

Feasibilities of Targets for Organic Farming and Agricultural Chemicals, and the Trade Implications of the European Union's Farm to Fork and Biodiversity Strategies for 2030

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1. Introduction

The new European Commission headed by Ursula von der Leyen set up in December 2019 initiated “The European Green Deal” which is comprehensive and covers a wide range of items for sustainable EU economic society as the highest priority. This initiative aims to realise the compatibility between decarbonisation and economic growth. Increased attentions are made to the importance of the European Green Deal, as the concept of “Green recovery” which intends to integrate climate policy and economic recovery is growingly becoming a global trend.

The Farm to Fork strategy (hereinafter called “F2F”) published by the European Commission in May 2020 is at the heart of the European Green Deal aiming to make food systems fair, healthy and environment-friendly. Ambitious targets in various fields in F2F are part of the strategy. In this article, with particular focus on organic farming and pesticide use and trade, we introduce research on feasibilities of targets and trade implication to for the European Union.

2. The current status and prospect of organic farming in Europe

The F2F and biodiversity strategies have set a target to bring 25% of total farmland under organic farming by 2030. In our study, we calculated the share of farmland under organic farming in the total farmland (hereinafter called “the share of organic farming”) by utilising the actual figures. Table 1 shows the result of this calculation under three scenarios. In scenario 1, it is assumed that the average annual growth rate of the share of organic farming between 2012 and 2019 (5.4%) is sustained until 2030, which means that the share of organic farming in 2030 will be at 15.2%. In case 2, the growth rate of 8.1% (the maximum annual increasing rate after 2012) from 2015 to 2016 is assumed to continue until 2030, which means that the share of organic farming in 2030 will be at 20.0%, much below 30%. To achieve 30% share of organic farming in 2030, as shown in case 3, over 10% (10.30%) annual growth is necessary when assuming the constant rate of annual growth. As demonstrated in the above calculations, to achieve the organic farming target, an unprecedented pace of growth is required. Consistent with the result of the calculations, an official of the European Commission demonstrated the recognition that strong commitments by EU member countries through the planning and implementation of CAP strategy plans (concrete plans of agricultural policy at national level in each EU member country, based on Common Agriculture Policy) are required.

Table 1. The share of land under organic farming and growth rate, 25% target of organic farming and calculations based on three scenarios

		2012	2013	2016	2019
Share		5.9%	5.9%	7.1%	8.5%
Average annual growth rate			0.5%	8.1%	5.7%
		2019	2022	2025	2030
Case-1	The average annual growth rate between 2012 and 2019 (5.4%) continues until 2030	8.5%	9.9%	11.7%	15.2%
Case-2	The maximum annual growth rate after 2012 (from 2015 to 2016) continues until 2030	8.5%	10.7%	13.5%	20.0%
Case-3	The annual growth rate which achieves 25% in 2030. (constant annual growth)	8.5%	11.4%	15.3%	25.0%

Materials: Author's calculations. Data from Eurostat.

Note: Figure of 2019 is estimate value.

3. Challenges and measures to achieve the organic farming target

A comparison of the shares of organic farming in 2019 among EU member countries shows that the figures of Germany (7.75%) and France (7.72%) are below the EU average level (8.49%). These figures imply that further measures by major countries to increase their share in the agricultural industry is one of the most critical needs in the supply side.

The second challenge is that Austria, which has the highest share of organic farming among EU member countries, does not hold a strong demand for its organic products in domestic markets, and instead exports products such as crops and milk to Germany and Switzerland. The European Commission has recognised that it is critically important to ensure simultaneous growth of demand and supply of organic products to ensure solid equilibrium in the sector. Thus, the feasibility of the target largely depends on whether the development of the organic sector in the EU area is well-balanced or not.

To achieve the target, it is necessary to take appropriate support measures and equip relevant systems and institutions, as well as ensure effective policy management through CAP strategy plans. Regarding the support measures, the Commission published the roadmap for the Action Plan for the development of EU organic production in September 2020, and demonstrated the importance of making availability and accessible organic products at various levels including processing and retail, ensuring consumers' trust through promotion activities and green public procurement, preparing supporting measures for further incentives for production, providing training, and promoting research and innovation. With respect to the appropriate system and institutions to promote organic farming, renewed EU regulation (amendment of the regulation on organic production and labeling of organic products enforced in 2008) is planned to be enforced on the 1st of January, 2022 to ensure fair competition for farmers whilst preventing fraud and maintaining consumer trust.

4. The current status and measures to reduce dependency of pesticide use in Europe

With respect to the pesticide, targets have been set in the F2F and biodiversity strategies to reduce the overall use, and risk of chemical and hazardous pesticides, by 50% by 2030. The overall use of pesticides per hectare in EU 28 (including the U.K., hereinafter the same apply in this article) in 2018 was 3.09kg which is less than that of Japan (11.76kg) and China (13.07kg) but higher than the world average (2.63kg) and that of the U.S. (2.54kg). Among EU member countries, there is a great variability, the lowest level being in Romania (0.77kg) and the highest in Cyprus (8.21kg).

The EU directive (Directive 2009/128/EC) was implemented in 2009 with the aim to establish a framework for community action to achieve the sustainable use of pesticides. In most member countries, however, it is believed that measurable targets in line with the forementioned directive have not been set and the implementation of Integrated Pest Management (hereinafter called "IPM") has not been advanced. After the revision of the CAP (Common Agricultural Policy), IPM is believed to become mandatory for farmers to implement to receive incentive payment regarding the aforementioned directive. Therefore, in relation to the feasibility of pesticide targets, it is necessary to give considerable attentions to the extent of changes of agricultural practice including the use of pesticides in each member country.

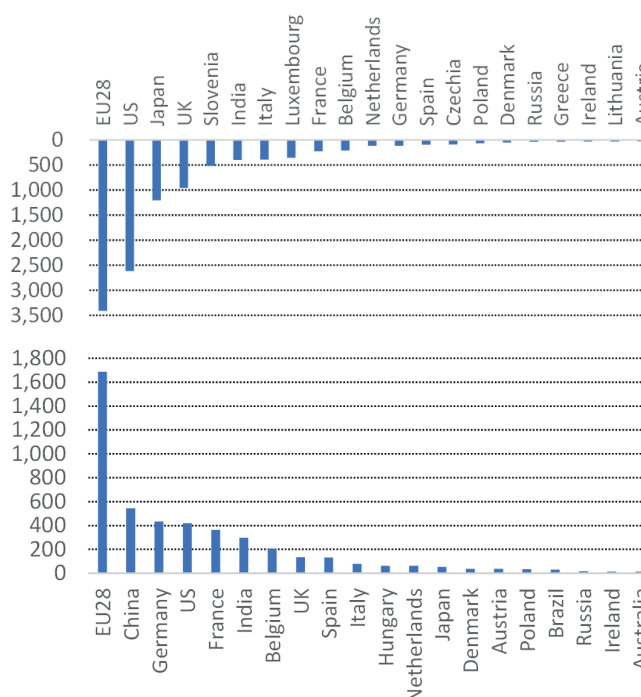


Figure 1. The export values of hazardous pesticides (top) (unit:10 thousand USD) and those of pesticides (bottom) (10 million USD) by EU28 and major countries (2018)

Materials: Author's calculations. Data from FAOSTAT.

Note 1: Figure of 2019 is estimate value.

2: The export values of hazardous pesticides: corresponding statistics are not obtained from Bulgaria, Cyprus, and Malta. Thus, EU28 does not contain the data of these three countries, but includes the datum of the U.K. Corresponding statistics are not obtained from Australia and China.

5. Pesticides trade by European countries; the current status and implications

The value of pesticide export by EU 28 is much higher than that of China and the U.S. However, the assessment by the EU28 of export value of “hazardous pesticides” in FAOSTAT (items included in the pesticides are stipulated in the Rotterdam Convention signed in 1998, hereinafter the same in this) shows that it surpasses the level of other exporting countries, but does not exceed it overwhelmingly (the corresponding statistic of China is not obtained). Furthermore, the U.K.’s share is around a quarter of the export value of EU28 in 2018. Therefore, when considering the level of the EU after removing the U.K.’s share of export value of hazardous pesticides of the total pesticides export, it is expected to plummet still further.

Under the current status and prospects of pesticides trade, in the light of the ambitious targets of pesticides use by the initiative of the EU, there is a possibility that the EU will take the initiative to formulate international rules regarding pesticide use and trade by encouraging other countries to adopt rules of EU model through the signing of free trade agreements, as well as make rules and provide fiscal assistance to promote distribution of agricultural products that are produced in conformance with the sustainability concept. Therefore, it is necessary to continuously follow and monitor the current and future status of pesticide trade.

Note (1): For comprehensive and detailed contents of this research, refer to Kuwaharada (2021) (published on the 22nd February 2021)

(2): Yamamoto (2020)

(3): Measurements for achievements of goals are not clarified yet. In this research, for convenience, figures illustrated in the Figure 1 and others are used.

(4): According to the definition of FAOSTAT, figures are the sum of arable land and land under permanent crops.

(5): The Rotterdam Convention lists 35 items as “hazardous pesticides”.

(6): There is a difference between “more hazardous pesticides” in F2F and Biodiversity and “hazardous pesticides” listed in the Rotterdam Convention in the strict sense.

[References]

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