

## Intelligent Control of Agricultural Farms, Gardens, Greenhouses, Livestock

**Authors :** Vahid Bairami Rad

**Abstract :** The intelligentization of agricultural fields can control the temperature, humidity, and variables affecting the growth of agricultural products online and on a mobile phone or computer. Smarting agricultural fields and gardens is one of the best and best ways to optimize agricultural equipment and has a 100 percent direct effect on the growth of plants and agricultural products and farms. Smart farms are the topic that we are going to discuss today, the Internet of Things and artificial intelligence. Agriculture is becoming smarter every day. From large industrial operations to individuals growing organic produce locally, technology is at the forefront of reducing costs, improving results and ensuring optimal delivery to market. A key element to having a smart agriculture is the use of useful data. Modern farmers have more tools to collect intelligent data than in previous years. Data related to soil chemistry also allows people to make informed decisions about fertilizing farmland. Moisture meter sensors and accurate irrigation controllers have made the irrigation processes to be optimized and at the same time reduce the cost of water consumption. Drones can apply pesticides precisely on the desired point. Automated harvesting machines navigate crop fields based on position and capacity sensors. The list goes on. Almost any process related to agriculture can use sensors that collect data to optimize existing processes and make informed decisions. The Internet of Things (IoT) is at the center of this great transformation. Internet of Things hardware has grown and developed rapidly to provide low-cost sensors for people's needs. These sensors are embedded in IoT devices with a battery and can be evaluated over the years and have access to a low-power and cost-effective mobile network. IoT device management platforms have also evolved rapidly and can now be used securely and manage existing devices at scale. IoT cloud services also provide a set of application enablement services that can be easily used by developers and allow them to build application business logic. Focus on yourself. These development processes have created powerful and new applications in the field of Internet of Things, and these programs can be used in various industries such as agriculture and building smart farms. But the question is, what makes today's farms truly smart farms? Let us put this question in another way. When will the technologies associated with smart farms reach the point where the range of intelligence they provide can exceed the intelligence of experienced and professional farmers?

**Keywords :** food security, IoT automation, wireless communication, hybrid lifestyle, arduino Uno

**Conference Title :** ICAACS 2024 : International Conference on Agriculture, Agronomy and Crop Sciences

**Conference Location :** Jeddah, Saudi Arabia

**Conference Dates :** February 19-20, 2024