and ensure the smooth operation of production.

Inventory management is one of the key aspects of running a business. Controlling inventory levels is an important performance indicator, especially with regard to achieving a high level of customer service [3]. Lack of materials leads to staff downtime and unused inventory, lost delivery time, delayed shipments to the customer, and therefore additional monetary losses.

The purpose of the research work is to address the effectiveness of software, specially developed for inventory management, in solving the problem regarding management of materials in stock. It is assumed that the software based on AI technologies, with incoming values of the minimum stock level and the maximum stock level, will meet the manufacturing demands by providing necessary components at the right time and in the right amount [4]. To test the ability of the system to perform its main function in real conditions, feeding data for the process of AI algorithms training for detecting and classifying the necessary objects in the video stream were provided.

As far as the min-max method is concerned, it is a simple way to optimize warehouse performance by calculating the minimum/maximum quantity of each stored item. The min/max calculation method means that when the physical quantity of goods in the warehouse reaches the threshold minimum quantity of goods, otherwise called the order point, an order will be formed, which will lead to the fact that the quantity of goods reaches the set maximum value. Supply manager calculates safety stock, minimum inventory and maximum inventory beforehand, the technological solution described above takes these values, track stock levels in real time and notifies supply chain management when the amount of material on the shelf reaches the declared critical value in order to meet the need for the supply of specific goods in a timely manner [5].

The benefits of appropriate inventory control that come as a result of integrating AI algorithms into a video surveillance system helps to avoid incidents where, due to delays in manual registration of the status of an inventory item, a shortage of material is detected at the moment when it is needed and in the full amount that is required.

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