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Environmental Policy Effect on Food Packaging and Health, Case Study Cameroon: The Ban on Sale and Use of Non-Biodegradable Plastics

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Access to affordable and safe methods for food packaging and preservation continues to be an indispensable issue to be addressed in Cameroon. This has become more evident after the ban on the sale and use of non-biodegradable plastics, a major method for food packaging in Cameroon. According to the ministry of environment, protection of nature and sustainable development, 58% of Cameroon's population discards their plastic wastes into the open air, these plastics which take a long time to degrade into particles, affecting wildlife, human health and environment, constituting 10% of 6 million tons of waste produced per day in Cameroon. While this policy may have resulted in preserving the environment in the short run, the intended benefits are outweighed by the external costs associated with food safety, nutrition and health; about 340 tons of plastics have been seized from vendors, which has resulted in food such as bread, vegetables, fruits, meat, being sold unpackaged and contaminated through direct contact with air pollutants. Increased enzymatic activity from reaction with extreme temperature and moisture during exposure quicken the ripening and spoilage of food, which decrease the nutritional value of food. This paper sought to present a detailed analysis of the policy on the ban of non-biodegradable plastics and its effects on food packaging and health and also to identify alternative methods for food packaging and to what extent they can be used sustainably in Cameroon. Method used is review and analysis of the policy, related literature, articles and scientific journals. It is expected that through recommendations and propositions made, a sound policy and access to sustainable methods for food packaging and plastic waste disposal be adopted and implemented by the government of Cameroon while public sensitization on the side effects of use and improper disposal of non-biodegradable plastics be reinforced through non- governmental organizations and local groups.

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Quality Estimation of Extra Virgin Olive Oil During Shipment and Storage

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One of the main properties of extra virgin olive oil (EVOO) is that it possesses multiple advantages for human health, which turns the quality control of this functional food into a great necessity. In the present research, samples of 3 different Spanish EVOOs (Marqués de Valdeusa, Empeltre and As Pontis), which are currently being exported to USA, were held under 3 different temperature conditions (3°C, 40°C and room temperature) simulating some of the possible conditions that EVOO suffers during shipment and storage. The consequences of the different temperatures, as well as time, led to an alteration of the properties of the EVOO samples, which were studied by means of absorption visible spectroscopy and neural network (NN) modeling, which is a non-linear mathematical tool that has been used to relate the absorption with time and temperature. The absorption peaks representing the chlorophylls and carotenoids present in EVOO decrease with time and temperature. Generally, the results showed that higher temperatures contribute more in the degradation of EVOO when compared to lower ones. The obtained information was used to create, design, and optimize a neural network, which is able to fairly distinguish the time and temperature conditions that EVOO samples underwent. This technique is fast, user-friendly, and non-destructive, so it could be of great use for the real-time quality control of edible oils during, for example, their distribution chain, as ideal conditions could be potentially optimized.

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