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Organic varieties under Regulation (EU) 2018/848: analysis of the concept and proposal to make them compatible with plant breeders' rights*

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* This chapter has been prepared under the framework of the research initiative entitled "*Opening plant variety protection to diverse plant reproductive material and drought tolerant varieties to counter climate change in the EU*", partly during a research stay at the Community Plant Variety Office (CPVO) in Angers (France), funded by the OECD Co-operative Research Programme: Sustainable Agricultural and Food Systems (CRP) 2022 Fellowships. The author acknowledges the receipt of a fellowship from the OECD Co-operative Research Programme: Sustainable Agricultural and Food Systems 2022. A special acknowledgement is extended also to Mr. Francesco Mattina and Mr. Dirk Theobald from the CPVO, for their support, invitation, and suggestions, as well as to the colleagues and experts from the CPVO, UPOV, Naktuinbouw and other institutions who instructed the author on DUS testing, plant breeding and organic varieties. The opinions expressed in this document are solely those of the author and do not necessarily represent the views and opinions of the aforementioned persons and institutions. Appreciation is also extended to the peer reviewer who, with his/her review, has contributed to the improvement of this chapter. In this chapter, an adapted version of the citation style "*Universidad de León (España) – Harvard*" ["*Author: Víctor Martínez: 07 – Jun – 19*"], provided by the Mendeley platform, has been used. An early version of this chapter was submitted to SSRN on May 9, 2022, and posted on May 20, 2022, as: Vives Vallés, Juan Antonio, Organic Varieties Under Regulation (EU) 2018/848: Analysis of the Concept and Proposal To Make Them Compatible With Plant Breeders' Rights (May 7, 2022). Dr. Juan Antonio Vives Vallés (Dir), Dr. Natale Rampazzo, and Dr. Jakub Kępiński (Coord.): Intellectual Property in Agriculture, Aranzadi Thomson Reuters, Cizur Menor (Forthcoming), Available at SSRN: https://ssrn.com/abstract=4104575.

Abstract

This paper focuses on the analysis of the concept of "*organic variety suitable for organic production*" of art. 3(19) of Regulation (EU) 2018/848[1]. For this purpose, in addition to the text of Regulation (EU) 2018/848, its *travaux préparatoires* have been also considered. Literature –with an intensive use of the interviews collected and systematized in Gutzen (2019)–, position documents from the organic sector –especially from the International Federation of Organic Agriculture Movements (IFOAM)– and the final report from the EU Horizon 2020 LIVESEED project –Bruszik *et al.* (2021)– have been also taken into account, to better support and contextualize the analysis. It has been found that fears on the tensions (identified by the sector[2], the experts[3] and the literature[4]) within art. 3(19) of Regulation (EU) 2018/848 –i. e., between the concept of "*variety*" included in art. 3(19) and the requirement of "*diversity*" in paragraph (a) of art 3(19)–, and between that provision and the schemes for the commercialization and protection of plant varieties, are to a large extent unfounded[5]. And this is so because, from the implementation of the applicable interpretative criteria, it follows that the "*diversity*" requirement of art. 3(19) of Regulation (EU) 2018/848 must necessarily be interpreted in a restrictive[6] or very restrictive manner[7]. Certainly, these interpretative pathways do not solve all the issues, but at least they do not create additional problems. Alternatives, *de lege ferenda*, are also proposed.

1. Regulation (EU) 2018/848 of the European Parliament and of the Council of 30 May 2018 on organic production and labelling of organic products and repealing Council Regulation (EC) No 834/2007.
2. IFOAM EU Group (2019, p. 6). *See also* n. 35.
3. E. g., Deneken as cited in Gutzen (2019, pp. 69-37); Rossmanith as cited in Gutzen (2019, pp. 95-96, 19); Fleck as cited in Gutzen (2019, pp. 19, 71, 76); Spieß as cited in Gutzen (2019, pp. 101, 104); Müller as cited in Gutzen (2019, pp. 93, 19); Gutzen (2019, pp. 4, 5, 19, 37, 57). Partially adapted from Vives-Vallés (2022, p. 510). *See also* n. 35. Important remark: The interviews in Gutzen (2019), and quotes made by Gutzen of those interviews, are referred to in this paper: "*as cited in Gutzen (2019, p*[…]*)*".
4. Gutzen (2019, pp. 4-5, 19, 37, 57). Partially adapted from Vives-Vallés (2022, p. 510). *See also* n. 35.
5. In line with the opinion personally communicated by Mr. Dirk Theobald, Senior Advisor at the CPVO, consulted during the early stages of the preparation of this chapter.
6. The result of this interpretation appears to be supported by a significant number of players in the organic industry. *See*, e. g., Rossmanith as cited in Gutzen (2019, p. 99); Fleck as cited in Gutzen (2019, pp. 19, 71, 76); Spieß as cited in Gutzen (2019, pp. 101, 104); Müller as cited in Gutzen (2019, pp. 93, 19). *Also*, IFOAM EU Group (2019, p. 6); Gutzen (2019, pp. 4, 5, 19, 37, 57); and n. 45 and 35.
7. The result of this interpretation is supported by some technical experts. *See*, e. g., Deneken in Gutzen (2019, p. 69). *See also* n. 58.

Keywords: Organic varieties, plant breeders' rights, plant variety rights, intellectual property, agriculture.

I. INTRODUCTION

1. A BRIEF INTRODUCTION TO THE TOPIC

In recent decades, the organic farming sector or organic sector has moved from more rigorous to more inclusive positions[8], often reaching difficult equilibria in relation to the principles governing the organic movement[9]. The organic sector has even come to accept[10] the protection of industrial

8. This evolution can be easily observed by comparing old (or older) documents from the sector and papers, with more recent publications. It is worth noting that "*organic varieties suitable for organic production*" and "*plant reproductive material*" might have experienced this trend with greater intensity, or, at least, in more recent times. Thus, for example, IFOAM (2006) focuses on the "*local*" level: "*Organic varieties are robust and fit to local, low-input agro-ecological conditions*". (IFOAM, 2006, p. 1). Whereas IFOAM – Organics International (2011) diminishes the relevance of the *"local"* element, even (expressly) welcoming, or, at least, accepting, "*intensification*", and (more implicitly), also, globalization: "*The overall goal is to provide organic farmers with* ***sufficient quantity of excellent starting plant material of a wide range of suitable varieties propagated according to the organic guidelines****. Considering the diversity of Organic Agriculture with respect to farm size, crop rotation, intensification level, as well as the diverse range of markets around the world, different site specific strategies need to be developed to promote the organic propagation of seeds. For example, supermarkets in many countries demand uniform organic products with a long shelf life that are certified for compliance to organic regulations by an independent third party. On the other hand, consumers of local farmer markets or niche market are more interested in locally adapted varieties that have a cultural heritage. In addition, not all countries have established organic certification systems that would allow for certified organic propagation. However, local seed production is essential for autonomous organic farming and needs to be promoted*". (Underlining added) (IFOAM – Organics International, 2011, p. 5). On the different models or interests in the organic sector in relation to plant breeding *see* particularly Wolfe *et al.* (2008, p. 325). IFOAM – Organics International (2011, p. 4) apparently prioritizes industry over the ideal of conservation, which it leaves to the end, making it quite clear that "[t]*raditional varieties*" are not a priority, with phrases such as: "*The value of traditional seed systems cannot be overlooked. Traditional varieties contain a greater genetic variability than modern commercial varieties especially since they are developed under local input conditions*". (IFOAM – Organics International, 2011, p. 4). *See also* IFOAM – Organics International (2011, p. 7).
9. These tensions can be easily observed in, e. g., IFOAM documents. Cf., e. g., IFOAM (2006) and IFOAM – Organics International (2011) –the most relevant excerpts in the framework of this chapter being transcribed in n. 8–. Cf. also with IFOAM EU Group (2019). *See also* Gutzen (2019, p. 2).
10. IFOAM – Organics International (2017) includes the following section: "***Intellectual property rights:*** *No patents should be granted on genetic resources, which*

property on plant varieties[11]. It might be said that the sector has come of age, leaving behind its innocence, although without (completely) abandoning its founding ideals, experiencing a noticeable crisis of growth and identity. The concepts of "*organic heterogeneous material*" and of "*organic variety suitable for organic production*" of Regulation (EU) 2018/848 were coined[12] in the midst of the above-mentioned developments. This chapter discusses the concept of "*organic variety suitable for organic production*" –in art. 3(19) of Regulation (EU) 2018/848–[13], highlighting its strengths and weaknesses, and suggests

should remain freely exchangeable and available to breeders and farmers. In particular, no patent should be granted on genetic information and native traits, or on varieties or traits stemming from traditional/ classical breeding, regardless of whether they are in older or newly bred varieties. The breeders' exemption and the farmers' right should be legally granted in perpetuity. Participatory breeding programs involving all stakeholders (producers, processors, retailers and consumers) should be promoted, with a plurality of independent breeding programs and breeders with different types of crops, animals, and other organisms to increase agricultural biodiversity". (IFOAM – Organics International, 2017, p. 4). Footnote 2 of the former excerpt reads as follows: "2 *Concerning specific varieties, Protection of Plant Varieties according to UPOV (1991) Convention and even license fees for propagation are considered useful, but it must be ensured that these varieties become common-benefit after the IPR has ended (20 years)*". (IFOAM – Organics International, 2017, p. 4). It is striking that the reference to "*UPOV*" and industrial property on plant varieties was left as a footnote. Certainly, it (allegedly) refers to the farm-saved seed (as "*farmers' right*") as something that "*should be legally granted in perpetuity*", when under UPOV is not even a mandatory exception –*see*, e. g., Dhar (2002, p. 15)–. Yet, it embraces PBRs, in a strategic way, seemingly trying to both please the industry and, at the same time, to avoid an uprising by the purists in the sector. A similar position was adopted by IFOAM in IFOAM – Organics International (2011): "*5. Organics International acknowledges variety protection as long as breeder exemptions and farmers' privilege are guaranteed. IFOAM – Organics International will strongly advocate against the patenting of living organisms that violate these rights*". (IFOAM – Organics International, 2011, p. 2). *See also* IFOAM – Organics International (2011, p. 6). On the overlap between patents and plant breeders' rights, *see*, e. g., Martínez Cañellas (2011).

11. *See* IFOAM – Organics International (2017, p. 4) and n. 10. *See also*, e. g., IFOAM – Organics International, (2011, p. 6). The most relevant excerpt from the latter source is transcribed herein: "*IFOAM – Organics International acknowledges variety protection as long as (i) breeder exemptions, which allowed the breeders to use the protected varieties for research purposes and for breeding new varieties, and (ii) farmers' privilege, which allowed the farmers to use their own harvested material of the protected variety for sowing the next crop on their own farm, are guaranteed. To promote free exchange of genetic resources, IFOAM – Organics International will strongly advocate against the patenting of living organisms that violate these right*". (IFOAM – Organics International, 2011, p. 6).
12. Bruszik *et al.* (2021, pp. 13, 15).
13. For an introduction to the concept of "*populations*" and also of "*organic heterogeneous material*", see, e. g., Gutzen (2019, pp. 6, 7, 12, 34-35, etc.). *Also*, generally, Vives-Vallés (2022).

some ways to overcome or minimize the latter, ultimately trying to increase the usefulness of "*organic varieties*" in practice.

2. THE BACKGROUND OF THE CONCEPT OF "*ORGANIC VARIETY SUITABLE FOR ORGANIC PRODUCTION*"

Regulation (EU) 2018/848 has been the first EU law to name and define "'*organic variety suitable for organic production*'", in art. 3(19) of Regulation (EU) 2018/848[14]:

> "*(19) 'organic variety suitable for organic production' means a variety as defined in Article 5(2) of Regulation (EC) No 2100/94 which:*
>
> *(a) is characterised by a high level of genetic and phenotypical diversity between individual reproductive units; and*
>
> *(b) results from organic breeding activities referred to in point 1.8.4 of Part I of Annex II to this Regulation*".

"[P]*oint 1.8.4 of Part I of Annex II*", in turn, provides:

> "*1.8.4. For the production of organic varieties suitable for organic production, the organic breeding activities shall be conducted under organic conditions and shall focus on enhancement of genetic diversity, reliance on natural reproductive ability, as well as agronomic performance, disease resistance and adaptation to diverse local soil and climate conditions.*
>
> *All multiplication practices except meristem culture shall be carried out under certified organic management*".

This definition is undoubtedly a new development, but it can hardly be called a revolution (its implications are another matter[15]). To start with, Council Regulation (EEC) No 2092/91[16] contained a "*derogation*" (art. 6.2) to the obligation to use "*only products composed of substances listed in Annexes I and II*" of Council Regulation (EEC) No 2092/91 –art. 6.1(b)– in the case of "*seeds treated with products not included in Annex II*" of the regulation –art. 6.1(b)–[17], thus introducing the concepts of "*non-treated seed*" (art. 6.2), and of "*seeds treated with products*" (art. 6.2). Certainly, "*seeds*" are not "*varieties*", and "*non-treated seeds*" are neither "*organic varieties*"[18], but Council Regulation (EEC) No 2092/91 began to move into that direction, by paying more attention

14. Gutzen (2019, p. 6).
15. *See* subsection "*2. Some additional considerations for a better use of 'organic varieties suitable for organic production'*" in section "*III. OTHER CONSIDERATIONS*" in this chapter.
16. Council Regulation (EEC) No 2092/91 of 24 June 1991 on organic production of agricultural products and indications referring thereto on agricultural products and foodstuffs.
17. *See* Ecolex (no date), which refers to "*Article 6 (3) (a) of Regulation (EEC) No. 2092/91*" (Ecolex, no date).
18. *See*, e. g., Gutzen (2019, pp. 12, 70, 88); Bruszik *et al.* (2021, pp. 10, 26, 28).

to "*plant reproductive material*"[19]. Council Regulation (EC) No 1935/95 of 22 June 1995 amending Regulation (EEC) No 2092/91[20] modified art. 6 of Council Regulation (EEC) No 2092/91, including, the following:

> "*Article 6*
>
> *1. The organic production method implies that for the production of products referred to in Article (1) (a) other than seeds and vegetative propagating material:*
>
> […]
>
> *(c) only seed or vegetative propagating material produced by the organic production method referred to in paragraph 2 is used.*
>
> *2. The organic production method implies that for seeds and vegetative reproductive material, the mother plant in the case of seeds and the parent plant(s) in the case of vegetative propagating material have been produced in accordance with the provisions of subparagraphs (a) and (b) of the previous paragraph for at least one generation or, in the case of perennial crops, two growing seasons.*
>
> *3. (a) By way of derogation from paragraph 1 (c), seeds and vegetative propagating material not obtained by the organic production method may, during a transitional period expiring on 31 December 2000* […]*".*

Certainly, the regulation of "[t]*he organic production method* […] *for seeds and vegetative reproductive material*" was another step in the direction of the regulation of "*organic varieties"*. It is also worth noting that the (then new) "*derogation*" in paragraph 3 of art. 6 of Council Regulation (EEC) No 2092/91 was extended by means of Commission Regulation (EC) No 1452/2003[21, 22]

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19. Neither "*organic varieties suitable for organic production*" nor "*organic heterogeneous material*" should be mistaken for "*plant reproductive material*". The "*plant reproductive material*" (from "*organic varieties suitable for organic production*" and "*organic heterogeneous material*") could be used conventionally; and, conversely, "*plant reproductive material*" from conventional varieties or conventional heterogeneous material becomes organic if point 1.8.2 of the Annex II of Regulation (EU) 2018/848 is observed – on this last issue, *see also* IFOAM EU Group (2019, p. 10)–, but that does not, *per se*, make those (conventional) varieties or heterogeneous material to which they belong (if they belong to any of them), "*organic varieties suitable for organic production*" nor "*organic heterogeneous material*". In any case, the connection between the latter and "*plant reproductive material*" is such that some authors refer to the previous ones as "*categories of plant reproductive material*" (Bruszik *et al.*, 2021, p. 15).
20. Council Regulation (EC) No 1935/95 of 22 June 1995 amending Regulation (EEC) No 2092/91 on organic production of agricultural products and indications referring thereto on agricultural products and foodstuffs.
21. Commission Regulation (EC) No 1452/2003 of 14 August 2003 maintaining the derogation provided for in Article 6(3)(a) of Council Regulation (EEC) No 2092/91 with regard to certain species of seed and vegetative propagating material and laying down procedural rules and criteria relating to that derogation.
22. Ecolex (no date).

and that it is still available today and until "*1 January 2028*" –art. 53.2 of Regulation (EU) 2018/848–[23].

The concept of "*populations*" of Commission Implementing Decision of 18 March 2014[24] has been pointed to as the predecessors of the concept of "*organic heterogeneous material*" of Regulation (EU) 2018/848[25], but it is also (to a certain extent) a predecessor of the concept of "*organic variety suitable for organic production*" of Regulation (EU) 2018/848 as well[26].

II. THE CONCEPT OF "*ORGANIC VARIETY SUITABLE FOR ORGANIC PRODUCTION*"

According to art. 3(19) of Regulation (EU) 2018/848, a "*variety*", to be an "*organic variety suitable for organic production*", must, to start with, be "*a variety as defined in Article 5(2) of Regulation (EC) No 2100/94*". Additionally, the "*variety*" must meet two cumulative requirements[27]: it must be "*characterised by a high level of genetic and phenotypical diversity between individual reproductive units; and*", it is also necessary that the "*variety* […] *results from organic breeding activities referred to in point 1.8.4 of Part I of Annex II to this Regulation*".

Each of these requirements is discussed below[28].

1. THE "VARIETY" REQUIREMENT OF ART. 3 (19) OF REGULATION (EU) 2018/848

Art. 3(19) of Regulation (EU) 2018/848 refers to art. 5(2) of Council Regulation (EC) No 2100/94 –by requiring an "'*organic variety suitable for organic production*'" to be (i. e., "*means*") "*a variety as defined in Article 5(2) of Regulation (EC) No 2100/94*"–:

> "*2. For the purpose of this Regulation, 'variety' shall be taken to mean a plant grouping within a single botanical taxon of the lowest known rank, which grouping,*

23. Gutzen (2019, p. 12).
24. Commission Implementing Decision of 18 March 2014 on the organisation of a temporary experiment providing for certain derogations for the marketing of populations of the plant species wheat, barley, oats and maize pursuant to Council Directive 66/402/EEC.
25. Particularly, by Gutzen (2019, p. 7). Adapted from Vives-Vallés (2022, p. 509).
26. Vives-Vallés (2022, p. 510). *See also* Gutzen (2019, p. 7).
27. These two requirements are analyzed by Gutzen (2019) on the basis of interviews to breeders and other technical experts. *See*, particularly, Gutzen (2019, pp. 19, 21, 69ff).
28. For a technical analysis (i. e., a non-legal interpretation) of these requirements, and, in general, of the concept of "*organic variety suitable for organic production*" and of "*breeding*" in the context of organic farming, *see* Gutzen (2019), an outstanding effort of collection, systematisation and analysis, based on the contribution of renowned technical experts.

irrespective of whether the conditions for the grant of a plant variety right are fully met, can be:

– defined by the expression of the characteristics that results from a given genotype or combination of genotypes,

– distinguished from any other plant grouping by the expression of at least one of the said characteristics, and

– considered as a unit with regard to its suitability for being propagated unchanged"[29].

Indents 1st, 2nd, and 3rd of art. 5(2) of Council Regulation (EC) No 2100/94 are in fact connected to the DUS[30] requirements[31], which have important implications as to the requirement contained in art. 3(19)(a) of Regulation (EU) 2018/848[32].

2. THE REQUIREMENT OF ART. 3(19)(A) OF REGULATION (EU) 2018/848

The idea of "*diversity*" is a basic principle of IFOAM[33], also in the domain of (organic) plant breeding, and so is repeatedly stated in its "*position paper*" on the "*Compatibility of Breeding Techniques in Organic Systems*" or IFOAM

29. On the concept of *"variety"* of art. 5(2) of Council Regulation (EC) No 2100/94, *see*, e. g., Würtenberger *et al.* (2015, p. 32). *Also*, in Spanish, García Vidal (2017b).
30. *"According to Article 7 of the 1961/1972 and 1978 Acts and Article 12 of the 1991 Act of the UPOV Convention, protection can only be granted in respect of a new plant variety after examination of the variety has shown that it complies with the requirements for protection laid down in those Acts and, in particular, that the variety is distinct (D) from any other variety whose existence is a matter of common knowledge at the time of the filing of the application (hereinafter referred to as a 'variety of common knowledge') and that it is sufficiently uniform (U) and stable (S), or 'DUS' in short*". (UPOV, 2002, p. 4). On the DUS requirements *see also*, e. g., Würtenberger *et al.* (2015, p. 35ff); García Vidal (2017a). For a novel approach to the DUS requirements in relation to the "*Nutritional Content as a characteristic of a New Variety Plant*" (Martínez-Cañellas, 2022), *see* Martínez-Cañellas (2022) in the present book. The acronym ("*DUS*") is widely used, in English or other languages, by the literature –*see*, e. g., Gallego Sánchez (2017, p. 991); Íñiguez Ortega (2017, p. 519); etc. Adapted from Vives-Vallés (2021, p. 115)–.
31. García Vidal (2017b, p. 280) and Mayr and Morri as cited in García Vidal (2017b, p. 280). Adapted from Vives-Vallés (2022, p. 503).
32. *See* Deneken as cited in Gutzen (2019, pp. 69, 37); Rossmanith as cited in Gutzen (2019, pp. 95, 96, 19); Fleck as cited in Gutzen (2019, pp. 19, 71, 76); Spieß as cited in Gutzen (2019, pp. 101, 104); Gutzen (2019, pp. 4, 5, 19, 37, 57); Müller as cited in Gutzen (2019, pp. 93, 19); IFOAM EU Group (2019, p. 6); generally, Bruszik *et al.* (2021) and LIVESEED (no date); n. 35 and text to n. 35. *See also*, generally, subsection "*1.2. The requirement of art. 3(19)(a) of Regulation (EU) 2018/848*" in section "*II. THE CONCEPT OF 'ORGANIC VARIETY SUITABLE FOR ORGANIC PRODUCTION'*" in this chapter.
33. Wolfe *et al.* (2008, p. 332).

– Organics International (2017)[34]. It is therefore no surprise that it was eventually included in the definitions of "*organic heterogeneous material*" and of "*organic variety suitable for organic production*" of Regulation (EU) 2018/848. It happens though that the first element of the definition of "*organic variety suitable for organic production*" –i. e., being "*a variety as defined in Article 5(2) of Regulation (EC) No 2100/94*"– collides with[35], or, at least, limits, the requirements contained in art. 3(19)(a) of Regulation (EU) 2018/848 (i. e., "*is*

34. *See*, e. g., the following excerpts from IFOAM – Organics International (2017): "*The **Principle of Ecology** in organic agriculture is about contributing to optimally functioning of a diversity of site-specific ecological production systems. This means that breeding needs to develop multilevel approaches, such as decentralized breeding for regional adaptability and enhancing genetic diversity and adapt organism to the environment instead of the environment to the organism*". (IFOAM – Organics International, 2017, p. 6). *Also*: "***A. Organic breeding:***

    […]

    sustains and improves the genetic diversity of our products, and thus contributes to the promotion of agro-biodiversity"; (IFOAM – Organics International, 2017, p. 9).

35. Deneken as cited in Gutzen (2019, pp. 69, 37); Rossmanith as cited in Gutzen (2019, pp. 95, 96, 19); Fleck as cited in Gutzen (2019, pp. 19, 71, 76); Spieß as cited in Gutzen (2019, pp. 101, 104); Gutzen (2019, pp. 4, 5, 19, 37, 57). Partially adapted from Vives-Vallés (2022, p. 510). *See also* Müller as cited in Gutzen (2019, pp. 93, 19); and *also* IFOAM EU Group (2019, p. 6), and, most remarkably, the following excerpt, where IFOAM explains the problem: "*Based on the nature of outcrossing species, open pollinated cultivars will never reach the same level of homogeneity as F1 hybrids derived from crosses of two inbred lines.* […] *Those open pollinated organic varieties are less homogenous and often do not comply with the criteria set out in the current EU horizontal legislation on the marketing of seeds, in particular with the uniformity criteria of the DUS registration.* […] *Adjusted DUS and VCU criteria are therefore needed for organic varieties suitable for organic production.* […] *IFOAM EU has already identified that it is necessary to adapt the protocols for variety registration: • For DUS registration, use less parameters for uniformity and stability*" (IFOAM EU Group, 2019, p. 6). However, IFOAM does not only not expressly back "*a high level of genetic and phenotypical diversity*" for "*organic variety suitable for organic production*" –as art. 3(19)(a) of Regulation (EU) 2018/848 does–, but it even states that "*organic breeders try to maintain a certain level of genetic diversity*" (IFOAM EU Group, 2019, p. 6). Undoubtedly, there is a big difference between "*a high level*" and "*a certain level*". However, according to IFOAM Organics International (2017, p. 7): "*Definitions and criteria go hand in hand and must be used together to ensure that intent and outcomes are clear. Definitions should be as precise as possible. Any minor wording variations among definitions globally should not be an excuse for confusion or subversion of intent. If substantive differences of interpretation of terms arise, these can be checked against the criteria for consistency*". (IFOAM Organics International, 2017, p. 7). Or, in other words, surprisingly, the strictness advocated by IFOAM Organics International (2017, p. 7) does not seem to be applied in IFOAM EU Group (2019, p. 6), which seemingly represents another victory of the organic industry over the purists and idealists (*see also* n. 10 and 67 and text to n. 67).

characterised by a high level of genetic and phenotypical diversity between individual reproductive units").

It is also important to note that there are several ways to measure "*diversity*"[36], or that "*diversity*" may refer to different things[37]. But it is also true that art. 3(19)(a) of Regulation (EU) 2018/848 further defines what is to be understood by "*diversity*". Particularly, according to it, "*diversity*" comprises both, "*genetic and phenotypical diversity*"[38], it must be "*high*", and it is to be found "*between individual reproductive units*". However, several questions remain unanswered or are not clearly addressed by Regulation (EU) 2018/848. To begin with, "*genetic and phenotypical diversity*" needs to be (legally) defined –in the context of art. 3(19)(a) of Regulation (EU) 2018/848–, and a (standard) way of measuring them should be established[39]. Additionally, whatever the definition or the way to measure "*diversity*", thresholds are also needed. Or, in other words, it remains to be defined what "*level of genetic and phenotypical diversity between individual reproductive units*" is needed for the requirement of art. 3(19)(a) of Regulation (EU) 2018/848 to be met. It is also necessary to know whether there is a maximum threshold of "*diversity*" beyond which the definition of "*organic variety suitable for organic production*" of Regulation (EU) 2018/848 does not and cannot be applied. Art. 3(19) of Regulation (EU) 2018/848 provides a clue on the latter. It follows from art. 3(19) of Regulation (EU) 2018/848 –i. e., from: "*means a variety as defined in Article 5(2) of Regulation (EC) No 2100/94*"–, that, if "*diversity*" is such that there is not "*a variety as defined in Article 5(2) of Regulation (EC) No 2100/94*", then, obviously, neither can there be an "*organic variety suitable for organic production*" according to art. 3(19) of Regulation (EU) 2018/848. A systematic approach to the interpretation of this requirement is also clarifying. Since the European legislator decided to include the concept of "*organic heterogeneous material*" in art. 3(18) of Regulation (EU) 2018/848 –and not in a random place, but just before the concept of "*organic variety suitable for organic production*" of art. 3(19) of Regulation (EU) 2018/848–, it can be easily deduced that "*diversity*" cannot be so "*high*" as to turn an "*organic variety suitable for organic production*" into "*organic heterogeneous material*"[40].

36. E. g., Fu (2015, p. 2133).
37. E. g., Urbatzka as cited in Gutzen (2019, pp. 19, 110); Fu (2015, p. 2133).
38. It should be recalled that UPOV and DUS are only (directly) concerned with "*phenotypical*" "*uniformity*" ("*stability*" and "*distinctness*"), not with "*genetic*" ones. E. g., García Vidal (2017b, p. 273).
39. Neither its definition nor its measurement are settled issues in the scientific arena. *See*, e. g., Fu (2015, p. 2133).
40. According to Bruszik *et al.* (2021, p. 15): "*Different types of cultivars between the categories of OHM and organic varieties should be tested in DUS tests to define methods to distinguish between them*". (Bruszik *et al.*, 2021, p. 15). It also shows that, at least for a faction of the organic sector, the "*diversity*" requirement seems to be

Moreover, Regulation (EU) 2018/848 does not exclude plant variety rights[41], which leaves the door open to several alternative interpretative pathways, each of which (potentially) lowering the threshold of "*diversity*", albeit to different degrees and in different ways:

a) certain standards of "*uniformity*"[42] (which are common standards under UPOV[43]) may be acceptable, while others (which are also common under UPOV) are not (because the degree of "*uniformity*" is such that the requirement of "*a high level of genetic and phenotypical diversity between individual reproductive units*" is not and cannot be met);

b) "*organic varieties suitable for organic production*" claiming plant variety protection do not need to meet standards of "*high level of genetic and phenotypical diversity between individual reproductive units*" as "*high*" as "*organic varieties suitable for organic production*" that do not claim that protection[44];

c) "*diversity*" must be "*high*", but not as "*high*" as to preclude the possibility of plant variety protection.

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relevant not only for "*OHM*", but also for "*organic varieties*". However, many experts seem to think otherwise –*see*, e. g., Deneken as cited in Gutzen (2019, p. 69); Fleck as cited in Gutzen (2019, p. 71); Müller as cited in Gutzen (2019, p. 93); Rossmanith as cited in Gutzen (2019, p. 95); Spieß as cited in Gutzen (2019, p. 104). *See also* Gutzen (2019, p. 20)–. On those in favor of the requirement of "*diversity*", *see*, e. g., Watschong as cited in Gutzen (2019, p. 111); Watschong as cited in Gutzen (2019, p. 117).

41. Deduced also from, e. g., Gutzen (2019, p. 39, 46-47); Deneken as cited in Gutzen (2019, p. 69); Heyden as cited in Gutzen (2019, p. 79); Rossmanith as cited in Gutzen (2019, pp. 24, 25, 98, 99); Watschong as cited in Gutzen (2019, p. 112); IFOAM EU Group (2019, p. 4). According to art. 6(i) of Regulation (EU) 2018/848:
"Article 6
Specific principles applicable to agricultural activities and aquaculture
As regards agricultural activities and aquaculture, organic production shall, in particular, be based on the following specific principles:
[…]
(i) without prejudice to Article 14 of Regulation (EC) No 2100/94 and to the national plant variety rights granted under Member States' national law, the possibility for farmers to use plant reproductive material obtained from their own farms in order to foster genetic resources adapted to the special conditions of organic production". Therefore, plant variety rights are, at least, admissible, even, it must be understood, for "*organic varieties suitable for organic production*".
42. On this and other DUS requirements, *see*, e. g., Würtenberger *et al.* (2015, p. 35ff); García Vidal (2017a).
43. *See*, e. g., Würtenberger *et al.* (2015, p. 35ff); García Vidal (2017a).
44. Fleck goes even further and proposes, what follows: "*heterogeneity should be an option for variety registration and not an obligation or precondition to obtain the label 'organic variety'*". Fleck as cited in Gutzen (2019, p. 76). Such a position, however, does not seem to be supported by any sound interpretation of art. 3(19) of Regulation (EU) 2018/848.

The first interpretative route[45] is best supported by a literal interpretation of the requirement contained in art. 3(19)(a) of Regulation (EU) 2018/848[46]. It also strikes a (moderated) balance between the importance which both, Regulation (EU) 2018/848[47] and art. 3(19)(a) of Regulation (EU) 2018/848, place on the idea of "*diversity*" on the one hand; and on the possibility of plant variety protection inferred from art. 6(i) of Regulation (EU) 2018/848, on the other hand[48]. Certainly, it (potentially) leaves the most uniform varieties out of art. 3(19) of Regulation (EU) 2018/848[49]. But, it is also true that art. 6(i) of Regulation (EU) 2018/848 could eventually be interpreted in the sense of

45. Which is in line with, e. g., the position of Rossmanith as cited in Gutzen (2019, p. 99) –i. e., "*We ask for a reduction of criteria on a reasonable level and, at the same time, more tolerance in diversity*". Rossmanith as cited in Gutzen (2019, p. 99)–. *See also* Deneken as cited in Gutzen (2019, pp. 69, 37); Fleck as cited in Gutzen (2019, pp. 19, 71, 76); Spieß as cited in Gutzen (2019, pp. 101, 104); Gutzen (2019, pp. 4, 5, 19, 37, 57); Müller as cited in Gutzen (2019, pp. 93, 19); and n. 35. Surprisingly, it is also (relatively) close to the position, of, e. g., IFOAM in IFOAM EU Group (2019, p. 6) (relevant excerpt transcribed in n. 35).

46. As Gutzen (2019, p. 19) points out: "*If the definition is taken literally, varieties which adhere to DUS criteria would be excluded from OA* [Organic Agriculture as abbreviated in Gutzen (2019)]". (Gutzen, 2019, p. 19). According to Fleck: "*The definition would entail that breeding lines are excluded and that only populations are allowed on the field*". Fleck as cited in Gutzen (2019, p. 71). However, as it will be shown, such an interpretation is not supported by other relevant criteria and means of interpretation.

47. E. g., in art. 4(c) and (i) of Regulation (EU) 2018/848.

48. As an interesting aside, it is surprising that art. 6(i) of Regulation (EU) 2018/848 expressly refers to "*the national plant variety rights*", but that it only refers to Community titles by means of "*Article 14 of Regulation (EC) No 2100/94*". In any case, the reference to "*the national plant variety rights*" must be understood as extending also to Community plant variety rights.

49. It has been pointed out that, at least with cross-pollinated varieties, both, the DUS requirements and the "*diversity*" requirement of art. 3(19)(a) of Regulation (EU) 2018/848 could be met – Fleck as cited in Gutzen (2019, pp. 19, 71, 76) and Gutzen in Gutzen (2019, pp. 19). *See also* Urbatzka as cited in Gutzen (2019, pp. 19, 110) and Gutzen (2019, pp. 19)–. From a legal standpoint, this is explained because the definition of "*Uniformity*", both under art. 8 of the UPOV Act of 1991 and under art. 8 of Council Regulation (EC) No 2100/94, includes the caveat: "*subject to the variation that may be expected from the particular features of its propagation*" (on the basis of a personal communication by Mr. Dirk Theobald, Senior Advisor at the CPVO). However, it is debatable whether, even in those cases, under a strict interpretation of the "*diversity*" requirement of art. 3(19)(a) of Regulation (EU) 2018/848, compliance with the "*uniformity*" (DUS) requirement would be feasible without amending the UPOV DUS guidance –as directly or indirectly shown by, e. g., Gutzen (2019, pp. VIII, 37, 46ff, 49, 50, 58); Rossmanith as cited in Gutzen (2019, pp. 23, 24, 97, 99); Körber as cited in Gutzen (2019, pp. 26); generally, Bruszik *et al.* (2021) and LIVESEED (no date).

not implying an acceptance of intellectual property protection on "*organic varieties suitable for organic production*" (nor DUS compliance), but, simply, as implying the acknowledgement of the need to avoid a collision with plant variety protection. The major shortcoming of this last interpretation is that, for those "*organic varieties suitable for organic production*" that do not comply with DUS standards, it requires a relaxation of those standards, not only to achieve plant variety protection[50] but also for their marketing[51]. It could be countered that not all "*organic varieties suitable for organic production*" are meant to be protected nor commercialized, but this argument is hardly tenable. Some efforts have been undertaken both to try to get Regulation (EU) 2018/848, including its art. 3(19)(a), amended[52], and to try to relax the application of DUS requirements on "*organic varieties suitable for organic production*"[53], which would solve, or, at least, substantially change, the issue under discussion here, but these are future and (highly) uncertain events, which cannot condition the interpretation of the law. The existence of legal alternatives for the marketing of more *diverse* varieties[54] relativizes the urgency and even the need of these reforms, further supporting the first interpretative route.

The second interpretation would achieve the highest levels of respect of the ideals of the organic sector[55] on the one hand, and of the principles and requirements of UPOV and DUS testing standards on the other hand, but at the cost of increasing an internal conflict –within art. 3(19) of Regulation (EU) 2018/848: i. e., between the concept of "*variety*" and the requirement of "*diversity*"[56]–. In any case, it would likely have a lower (negative) impact

See also n. 35 and text to n. 35–. In the end this will ultimately depend on the "*diversity*" standards required under Regulation (EU) 2018/848.

50. E. g., Rossmanith as cited in Gutzen (2019, pp. 98-99).

51. E. g., Rossmanith as cited in Gutzen (2019, pp. 24-25, 98). It must be recalled that the commercialization of plant varieties in the EU also requires DUS compliance –E. g., Winge (2015, pp. 6-7)–. For a general overview on the applicable statutes and procedures, *see*, e. g., European Commission (no date), and, *also*, Gobierno de España: MAPA (no date), which introduces the Spanish "*Registro de variedades comerciales*". On the Spanish procedure Íñiguez Ortega (2022) has recently been published, to which the author of this chapter has not yet had access.

52. Spieß as cited in Gutzen (2019, p. 104).

53. E. g., generally, Bruszik *et al.* (2021) and LIVESEED (no date). *See also* n. 49 and text to n. 49.

54. E. g., Gutzen (2019, pp. 25, 34-36, 48, 49, 58,); Fleck as cited in Gutzen (2019, pp. 25, 35, 36, 75).

55. Contained not only in, e. g., art. 6(i) of Regulation (EU) 2018/848, but also in IFOAM position papers. *See*, e. g., Wolfe *et al.* (2008, p. 332); IFOAM – Organics International (2017, p. 9); and n. 34 and text to n. 34.

56. Tension noted by, e. g., Deneken as cited in Gutzen (2019, pp. 69, 37); Rossmanith as cited in Gutzen (2019, pp. 95-96, 19); Fleck as cited in Gutzen (2019, pp. 19, 71, 76); Spieß as cited in Gutzen (2019, pp. 101, 104); Gutzen (2019, pp. 4-5, 19, 37,

–both sectors, conventional and organic, considered– than other solutions proposed from the organic sector[57].

The third route[58] strikes, like the first one, a balance between "*diversity*" and plant variety protection, but leaning towards the latter. It also has the advantage of doing a more appropriate reading of arts. 3(18) and 3(19) of Regulation (EU) 2018/848. Indeed, solely under this third alternative interpretative pathway do both arts. 3(18) and 3(19) of Regulation (EU) 2018/848 make sense. It should be noted that the only (or, at least, the biggest) significant difference between the legal concept of "*organic heterogeneous material*" –art. 3(18) of Regulation (EU) 2018/848– and of "*organic varieties suitable for organic production*" –art. 3(19) of Regulation (EU) 2018/848– is their opposite stance towards the definition of "*variety*" of "*Article 5(2) of Council Regulation (EC) No 2100/94*". In other words, if the difference between both, "*organic heterogeneous material*" and "*organic varieties suitable for organic production*" is explained by their opposite relationship to the concept of "*variety*" from "*Article 5(2) of Council Regulation (EC) No 2100/94*", then, any interpretation that diminishes or relativizes that fundamental distinction must be questioned, at the very least. Contrariwise, any interpretation supporting that differentiation should be, at least, provisionally, welcome for further consideration. And the fact is that the only significant difference or advantage that (in connection to what is being discussed here) can be expected from using one or the other one (i. e., "*organic heterogeneous material*" or "*organic varieties suitable for organic production*") is either the expectation of a greater "*diversity*" (in the case of "*organic heterogeneous material*"), or the expectation of the possibility of compliance with the DUS requirements (in the case of "*organic varieties suitable for organic production*")[59]. It could

57). Partially adapted from Vives-Vallés (2022, p. 510). *See also* Müller as cited in Gutzen (2019, pp. 93, 19); IFOAM EU Group (2019, p. 6); n. 35 and text to n. 35.

57. As stated by Gutzen (2019, p. 47): "*One possible solution would be to differentiate between testing for the identification of a variety, and testing for variety protection*". (Gutzen, 2019, p. 47). However, this proposal does not seem to take into account the interconnection between plant variety registration and protection schemes –*see*, e. g., Winge (2015, p. 41), adapted from Vives-Vallés (2022, p. 508). *See also* n. 99–. Gutzen (2019, p. 50) also proposes "*a separate category for organic varieties in UPOV guidelines and CPVO protocols is necessary*" (Gutzen, 2019, p. 50), but this proposal does not seem to take into account the potential overlaps between diverse *"organic varieties"* and conventional protected varieties (on the basis of personal communications from several DUS experts, Mr. Dirk Theobald from the CPVO, among them).

58. Apparently, this interpretation is aligned with, e. g., the position of Deneken –whereby: "*The high level of genetic and phenotypical diversity refers* […] *to organic heterogeneous material*". Deneken in Gutzen (2019, p. 69)–.

59. As explained by Lenaerts and Gutierrez-Fons (2013), a "*duplication*" in "*the same normative text*" must be solved by giving each provision a different "*meaning*" by

be counterargued that registration was expected, but on the basis of lower DUS requirements[60] or a tailor-made alternative registration system[61]; but these are speculations about mere (uncertain) expectations. It could be also countered that, if the two concepts were meant to be so distinct, why then establish identical requirements (i. e, "*is characterised by a high level of genetic and phenotypic diversity between individual reproductive units*") in both arts. 3(18)(b) and 3(19)(a) of Regulation (EU) 2018/848?[62] It must be kept in mind, however, that a coincidence in the phrasing does not necessarily mean a coincidence in the meaning, and this is not only a matter of the possibility of polysemy. Indeed, legal interpretation is not restricted to literal interpretation[63]. Besides, interpreting the requirements in arts. 3(18)(b) and 3(19)(a) of Regulation (EU) 2018/848 as referring to different thresholds of "*high level of genetic and phenotypical diversity between individual reproductive units*" –significantly lower in the case of art. 3(19)(a)– is the only interpretation which is consistent with a proper application of a systematic approach[64], the observance of which is not only advisable but almost compulsory to address the issue[65]. Furthermore, this solution is also consistent with a teleological interpretation of those provisions. In this regard, and counterintuitive as it may seem, it must not be forgotten that, above all, Regulation (EU) 2018/848 is the result of the consensus between different organic farming factions[66], and that, among them and in this matter, idealists seem to be relentlessly

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ensuring they are "*interpreted in light of its 'effet utile'*". (Lenaerts and Gutierrez-Fons, 2013, pp. 13-14). This is fully applicable to the present case.

60. *See*, e. g., Gutzen (2019, pp. VIII, 37, 46ff, 49, 50, 58); Rossmanith as cited in Gutzen (2019, pp. 23, 24, 97-99); Körber as cited in Gutzen (2019, pp. 26); generally, Bruszik *et al.* (2021) and LIVESEED (no date), and n. 49 and text to n. 49.
61. *See*, e. g., the proposal from Müller in Gutzen (2019, p. 91 *in fine*).
62. As expressed by Gutzen: "*Breeders agree with coordinators, that this subpoint of the definition* [referring to the "*diversity*" requirement of art. 3(19)(a) of Regulation (EU) 2018/848] *uses the same wording as for the definition of organic heterogeneous material. Thus, they request a clarification of the definition*". Gutzen (2019, p. 19). *See also* Deneken, Rossmanith and Spieß as cited in Gutzen (2019, pp. 69, 96, 104), as well as Fleck, Müller and Rossmanith as cited in Gutzen (2019, pp. 71, 76, 93, 95), respectively.
63. E. g., Fennelly (1996, pp. 660, 664, 665, 668, 674); Lenaerts and Gutierrez-Fons (2013, pp. 4, 5, 8ff); and, most remarkably, Lenaerts and Gutierrez-Fons (2013, pp. 14-15), and n. 59 and text to n. 59.
64. *See* text to n. 59 in the context of Lenaerts and Gutierrez-Fons (2013, pp. 14-15) and n. 59.
65. *See* Lenaerts and Gutierrez-Fons (2013, pp. 14-15) and n. 59.
66. Already back in 2008, Wolfe *et al.* (2008) identified "*three market types*" in the organic sector: "*Global commodity farming*", "*Regional market farming*", and "*Local market farming*" (Wolfe *et al.*, 2008, p. 325).

losing traction against pragmatists and «*commoditization*» advocates[67]. Therefore, when reference is made here to the teleological approach, it is not even close to the founding ideas and principles of organic farming, nor even to the position of the major associations in the sector, but to the eminently pragmatic spirit of Regulation (EU) 2018/848, at least as far as the subject matter of this chapter is concerned. Finally, it is worth noting that recitals (36) and (37) of Regulation (EU) 2018/848[68] seem also to support this third

67. Today it is clear that *"commoditization"* and big companies in organic farming have beaten the idealists. According to the Blue Weave Consulting report "Global Organic Farming Market […] 2017-2027", the organic sector worldwide is led by big corporations, such as "*ZUWA Organic Farms Pvt Ltd., Bayer AG, Organic Farmers Co., AkzoNobel N. V., Dow Chemical Company, Indian Organic Farmers Producer Company (IOFPC), BASF SE,* […]" (BlueWeave Consulting, 2021). This seems to be conditioning the agenda of the most important organizations in the organic sector –*see*, e. g., IFOAM – Organics International (2011, p. 5), relevant excerpt transcribed and underlining in n. 8– and, likely, the agenda of the EU legislator. As explained by "*Jens Rohde*" in his "*Amendment 960*" to the text of the "*Proposal for a regulation [COM(2014)0180 – C7-0109/2014 – 2014/0100(COD)]*" at the European Parliament: "*Serious strategies should be implemented in order to reduce the need for non-organic plant reproductive material and non-organic animals for breeding, but the challenges are substantial due to the limited market. For a range of seed and breeding companies, it is not yet economically profitable to develop the required organic breeds or varieties.* […]" (Emphasis added) (European Parliament, 2015, p. 68). It is clear that the quoted motivation of the proposed modification is referring to (likely key/big) conventional "*seed and breeding companies*" –using the words of Rohde in European Parliament (2015, p. 68)–. Of course, there is nothing wrong with big corporations, but *"globalization"* and *"commoditization"*, and, to a certain extent, also big corporations, do not seem, *prima facie*, to be in the best possible harmony with the original ideals and principles of the movement of organic farming –on the, current, "*Principles of Organic Agriculture*" according to IFOAM, *see* IFOAM Organics International (no date)–. *See also* Gutzen (2019, p. 2ff), who in her work collects and comments on the different technical reasons and standpoints in relation to organic breeding –and which can be connected to the different market positions described by Wolfe *et al.* (2008, p. 325) and summarized in n. 66–. It is worth noting that one of the "*hypotheses"* which Gutzen defines and explores in her work is precisely whether "[t]*he definition of 'organic varieties suitable for organic production', in the new organic regulation (EU) 2018/848, represents a restriction of varieties available to organic farmers.*" (Gutzen, 2019, p. 2).

68. Recital (36) of Regulation (EU) 2018/848: "*(36) Research in the Union on plant reproductive material that does not fulfil the variety definition as regards uniformity shows that there could be benefits of using such diverse material, in articular with regard to organic production, for example to reduce the spread of diseases, to improve resilience and to increase biodiversity.*

(37) Therefore, plant reproductive material that does not belong to a variety, but rather belongs to a plant grouping within a single botanical taxon with a high level of genetic and phenotypic diversity between individual reproductive units, should be available for use in organic production.

interpretative route, because they only link the "*uniformity*" problems to which they expressly refer to "*organic heterogenous material*" (not to "*organic varieties*").

3. THE REQUIREMENT OF ART. 3(19)(B) OF REGULATION (EU) 2018/848

The requirement contained in art. 3(19)(b) of Regulation (EU) 2018/848 is a complex one, not only because it refers in turn "*to* […] *point 1.8.4 of Part I of Annex II to this Regulation*" –of Regulation (EU) 2018/848–, but because that "*point*" is extremely vague[69], and because it further develops art. 3(19)(b) of Regulation (EU) 2018/848 far beyond what would be *a priori* expected from the reference contained in that paragraph[70]. It is extremely vague, because it defines the requirement in art. 3(19)(b) (i. e., "*results from organic breeding activities* […]") in a tautologic (or, at least, in a very simplistic) way, as it only imposes that "*the organic breeding activities shall be conducted under organic conditions*". Therefore, it does not clarify what are and what are not "*organic breeding activities*". At least it states that they "*shall be conducted under organic conditions*", which must be interpreted as "*conducted*" according to certified "*organic conditions*", but it still does not specify which specific "*organic conditions*". And that point of the Annex goes beyond the reference in art. 3(19)(b) of Regulation (EU) 2018/848,

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For that reason, operators should be allowed to market plant reproductive material of organic heterogeneous material without having to comply with the requirements for registration and without having to comply with the certification categories of pre-basic, basic and certified material or with the requirements for other categories set out in Council Directives 66/401/EEC ([1]), 66/402/EEC ([2]), 68/193/EEC ([3]), 98/56/EC ([4]), 2002/53/EC ([5]), 2002/54/EC ([6]), 2002/55/EC ([7]), 2002/56/EC ([8]), 2002/57/EC ([9]), 2008/72/EC ([10]) and 2008/90/EC ([11]), or in acts adopted pursuant to those Directives.

That marketing should take place following a notification to the responsible bodies referred to in those Directives and, after the Commission has adopted harmonised requirements for such material, provided that it complies with those requirements."

69. A problem which seems to be also pointed out by Rossmanith when saying: "[…] *We are thankful that there is a definition of organic breeding, even though it is not a very good definition*. […]" (emphasis added) –Rossmanith as cited in Gutzen (2019, p. 96)–.

70. It is however supported by many experts –*see*, e. g., Fleck as cited in Gutzen (2019, pp. 20, 71); Heyden as cited in Gutzen (2019, pp. 20, 78, 80); Karalus as cited in Gutzen (2019, p. 87); Körber as cited in Gutzen (2019, p. 89); Rossmanith as cited in Gutzen (2019, pp. 20, 96); Spieß as cited in Gutzen (2019, pp. 20, 104, 105); Watschong as cited in Gutzen (2019, p. 111). *See also* Gutzen (2019, pp. 20, 38ff)–. Furthermore, as claimed by Rossmanith, it "*goes in line with the IFOAM standards*" –Rossmanith as cited in Gutzen (2019, p. 96)–. For further information on this issue, *see*, particularly, Gutzen (2019, pp. 20, 38ff).

because it does not merely refer to "*organic breeding activities*" (which, however, it does not even define) but establishes other (sub)requirements of "*organic breeding*", i. e., that "*the organic breeding activities* […] *shall focus on enhancement of genetic diversity, reliance on natural reproductive ability, as well as agronomic performance, disease resistance and adaptation to diverse local soil and climate conditions*"[71]. Or, in other words, it provides some (minimal) insights on what "*breeding*" must pursue in order to be "*organic*", but says nothing about its "*activities*", nor does it define "*breeding*" in the context of Regulation (EU) 2018/848. The vagueness or lack of specification of the "*organic breeding activities*" might be addressed by considering, and, eventually, implementing to some extent in the EU legislation, the document: IFOAM Organics International (2017)[72]. As to what is to be understood by "*breeding*", it is worth noting that, in some cases, the threshold could eventually be so low[73] that the requirement of art. 3(19)(b) of Regulation (EU) 2018/848 might ultimately make hardly any substantial difference with respect to conventional plant varieties. If accompanied by a relaxation of the other requirements contained in art. 3(19) of Regulation (EU) 2018/848, it could even be the case that point 1.8.4 of Annex II of

71. It should also be noted that the transcribed excerpt is, to some extent, a reproduction of art. 6(f) of Regulation (EU) 2018/848:
"Article 6
Specific principles applicable to agricultural activities and aquaculture
As regards agricultural activities and aquaculture, organic production shall, in particular, be based on the following specific principles:
[…]
(f) *in the choosing of plant varieties, having regard to the particularities of the specific organic production systems, focussing on agronomic performance, disease resistance, adaptation to diverse local soil and climate conditions and respect for the natural crossing barriers*". *See also* IFOAM EU Group (2019, p. 7).

72. This, like so many other proposals in this study, is made by the author because it is consistent with the interpretation that, according to the applicable interpretative criteria and available interpretative elements, seems the most appropriate; not because the author agrees with the substance. In fact, the concept of "*organic breeding*" and, above all, the introduction of a list of techniques, in addition to artificially limiting the possibilities of plant breeding in the sector –something even acknowledged, to a certain extent, by the sector itself, as proven by the maintenance of the "*derogations*" [*see* IFOAM EU Group (2019, p. 2) and n. 84 and text to n. 84] and noted by others [like Karalus in Gutzen (2019, pp. 20, 87) and Gutzen (2019, p. 38), but *also*, Körber as cited in Gutzen (2019, p. 89)]– would end up hindering the development of plant breeding in the sector, as has already happened with agricultural biotechnology as a result of the legal configuration of the concept of GMOs in the EU –*see*, e. g., the reference to the "*The COGEM report* […]" in Morris and Spillane (2010, p. 367)–.

73. *See*, e. g., Würtenberger *et al.* (2015, pp. 28, 29).

Regulation (EU) 2018/848 would be fulfilled by simply meeting the requirements of point 1.8.2 of the said Annex[74]; or that compliance with the conditions included in the later point would be more difficult than the compliance with those contained in point 1.8.4 of the same annex.

As to the sub-requirements in point 1.8.4 of Annex II of Regulation (EU) 2018/848, it should be noted that the first one (i. e., the "*enhancement of genetic diversity*") is actually an old acquaintance, the "*diversity*" requirement of art. 3(19)(a) of Regulation (EU) 2018/848. Other four (or even five) sub-requirements are also included: two classical (conventional) breeding requirements[75] –"*agronomic performance*" and "*disease resistance*"–; a typical organic requirement[76] ("*reliance on natural reproductive ability*"); "*and adaptation to diverse local soil and climate conditions*" (which, in turn, is a compound of two sub-requirements). Characters related to "*agronomic performance*", and most particularly, "*yield*", and also "*disease resistance*", seem to be the most important criteria for organic farmers as well[77]. It is also worth noting that the "*reliance on natural reproductive ability*" criterion appears to be intended for GMOs[78], but could eventually also disfavor (at least some) hybrids, whereas IFOAM's "*Position Paper*" on the "*Compatibility of Breading Techniques*

74. Focused in the *"obtention"* of "*organic plant reproductive material to be used for the production of products other than plant reproductive material*" –point 1.8.2 of Annex II of Regulation (EU) 2018/848–. It is worth noting that in such a scenario, in some cases, "*Organic Plant Breeding*" –as coined by Wolfe *et al.* (2008, p. 324); *see also* Gutzen (2019, pp. 10, 12)–, and even "*Breeding programmes For Organic Agriculture*" –Wolfe *et al.* (2008, p. 324); *see also* Gutzen (2019, pp. 10, 12)– might be virtually nonexistent –i. e., substituted by conventional bred varieties "*produced in accordance with this Regulation* [Regulation (EU) 2018/848] *for at least one generation, or, in the case of perennial crops, for at least one generation during two growing seasons*", as stated in point 1.8.2 of Annex II of Regulation (EU) 2018/848–.
75. *See*, e. g., Urbatzka as cited in Gutzen (2019, pp. 107, 108).
76. According to IFOAM – Organics International (2014): "*Organic plant breeding and variety development is sustainable, enhances genetic diversity and relies on natural reproductive ability*". (IFOAM – Organics International, 2014, p. 43). Adapted from Gutzen (2019, p. 38). It is worth noting that, already in 2014, according to IFOAM – Organics International (2014, p. 43): "*To produce organic varieties, plant breeders shall select their varieties under organic conditions that comply with the requirements of this standard*". (IFOAM – Organics International, 2014, p. 43). I. e., IFOAM – Organics International (2014) already anticipated the requirement of art. 3(19)(b) of Regulation (EU) 2018/848.
77. E. g., Müller as cited in Gutzen (2019, p. 92); Schnock as cited in Gutzen (2019, p. 95); Spieß as cited in Gutzen (2019, p. 103); Urbatzka as cited in Gutzen (2019, p. 108); Wegner as cited in Gutzen (2019, pp. 114, 117).
78. IFOAM EU Group (2019, p. 7).

in Organic Systems" –or IFOAM Organics International (2017)– accepts the general use of hybrids[79], only banning some of them[80].

III. OTHER CONSIDERATIONS

1. "*DEROGATIONS*" TO THE USE OF "*ORGANIC VARIETIES SUITABLE FOR ORGANIC PRODUCTION*"

Recital (43) of Proposal COM/2014/0180 final – 2014/0100 (COD)[81] reads as follows:

> "*(43) Regulation (EC) No 834/2007 provided for different exceptions from organic production rules. The experience gained from the application of those provisions has shown that such exceptions have a negative impact on organic production. In particular, it has been found that the very existence of such exceptions impedes the production of inputs in organic form and that the high level of animal welfare associated with organic production is not ensured. In addition, the management and control of exceptions entail considerable administrative burden, both for the national administrations and operators. Finally, the existence of exceptions has created conditions for distortions in competition and has threatened to undermine consumer confidence. Accordingly, the scope for allowing exceptions from organic production rules should be further restricted and limited to cases of catastrophic circumstances*". (Emphasis added).

The "*Legislative financial statement*" enclosed to Proposal COM/2014/0180 final – 2014/0100 (COD), states[82]: "*The removal of exceptions to the rules is expected to contribute to the development of organic inputs, notably seeds*"[83]. However, finally, those "*exceptions*" or "*derogations*" were not removed[84], which seems to be hindering the development of "*organic seeds*"[85]. What is most surprising

79. According to IFOAM – Organics International (2017): "*In complementation to the presently widely used hybrids, breeding of non-hybrid plant varieties and animal breeds is encouraged in order to give farmers the choice to produce their own seeds (farmers' privilege) and animal breeding lines*". (IFOAM – Organics International, 2017, p. 9).
80. *See* IFOAM Organics International (2017, pp. 19, 21, 22, 25).
81. Proposal for a Regulation of the European Parliament and the Council on organic production and labelling of organic products, amending Regulation (EU) No XXX/XXX of the European Parliament and of the Council [Official controls Regulation] and repealing Council Regulation (EC) No 834/2007[.] COM/2014/0180 final – 2014/0100 (COD), or European Commission (2014).
82. Just under the subtitle "*Specify the effects which the proposal/initiative should have on the beneficiaries/groups targeted*".
83. European Commission (2014, p. 61).
84. E. g., IFOAM EU Group (2019, p. 2). It should be recalled that those "*derogations*" have been in force since Council Regulation (EEC) No 2092/91 (Ecolex, no date). *See* also n. 17 and 22 and the text to n. 17 and 22.
85. According to Bruszik *et al.* (2021): "*The main obstacle found regarding the implementation of the derogation rules is that in most EU Member States visited, the*

is that farmers do not seem to be demanding "*organic seeds*"[86] –which at least casts some doubts on the advantages of those "*seeds*" (for farmers)– and that the sector appears to be generally in favor of the possibility of using "*non-organic seeds*"[87].

2. SOME ADDITIONAL CONSIDERATIONS FOR A BETTER USE OF "*ORGANIC VARIETIES SUITABLE FOR ORGANIC PRODUCTION*"

It remains to be seen what impact the so-called "*7-year temporary experiment*"[88] will have on the (development of the) regulation of "*organic varieties suitable for organic production*" of art. 3(19) of Regulation (EU) 2018/848. In the meantime, it is worth noting that there is no clear advantage with the introduction of the concept of "*organic variety suitable for organic production*", but significant risks and downsides, at different levels. From the perspective of agricultural and food production planning, it should not be forgotten that supporting organic farming without significant changes in consumption patterns[89], necessarily entails the use of more land for agricultural purposes[90]. Furthermore, "*organic varieties suitable for organic*

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approach as it has been applied so far has not encouraged the use of organic seed". (Bruszik *et al.*, 2021, p. 8). I. e., just as predicted by recital (43) of Proposal COM/2014/0180 final – 2014/0100 (COD) or European Commission (2014). IFOAM also appears to believe that Regulation (EU) 2018/848 went too far with the "*derogations*" –*see* particularly IFOAM EU Group (2019, pp. 2, 9ff)–. *See also* the other references to the "*derogations*" in Bruszik *et al.* (2021, p. 8).

86. *See* Bruszik *et al.* (2021, p. 8) (the most relevant excerpt transcribed in n. 85). IFOAM – Organics International (2011, p. 2) goes even further: "*If farmers are forced to use only organically propagated plant material, they will miss a large number of adapted varieties. The* ***lack of choice*** *and the* ***additional expenditures*** *compared to conventional seed might become more severe if the propagation of plant material needs to be certified organic*". (IFOAM – Organics International, 2011, p. 4).
87. IFOAM – Organics International (2011, p. 2): "*8. In places where certified organic seeds of suitable varieties are not available in sufficient quantity or quality the use of non-organic seeds should be allowed.* […]" (IFOAM – Organics International, 2011, p. 2). *See also* IFOAM – Organics International (2011, pp. 6, 7).
88. IFOAM EU Group (2019, p. 6). *See also* Bruszik *et al.* (2021, p. 15) and recital (39) of Regulation (EU) 2018/848.
89. E. g., Smil (2011, p. 13); Lynas (2017); Balmford *et al.* (2018, p. 3); Nordhaus and Shah (2022). *See also* Rambo (1997, pp. 2, 5); generally, Phalan *et al.* (2016); and Purnhagen *et al.* (2021, p. 3).
90. E. g., Renobales Scheifler (2009, pp. 21-22); Smil (2011, p. 10); generally, Phalan *et al.* (2016); Lynas (2017); generally, Balmford *et al.* (2018); Smil as cited in Clark (2022); Nordhaus and Shah (2022). *See also* Rambo (1997, p. 5) and Purnhagen *et al.* (2021, pp. 3, 4). It should be noted that both Renobales Scheifler (2009, pp. 21-22) and Balmford *et al.* (2018) make explicit reference to, e. g., "*cultivos ecológicos*" –Renobales Scheifler (2009, p. 21)– or "*organic systems*" –Balmford *et al.* (2018, pp. 3, 5, 11…)–.

production", as they are currently regulated in Regulation (EU) 2018/848, are either a menace to orthodox or conventional plant variety registration and protection schemes –in case of a strict or literal interpretation of the requirement of "*diversity*" of art. 3(19)(a) of Regulation (EU) 2018/848 is finally taken–[91], or a betrayal of the principles of the organic farming movement, the consumers of those varieties, and the end consumers (in case of a rhetorical or permissive interpretation of that requirement), or both (in the event that a compromise is finally reached between the two opposing views, rigorism *vs.* –valueless– "*commoditization*"). But neither organic farming nor "*organic varieties suitable for organic production*" are the enemies of plant variety registration and protection schemes, nor (necessarily) useless. Rather on the contrary. The market for organic products is already important and is expected to keep expanding[92]. Furthermore, "*diversity*" is not only a demand of Regulation (EU) 2018/848 and the organic sector, but also of the scientific community[93]. One solution could be to give priority to "*organic varieties suitable for organic production*" in marginal agricultural areas[94],

91. On the tensions between the organic requirement of "*diversity*" and orthodox or conventional plant variety registration and protection schemes *see*, e. g., Deneken as cited in Gutzen (2019, pp. 69, 37); Rossmanith as cited in Gutzen (2019, pp. 95, 96, 19); Fleck as cited in Gutzen (2019, pp. 19, 71, 76); Spieß as cited in Gutzen (2019, pp. 101, 104); Gutzen (2019, pp. 4, 5, 19, 37, 57). Partially adapted from Vives-Vallés (2022, p. 510). *See also* Müller as cited in Gutzen (2019, pp. 93, 19); IFOAM EU Group (2019, p. 6); n. 35 and text to n. 35, as well as Vives-Vallés (2022, p. 510) –where the conflict between the organic requirement of "*diversity*" [of art. 3(19)(a) of Regulation (EU) 2018/848] and the DUS requirement of "*uniformity*" is further developed, but in the context of to the concept of "*populations*" of Commission Implementing Decision of 18 March 2014, and of "*organic heterogeneous material*" of art. 3(18) of Regulation (EU) 2018/848–. *See also* subsection "*1.2. The requirement of art. 3(19)(a) of Regulation (EU) 2018/848*" from section "*II. THE CONCEPT OF 'ORGANIC VARIETY SUITABLE FOR ORGANIC PRODUCTION'*" in this chapter.
92. E. g., BlueWeave Consulting (2021); Körber as cited in Gutzen (2019, p. 88); Bruszik *et al.* (2021, p. 4). However, this situation and the forecasts are in sharp contrast with a, still, very low market penetration of "*organic seed*" (Bruszik *et al.*, 2021, p. 8) and "*varieties*" (Gutzen, 2019, p. 1).
93. *See*, e. g., generally, Hammer *et al.* (2012).
94. As proposed by Nordhaus and Shah (2022). Contrarily to what leaders from the organic farming sector seems to suggest –*see*, e. g., Figeczky and Kariyawasam (2022)–, it is not a question of likes or dislikes for organic famirng and, in general, low input agriculture, but, simply that, as stated or implied by the literature –e. g., Renobales Scheifler (2009, pp. 21-22); Smil (2011, pp. 10, 13); generally, Phalan *et al.* (2016); Lynas (2017); generally, Balmford *et al.* (2018); Smil as cited in Clark (2022); Nordhaus and Shah (2022); Rambo (1997, p. 5); Purnhagen *et al.* (2021, pp. 3-4)–, and as evinced by the Sri Lanka crisis (Nordhaus and Shah, 2022), a significant shift towards organic farming or to a low input agriculture does not seem feasible without significant changes in consumption paterns

where a comparative advantage is attributed to them[95]. The relaxation of the «*uniformity*» DUS requirement[96], if any, should not be restricted to "*organic varieties suitable for organic production*"[97]. However, the latter does not seem feasible in the short to mid-term. Not only because this would require the modification of the DUS guidance[98] but also, because, if not well thought through, such modifications could jeopardize the EU, and international, plant variety registration and protection schemes[99]. Formulas that keep

–e. g., Smil (2011, p. 13); Lynas (2017); Balmford *et al.* (2018, p. 2); Nordhaus and Shah (2022). *See also* Rambo (1997, pp. 2, 5); generally, Phalan *et al.* (2016); Purnhagen *et al.* (2021, pp. 3-4); as well as n. 89 and text to n. 89–, and/or without the consumption of more soil –e. g., Renobales Scheifler (2009, pp. 21-22); Smil (2011, p. 10); generally, Phalan *et al.* (2016); Lynas (2017); Smil as cited in Clark (2022); Nordhaus and Shah (2022); Purnhagen *et al.* (2021, pp. 3-4). *See also* Rambo (1997, p. 5); generally, Balmford *et al.* (2018); as well as n. 90 and text to n. 90–, and/or without the decrease of worldwide population –e. g., Rambo (1997, pp. 2, 4-7); Renobales Scheifler (2009, pp. 21-22); Smil (2011, pp. 9, 10, 12); Lynas (2017); Smil as cited in Clark (2022); Nordhaus and Shah (2022)–, and/or without accepting an increase of grenhouse emissions –e. g., Burney *et al.* (2010, pp. 12052ff); "*Burney, Davis and Lobell (2010)*" as cited in Smil (2011, p. 10); Phalan *et al.* (2016, p. 450); generally, Balmford *et al.* (2018). *See also* Purnhagen *et al.* (2021, pp. 3-4)–. As expressed by FAO Director Diouf: "*It is clear in this regard that while organic agriculture contributes to poverty reduction and should be promoted, it cannot feed 6.8 billion today and 9.1 billion in 2050*". –Diouf (2009, p. 3). Adapted from Renobales Scheifler (2009, p. 40)–. This is by no means incompatible with advocating that agriculture, in general, should make a rational use of inputs –*see* e..g., the reference to a "[j]*udicious use of chemical fertilizers* […]" by Diouf (2009, p. 3), adapted from Renobales Scheifler (2009, p. 40); Smil (2011, p. 13); Vitousek *et al.* (2009, pp. 1519-1520)– in order to avoid or, at least, diminish its environmental impacts –e. g., Vitousek *et al.* (2009, pp. 1519-1520); Smil (2011, p. 12)–.

95. According to IFOAM: "*Organic varieties are robust and fit to local, low-input agroecological conditions*". (IFOAM, 2006, p. 1). *See also*, e. g., IFOAM EU Group (2019, p. 6); Gutzen (2019, p. 36); "*Heyden 2004*" as cited in Wolfe *et al.* (2008, p. 328); "*Burger et al. 2008*" as cited in Wolfe *et al.* (2008, p. 340); Wolfe *et al.* (2008, p. 341).
96. Requested by the organic sector. *See*, e. g., IFOAM EU Group (2019, p. 6) (relevant excerpt transcribed in n. 35).
97. Vives-Vallés (2022, pp. 518-519, 521), in relation to the concept of "*populations*" from Commission Implementing Decision (EU) 2018/1519 of 9 October 2018 amending Implementing Decision 2014/150/EU on the organisation of a temporary experiment providing for certain derogations for the marketing of populations of the plant species wheat, barley, oats and maize pursuant to Council Directive 66/402/EEC.
98. *See*, e. g., Gutzen (2019, pp. VIII, 37, 46ff, 49, 50, 58); Rossmanith as cited in Gutzen (2019, pp. 23, 24, 97-99); Körber as cited in Gutzen (2019, pp. 26); generally, Bruszik *et al.* (2021) and LIVESEED (no date), and n. 49 and text to n. 49.
99. Similar concerns were harbored over the "*conservation varieties*" and "*amateur varieties*". *See*, e. g., "*Louwaars et al. (2010)*" as cited in Winge (2015, p. 40).

"*organic varieties suitable for organic production*" at bay (as it is the case, e. g., with "*conservation varieties*" and "*amateur varieties*"[100]) could also work, but they would likely not meet the wishes and expectations of the organic sector[101]. A winner-takes-all solution does not seem likely in the short term, but what is certain is that there will be winners and losers, and, at least for now[102], idealists in the organic sector seem to be the weakest in this contest. At least their sacrifice will be in the interest of the stability of plant variety registration and protection schemes.

IV. CONCLUSIONS

The concept of "*organic variety suitable for organic production*" of Regulation (EU) 2018/848 has come to the world of organic farming perhaps too late, in a context in which the sector has grown up and has lost much of its innocence. Surprising and counter-intuitive as it may seem, probably never has the organic sector moved so far away from the ideals of defending and promoting "*diversity*" and "*conservation varieties*" as in the times of Regulation (EU) 2018/848 and its concept of "*organic variety suitable for organic production*"[103]. This, in conjunction with the ambitions of market growth[104] has inevitably resulted in an array of tensions, among which, that between the "*diversity*" requirement of art. 3(19)(a) of Regulation (EU) 2018/848 on

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Adapted from Vives-Vallés (2022, pp. 513, 515, 517). However, in the present case, reasons are not restricted to competition between organic and conventional regimes –*see*, e. g., "*Louwaars et al. (2010)*" as cited in Winge (2015)–, but include also a (potential) trojan effect derived from such reform –i. e., due to the (under such scenario, foreseeable) implosion of orthodox or conventional systems which are based on strict, and interconnected [*see*, e. g., Winge (2015, p. 41)] DUS requirements–. Adapted from Vives-Vallés (2022, pp. 513, 515, 517). Rossmanith seems to believe that it is easier to open conventional registration schemes (to allow the development and marketing of *"organic varieties suitable for organic production"*), than to do the same in DUS for the granting of plant breeders' rights. *See* Rossmanith as cited in Gutzen (2019, p. 25, 98). *See also* n. 57.

100. E. g., Winge, 2015, pp. 14-19); Spieß as cited in Gutzen (2019, p. 35) and Fleck as cited in Gutzen (2019, p. 36). *Also* Gutzen (2019, p. 6, 35-36, 48-49).

101. *See*, e. g., Spieß as cited in Gutzen (2019, p. 35) and Fleck as cited in Gutzen (2019, p. 36).

102. *See* the following sources in the context of n. 67: BlueWeave Consulting (2021); IFOAM – Organics International (2011, p. 5); European Parliament (2015, p. 68); European Parliament (2015, p. 68); IFOAM Organics International (no date); Gutzen (2019, p. 2ff); Wolfe *et al.* (2008, p. 325); and Gutzen (2019, p. 2).

103. *See*, particularly, IFOAM – Organics International (2011, pp. 4, 5). *Also* cf. IFOAM (2006) and IFOAM – Organics International (2011) and IFOAM EU Group (2019). *See also* Gutzen (2019, p. 2) and n. 8 and 9.

104. IFOAM EU Group (2019, p. 6); arts. 4(i), and 6(g) and (h) of Regulation (EU) 2018/848. *See also* n. 115 to 117 and text to n. 115 to 117.

the one hand, and the DUS requirements on the other hand, is probably the most noteworthy[105]. This dilemma has not gone unnoticed to the experts[106], and significant institutional and research efforts have already been devoted to the matter[107]; but the underlying legal problem remains unresolved, and largely unattended.

It can be concluded that the interpretative approach which is being promoted by (at least part of) the experts[108] –which seem to seek the relaxation of the DUS requirements (especially, "*uniformity*"[109]) but also the "*diversity*" requirement of art. 3(19)(a) of Regulation (EU) 2018/848[110]– might be acceptable (from a purely legal perspective) only to the extent that it would only focus on Regulation (EU) 2018/848 (i. e., leaving the DUS requirements unchanged). But this is not the only option possible. According to the available interpretative elements and the applicable interpretative criteria, an interpretation that further downgrades the "*diversity*" requirement is not only an alternative but even the one that best complies with the existing legal framework. Pursuant this interpretation, all "*organic varieties suitable for organic production*", without exception, should (potentially) have the possibility to comply with the (current) DUS requirements and to claim plant variety protection. Of course, this interpretation jeopardizes the foundational ideals of the organic movement, but so, to a large extent, does the prevailing (previous) interpretation; and, most importantly, it should not be forgotten that such ideals are not the dominant ones in Regulation (EU) 2018/848. Indeed, at least in the field of "*organic heterogeneous material*" and "*organic varieties suitable for organic production*", the position of the EU legislator should not be mistaken with the position of the most significant groups of

105. On these tensions *see*, e. g., Deneken as cited in Gutzen (2019, pp. 69, 37); Rossmanith as cited in Gutzen (2019, pp. 95-96, 19); Fleck as cited in Gutzen (2019, pp. 19, 71, 76); Spieß as cited in Gutzen (2019, pp. 101, 104); Gutzen (2019, pp. 4-5, 19, 37, 57). Partially adapted from Vives-Vallés (2022, p. 510). *See also* Müller as cited in Gutzen (2019, pp. 93, 19); IFOAM EU Group (2019, p. 6), n. 35 and text to n. 35.

106. *See*, e. g., Deneken as cited in Gutzen (2019, pp. 69, 37); Rossmanith as cited in Gutzen (2019, pp. 95-96, 19); Fleck as cited in Gutzen (2019, pp. 19, 71, 76); Spieß as cited in Gutzen (2019, pp. 101, 104); Gutzen (2019, pp. 4-5, 19, 37, 57). Partially adapted from Vives-Vallés (2022, p. 510). *See also* Müller as cited in Gutzen (2019, pp. 93, 19); IFOAM EU Group (2019, p. 6); n. 35 and text to n. 35.

107. *See*, e. g., generally, Bruszik *et al.* (2021) and LIVESEED (no date).

108. *See*, e. g., Gutzen (2019, pp. VIII, 37, 46ff, 49, 50, 58); Rossmanith as cited in Gutzen (2019, pp. 23, 24, 97-99); Körber as cited in Gutzen (2019, p. 26); generally, Bruszik *et al.* (2021) and LIVESEED (no date), and n. 49, 98 and text to n. 49, 98.

109. E. g., IFOAM EU Group (2019, p. 6) (relevant excerpt transcribed in n. 35).

110. E. g., Fleck as cited in Gutzen (2019, pp. 19, 71, 76) and Gutzen (2019, p. 19). *See also* Urbatzka as cited in Gutzen (2019, pp. 19-110) and Gutzen (2019, pp. 19).

the organic sector; and the position of the latter should not be mistaken with the founding principles of the organic movement nor with the most purist positions within that movement[111].

The relaxation of the DUS standards proposed by relevant organic farming organizations[112] and scholars[113] would threaten conventional plant variety registration and protection schemes[114]. Pending a detailed analysis of the matter, it seems reasonable to presume that such a relaxation could only be acceptable (although likely not desirable) under two scenarios: either by limiting the growth of the market for "*organic varieties suitable for organic production*" (as it happens in the case of "*conservation varieties*" and "*amateur varieties*"[115]) –in clear opposition to the goals of Regulation (EU) 2018/848[116] and the organic sector[117]–, or by generalizing such a relaxation to all varieties, whether organic or conventional. However, the later approach would require not only the modification of the DUS guidance[118], but also a thorough evaluation, and likely, an in-depth revision, of the aforementioned schemes, which is not likely to happen in the short to mid-term. Fortunately, the so-called "*7-year temporary experiment*"[119] has managed, at least, to buy time, which should be used to analyze the preceding questions in depth in order to provide an appropriate solution for all sectors. Other issues, such as the term "*organic breeding activities*" in the requirement of art. 3(19)(b) of Regulation (EU) 2018/848, or the sub-requirements contained "*in point 1.8.4 of Part I of Annex II to*" Regulation (EU) 2018/848, also need further development and attention.

111. *See* n. 10, 35 *in fine*, 67 and text to n. 67.

112. E. g., IFOAM EU Group (2019, p. 6) (relevant excerpt transcribed in n. 35).

113. *See*, e. g., Gutzen (2019, pp. VIII, 37, 46ff, 49, 50, 58); Rossmanith as cited in Gutzen (2019, pp. 23, 24, 97, 99); Körber as cited in Gutzen (2019, p. 26); generally, Bruszik *et al.* (2021) and LIVESEED (no date), and n. 49, 98 and text to n. 49, 98.

114. *See*, e. g., "*Louwaars et al. (2010)*" as cited in Winge (2015, p. 40) (focusing on "*conservation varieties*" and "*amateur varieties*", not on "*organic varieties*"). Adapted from Vives-Vallés (2022, pp. 513, 515, 517). *See also* n. 99.

115. E. g., Winge, 2015, pp. 14-19); Spieß as cited in Gutzen (2019, p. 35) and Fleck as cited in Gutzen (2019, p. 36). *Also* Gutzen (2019, p. 6, 35-36, 48-49). *See also* n. 100 and text to n. 100.

116. *See*, e. g., arts. 4(i), and 6(g) and (h) of Regulation (EU) 2018/848. *See also* n. 104.

117. *See*, e. g., IFOAM EU Group (2019, p. 6). *See also* n. 104.

118. The organic sector proposes such a relaxation, although, apparently, focusing on *"organic varieties"* (i. e., not a general relaxation). *See*, e. g., Gutzen (2019, pp. VIII, 37, 46ff, 49, 50, 58); Rossmanith as cited in Gutzen (2019, pp. 23, 24, 97-99); Körber as cited in Gutzen (2019, p. 26); generally, Bruszik *et al.* (2021) and LIVESEED (no date), and n. 49, 98 and text to n. 49, 98.

119. IFOAM EU Group (2019, p. 6). *See also* Bruszik *et al.* (2021, p. 15) and recital (39) of Regulation (EU) 2018/848. *See also* n. 88.

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