5th IAC

International Agriculture Congress

21-24 August 2019 İstanbul, Turkey

ABSTRACT BOOK

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6. ULUSAL TARIM KONGRESİ

ÖZET KİTABI

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5th International Agriculture Congress

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Dear Colleagues and Friends,

The 5th International Agriculture Congress will be held in Istanbul-Turkey from 21-24 August 2019. . With a population of 15.03 million, Istanbul is one of the oldest cities of the world. Istanbul is also only city in the world that sits on two continents, Europe and Asia. Strategically located on the Bosphorus peninsula between the Balkans and Anatolia, the Black Sea and the Mediterranean, Istanbul was successively the capital of the Eastern Roman Empire, and the Ottoman Empire and has been associated with major events in political history, religious history and art history for more than 2,000 years. The city is situated on a peninsula which is surrounded by the Golden Horn (Haliç), a natural harbor on the north, the Bosphorus on the east and the Marmara Sea on the south. The Historic Peninsula, on which the former Byzantium and Constantinople developed, was surrounded by ancient walls, built initially by Theodosius in the early fifth century. The Historic Areas of Istanbul include monuments recognised as unique architectural masterpieces of Byzantine and Ottoman periods such as Hagia Sophia, which was designed by Anthemios of Tralles and Isidoros of Miletus in 532-537.

The aim objective of IAC 2019 is to provide a platform for researchers and academicians from all over the world to present their research results and development activities in Agriculture. This congress provides opportunities for the delegates to exchange new ideas and application experiences face to face, to establish business or research relations and to find global partners for future collaboration.

The Conference will be divided into substantive sessions, providing the opportunity to focus on specific areas from their own prospective and national experiences.

The Conference aims to bring together academic scientists, researchers, research scholars and professionals, in order to exchange and share their experiences and research results related to Agriculture aspects.

The conference will be a great opportunity for academics from a range of disciplines and countries to share their research; to receive informal in-depth feedback through discussions and to establish contact with professionals in other countries and institutions.

So, we invite you to contribute with papers and presentations, as well to participate in The 5th International Agriculture Congress

We look forward to meeting you in Istanbul

Sincerely

Prof. Dr. Hasan Atar, Ankara University, Turkey

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The Determination of Freezing/Thawing Effect on the Color Change of Anchovy and Sardine: A Preliminary Study

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Presentation preference: Oral

Abstract 1

If temperature fluctuations can be controlled, freezing and frozen storage are very effective food preservation techniques. However, frozen products must be thawed before they are consumed. The number of methods of thawing is increasing. Thawing stage is very important for maintaining quality. However, the consumer cannot use industrial techniques at home, and thaws the frozen product in the refrigerator. This leads to significant changes in some quality parameters, especially color. The aim of this study is to monitor the color changes during the freezing/thawing stages and storage of anchovy and sardine by using Computer-Based Image Analysis (CBI). The technique used in this study simulates the method used by the consumer at home. According to results, the L* value of the fresh anchovy and sardine was 44.49±3.53 and 48.64±2.85, respectively. Anchovy L* value did not show statistical significance after thawing, the first day of storage and second day of storage ($p>0.05$). However, sardine samples showed statistical significance after thawing and second day of storage L* value ($p<0.05$). The same trend was monitored for anchovy a* value ($p<0.05$). The a* value of the fresh sardine and after thawing did not show any significant difference ($p>0.05$), but there was a significant difference between storage days, and fresh and thawed samples' a* values ($p<0.05$). The same trend was found for b* values of the anchovy. However, b* values of sardine samples were 6.39±0.55, 8.63±1.33, 11.18±1.60, and 11.91±1.28 for fresh, after thawing, the first day of storage and second day of storage, respectively. The fresh, after thawing, and two storage day b* values were found statistically different ($p<0.05$). However, there was no difference between storage days ($p>0.05$). The trend of b* values was observed by the Chroma values of both fish species. The Whiteness values were similar to the trend shown by the L* values of anchovy and sardine. As a result, fresh anchovy that is frozen and then thawed in the refrigerator conditions does not have significant changes in color values. However, if anchovy samples are not consumed and stored after the thawing process, significant color changes occur. However, it was found that sardine b* value had significant differences after the thawing process. These differences were also monitored during storage. These changes may be related to the quality parameters of the fish. For future studies, it is recommended to compare different thawing and freezing techniques and analyze the quality parameters.

Keywords: Freezing/thawing, Anchovy, Sardine, Color, Imaging

The Effect of Smart Agriculture in Food Security

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Presentation Preference: Oral

Abstract 2

Agriculture is one of the most important human activities. Human beings have been dependent on agriculture for food and much of their raw materials for a long time. Demand for agricultural products is still rising nowadays. However, the resources needed for agriculture such as cultivated land, water quality, and so on are very limited. Hence, efficient management is required to increase agronomic productivity. Smart agriculture is a solution that can increase production efficiency in farms, gardens, greenhouses and other agricultural units. The purpose of smart agriculture is the precise use of effective inputs in the production process both spatially and temporally. Accordingly, resource consumption will be minimized in this way of farming. Smart agriculture employs the Internet of things (IoT). The most important tools in this regard are a variety of sensors. Sensors for monitoring soil moisture, temperature, radiation, diseases diagnosis and plant pests are the most important ones used in IoT-based agriculture. These sensors evaluate the environment variables instantaneously and send the data to the database. Then, with the software modeling tools, you can accurately analyze the field situation at any moment. Finally, the system acts intelligently to issue appropriate commands on irrigation, spraying, fertilizing, etc. Owing to the advances made in the applied computer science, e.g. IoT, the intelligent agriculture is economical and cost-effective these days and it moves our life toward sustainability goals by using resources just in need.

Keywords : Smart agriculture, Productivity, Ecological resources, Sensors, the Internet of Things (IoT), Sustainability.



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