

## Chapter 23

# The Circular Agriculture Products During COVID-19: A Portuguese Analysis

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### ABSTRACT

*The agricultural sector was one of the most important sectors in the economy during COVID-19. The potential of agriculture and the needs of consumers were the main factors in changing the way agriculture supplied the market. Circular products in agriculture were important due to the fact that consumer needs changed during COVID-19. This chapter shows which products have been more important to consumers and how the market has changed to improve the strategy in this sector. Therefore, the perspective of producers to supply the market is the main point of this chapter, as it shows that there is an adjustment in the type of products and services, and therefore, this research will help to understand the circular economy in the agricultural sector during COVID-19.*

### INTRODUCTION

The pandemic COVID -19 has led to historic changes in the norms of our society and the way people interact with each other (Galanakis, C. M. et al., 2021). The importance of the agricultural sector increased after COVID -19. Many countries had adapted their production to the needs of consumers. In fact, the agricultural sector was one of the first to take a step forward. The circular business model and the agricultural sector gave the market the opportunity to reduce the COVID -19 impact on families and organizations and the ability of producers to develop a new strategy in the market (Timuş, A., 2020). In this paper, we have discussed the potential of the circular economy sector during the pandemic, highlighting the Portuguese market. Few studies have promoted the agricultural sector during and after the pandemic COVID -19 (Ibn-Mohammed, T., 2020, Lal, R. et al., 2020; Palahí, M. et al., 2020). Indeed,

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consumers and producers have adopted a new challenging attitude towards new forms in the market. In this regard, organic products have played an important role in changing consumer needs.

Decision making within organizations and its impact on the market pose a new challenge for agricultural products. Producers have had to adopt new forms of resilience in order to compete and collaborate with the agricultural industry. Therefore, the increase in the agricultural market for organic products is one of the main achievements of the pandemic.

In order to discuss the market for circular economy in Portugal, the research question is: what types of circular economy products were important during the pandemic? To answer the question, a qualitative methodology was applied, based on the analysis of data from statistical national sources, such as INE, and international sources (EUROSTAT and European Commission), as well as academic papers. The results showed a positive impact on the consumption of organic products during the pandemic, a new business model for the agricultural industry.

This paper is divided into four main sections. The first provides an introduction to the research; the second examines the concept of the European circular economy market, the Portuguese circular economy and the Portuguese agricultural market; the third explains the methodology and results; the fourth points out future research directions and conclusions.

## **BACKGROUND**

The aim of this study is to analyse how the circular economy in agriculture has changed the market strategy in terms of consumer needs. In this section, the circular economy and the agricultural sector are characterised. An overview of the European market and the prospects of the circular economy to increase sustainability based on circular business models is provided.

### **The Circular European Agriculture Market**

*“By modifying current practices much can be done in terms of improving the productivity of many food and agricultural production systems. Productivity will need to continue to increase in the future to ensure sufficient supply of food and other agricultural products. However, this must be done while limiting the expansion of agricultural land as well as safeguarding and enhancing the environment. This is the core of the transformation necessary for sustainability in food and agriculture systems. Efficiency in productivity has, in the past, been mostly expressed in terms of yield (kg per hectare of production) but future productivity increase should consider more dimensions. Water and energy-smart production systems will become increasingly important as water scarcity increases and as agriculture will need to seek ways to reduce emission of greenhouse gas. This will also have an effect on the use of fertilizers and other agricultural inputs.” (Food and Agriculture Organization of the United Nations, n.d.)*

Accordingly, with FAO (n.d.) sustainable agriculture is based on the increase in productivity, employment and value addition in food system, protecting and enhance natural resources, improving livelihoods and foster inclusive economic growth, enhance the resilience of people, communities and ecosystems, and adopted governance to the new challenges. Lorencowicz et al., (2014:9) discusses sustainable agriculture as a condition for the survival of mankind. The use of circular economy in agriculture has been a highlight in a worldwide context. One such example has recently been pointed by the World Economic Forum, as

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