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EC Register: 75964025885-59

### **European Mobile Seed Association**

## May 2023

# Mobile Seed Processing in Europe

Law, Market, Challenges



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# List of Abbreviations

| BSPB     | British Society of Plant Breeders  |
|----------|--|
| CAP      | Common Agricultural Policy (EU)  |
| CEETTAR  | Confédération Européenne des Entrepreneurs<br>de Travaux Techniques Agricoles, Ruraux et Forestiers<br>European Organisation of Agricultural, Rural and Forestry Contractors |
| CNDSF    | Coordination Nationale pour la Défense des Semences Fermières<br>National Coordination for the Defence of Farm Seeds (France)  |
| COAG     | Coordinadora de Organizaciones de Agricultores y Ganaderos<br>Coordinating Committee of Farmers' and Stockbreeders' Organisations<br>(Spain)                                 |
| СОРА     | Comité des organisations professionnelles agricoles<br>Committee of Professional Agricultural Organisations (EU)   |
| COGECA   | Confédération Générale des Coopératives Agricoles<br>General Confederation of Agricultural Cooperatives (EU)   |
| CPVO     | Community Plant Variety Office (EU)  |
| CPVR     | Community Plant Variety Rights (EU)  |
| CRIV     | Contribution pour la Recherche et l'Innovation Variétale<br>Contribution for Research and Varietal Innovation (France)   |
| CS       | Certified Seed   |
| DG       | Directorate-General of the European Commission   |
| DG AGRI  | Directorate-General for Agriculture and Rural Development (EU)   |
| DG COMP  | Directorate-General for Competition (EU)   |
| DG ENVI  | Directorate-General for Environment (EU)   |
| DG SANCO | Directorate-General for Health and Consumer Protection $(EU)$  |
| DM&E     | Danske Maskinstationer og Entreprenører<br>Danish Association of Machinery and Contractors   |
| EC       | European Parliament and Council  |
| EESC     | European Economic and Social Committee   |
| EHNE     | Euskal Herriko Nekazarien Elkartasuna<br>Farmers' Association of the Basque Country  |
| EMSA     | European Mobile Seed Association   |
| EP       | European Parliament  |
| ESA      | European Seed Association (now Euroseeds)  |
| EU       | European Union   |

| FEGRA      | Federatie van de Belgische Graanhandelaars<br>Belgian Federation of Cereal Traders  |
|------------|---|
| FSS        | Farm-Saved Seed   |
| FUJA       | Front Uni des Jeunes Agriculteurs (now FUGEA)<br>United Front of Young Farmers (Belgium)  |
| GMO        | Genetically Modified Organism   |
| ha         | Hectare   |
| IG Nachbau | Interessengemeinschaft gegen die<br>Nachbaugesetze und Nachbaugebühren<br>Community of interest against the replication laws and replication fees<br>(Germany)                                  |
| MEP        | Member of the European Parliament   |
| MSC        | Mobile Seed Contracting   |
| NAAC       | National Association of Agricultural Contractors (UK)   |
| NAV        | Nederlandse Akkerbouw Vakbond<br>Dutch Arable Union   |
| NBTs       | New Breeding Techniques   |
| No         | Number  |
| PVC        | Plant Variety Certificate   |
| PVDO       | Plant Variety Development Office (Ireland)  |
| PVR        | Plant Variety Rights (National system)  |
| q          | Quintal   |
| SICASOV    | Société d'Intérêt Collectif Agricole des Sélectionneurs Obtenteurs de<br>Variétés Végétales<br>Collective Agricultural Interest Company of Plant Variety Breeders<br>(France & other countries) |
| STAFF      | Syndicat des Trieurs à Façon Français<br>French Mobile Seed Contractors Union   |
| STV        | Saatguttreuhandverwaltungs<br>Seed Trust Management (Germany)   |
| USA        | United States of America  |
| t          | Tonne   |
| UESPF      | Union Européenne des Semences et Plants de Ferme<br>European Union of Farm Seeds and Plants   |
| UK         | United Kingdom  |
| UPOV       | Union internationale pour la protection des obtentions végétales<br>International Union for the Protection of New Varieties of Plants   |
| ▼          | Table sorting variable in ascending order   |

### Introduction

#### a. Mobile Seed Processing

Farm-saved seed is an alternative to the purchase of certified seed. It is seed produced by the farmer from his own harvest for his own use to sow his fields in subsequent years. The seed processing can be done by the farmer himself or by a service provider: the mobile seed contractor.

Mobile seed contractors are professionals who travel to farms with mobile seed processing machines. They provide farmers with the sorting, cleaning and treatment of their harvested grain in order to enable them to resow it. By promoting farm-saved seed, mobile seed contractors contribute to the competitiveness of the European agriculture, the maintenance of the biodiversity and the development of the rural economy.

Indeed, farm-saved (FSS) seed has many advantages compared to certified seed. It presents an ecological interest (reduction of more than 50% in the use of phytosanitary products), an economic interest (reduction of 30% to 65% in production costs for farmers) and a social interest (coverage of the territory by mobile contractual seed contractors, creation of rural jobs).<sup>1</sup> It is therefore fully in line with sustainable development. Farm-saved seed is especially appreciated by farmers for the independence it gives them (traceability, free choice of treatment, etc).



Harvested grain, sorted grain and treated grain

<sup>1</sup> A. MILSTAJN, La Semence de ferme dans l'Union européenne : Enjeux, jurisprudence & systèmes nationaux, European Mobile Seed Association, 2011



Mobile seed processing plants

#### b. Organisation

EMSA, European Mobfile Seed Association, is the organisation that defends the interests of mobile seed contractors at European level. It was founded in 2011 by the British NAAC, the French STAFF and the Belgian Landbouwservice. It is based in Brussels and operates under Belgian law. After the constitutive General Assembly, the Executive Board elected Nigel Day (NAAC) as President and Sylvain Ducroquet (STAFF) as Vice-President.

EMSA is registered in the European Register of Interest Representatives. This gives EMSA full legitimacy for its activities. Although EMSA is a fully autonomous organisation, it is a member organisation of CEETTAR (European organisation of agricultural contractors) and benefits from its secretariat. This membership is comparable to the situation at the national level: mobile seed contractors are very often members of agricultural contractors' associations.

EMSA aims to participate in the European Union's decision-making process on the issue of seeds and to bring together all actors in the farm seed production chain. It ensures the representation of members in European organisations, maintains contact and cooperation with the EU institutions and defends the trade of mobile seed contractors and farm-saved seed.

Long before the creation of EMSA in 2011, CEETTAR welcomed and supported seed sorters in an informal but historically crucial way. As early as 1990, Mr. Goldingham, a British seed contractor, introduced CEETTAR to the issues of seed sorting and farm-saved seed. From 1991 to 1993, CEETTAR was indeed consulted by the Directorate General for Agriculture of the European Commission on the question of the "farmers' privilege" in the context of the drafting of Regulation No 2100/94.

Besides, three European mobile seed contractors - the French René Pouchain and the British Nick Downey and Tim Rogers - participated in 1993 in the discussions for the drafting of this European Regulation on seeds<sup>2</sup>.

<sup>2</sup> See "European Legislation", p. 9



<u>R. Pouchain, N. Downey and T. Rogers</u>

After the adoption of the Regulation, CEETTAR participated in 1995 in a dialogue on farm-saved seed at the invitation of the European Commission. Regular contacts were also established with the International Union for the Protection of New Varieties of Plants (UPOV).<sup>3</sup>

In the early 2000s, an attempt was made to federate the defenders of farm-saved seed within the European Union of Farm-Saved Seeds and Plants (UESPF). It gathers IG Nachbau (Germany), the Mouvement d'Action Paysanne, FUJA and mobile seed contractors (Belgium), COAG and EHNE (Spain, Basque Country), CNDSF (France), NAV (Netherlands), but does not succeed in establishing a long-term position.<sup>4</sup>



French delegation of mobile seed contractors in the UK in 2010

In 2009, a rapprochement took place between the French and British mobile seed contractors' unions (STAFF and NAAC). The French contractors organised a visit to the United Kingdom, and then received the English contractors.

The European Mobile Seed Association is created on 15 December 2010 and is recognised in 2011 as a non-profit organisation under Belgian law by the authorities and registered in the European Register of Interest Representatives.

<sup>3</sup> E. KLÖCKER, Des entrepreneurs au service de la ruralité : Une brève histoire de la CEETTAR (1961-2011), CEETTAR, 2011

<sup>4 &</sup>quot;L'UESPF défend les semences de ferme et le tri à façon", *La Terre*, 4 April 2002



President Nigel Day and Vice President Sylvain Ducroquet founding EMSA in 2011

In 2011, EMSA established contacts with various stakeholders to discuss the challenges for FSS of a potential revision of the Regulation 2100/94 on Community plant variety rights:

- the European Commission (DG SANCO [Plant Health and CPVR], DG AGRI [Seed & Rural Development], DG ENVI [Biodiversity & Agriculture], DG COMP [unfair competition with Plant Breeders]);
- the European Parliament (MEPs Ashworth, Capoulas Santos, Dantin and Bové; cabinet of De Castro, President of the EP Committee for Agriculture);
- the European Social and Economic Committee (EESC), UPOV...

EMSA participated in the international conference organised by the Commissioner John Dalli finalising the 2-year long evaluation of the Regulation 2100/94 on CVPR, and was invited as guest speaker to deliver its views on biotechnologies and patenting schemes in a Public Hearing organised by the EESC.

In 2012, EMSA met with COPA-COGECA, the European farmers' association. In 2013, it participated in the CEETTAR General Assembly in Madrid. In the same year, a study trip was organised by the French mobile seed contractors to the United Kingdom. In 2016, EMSA invited ESA (European Seed Association – now Euroseeds – which represents the certified seed sector) to its General Assembly in France. As a major agreement was signed between the Belgian seed stakeholders on the collection of royalties, EMSA also met with Synagra, the Belgian royalty collection agency. At the time of Brexit, EMSA considered incorporating CEETTAR as one of its Standing Committees, but this did not happen. In 2018, Secretary General Eric Dresin was replaced by Jérôme Roche. Today, EMSA continues to benefit from the secretariat that CEETTAR shares with it as an independent association.



EMSA General Assembly in 2019 in the United Kingdom

#### c. Roadmap

In view of its General Assembly to be held in France in May 2023, and to mark the passage of its tenth anniversary, EMSA wanted to present a roadmap that would first aggregate information on the situation of mobile seed processing in Europe. The presentation of this information would allow to outline a development strategy for EMSA, adjusted to its needs and capacities.

The idea of the present roadmap is therefore first of all to map the European farm-saved seed, a necessary prerequisite for the members to be able to define a strategy.

To do this, we have gathered and aggregated the data that EMSA has accumulated since its creation, but we have also collected new data from its members, other stakeholders and academic studies. Alongside this research work, mobile seed contractors were identified in various European countries and contacted by the association.

### Legislative Framework

#### a. European Legislation

#### <u>Council Regulation (EC) No 2100/94 of 27 July 1994</u> <u>on Community Plant Variety Rights<sup>5</sup></u>

Article 1 of the Regulation establishes "a system of Community plant variety rights [...] as the sole and exclusive form of Community industrial property right for plant varieties." Under this Community plant variety right (CPVR), the *breeder* (defined in Article 11 (1) as "the person who bred, or discovered and developed the variety, or his successor in title") has full ownership of the protected seed he has bred or discovered. The breeder can use it himself as he sees fit or he can grant licences, i.e. authorise third parties to use it under the conditions he sets.

Thus, as stated in Article 13 (2), "production or reproduction (multiplication)", "conditioning for the purpose of propagation", "offering for sale", "selling or other marketing", "exporting from [or] importing to the Community" or stocking for the above purposes of variety constituents, or harvested material of the protected variety, shall require the authorization of the holder of the Community plant variety right.

However, the Regulation recognises in Article 14, "Derogation from Community plant variety right", the principle commonly known as "farmers' privilege". Indeed, "for the purposes of safeguarding agricultural production, farmers are authorized to use for propagating purposes in the field, on their own holding the product of the harvest which they have obtained by planting, on their own holding, propagating material of a variety other than a hybrid<sup>6,7</sup> or synthetic variety, which is covered by a Community plant variety right." This derogation, nevertheless, only applies to a closed list of 21 species<sup>8</sup>. Moreover, in order to use this right, farmers (except "small farmers" who are exempted) "shall be required to pay an equitable remuneration to the holder".

Finally, Article 14 (3) provides that "the product of the harvest may be processed for planting, either by the farmer himself or through services supplied to him". This statement legalises and provides the framework for mobile seed processing. In reproducing seeds, mobile seed contractors are then bound by the same obligations as farmers: only seeds of the 21 species listed in Article 14 (2) are allowed to be propagated, with the exception of hybrid varieties, provided that the farmer pays the breeding rights.

<sup>5</sup> It is complemented by the Commission Regulation (EC) No 1768/95 of 24 July 1995 implementing rules on the agricultural exemption provided for in Article 14 (3) of Council Regulation (EC) No 2100/94 on Community plant variety rights.

<sup>6</sup> Although they were rare for oilseed when the Regulation was drawn up in 1994, they now account for a large proportion of certified seed.

<sup>7</sup> See "Hybrid Seeds" box, p. 18

<sup>8</sup> Oats, barley, rice, canary grass, rye, triticale, wheat, durum wheat, spelt wheat, potatoes, swede rape, turnip rape, linseed, chickpea milkvetch, yellow lupin, lucerne, field pea, berseem, persian clover, field bean, common vetch.

#### b. National Legislations

Most European countries also have a legal framework for farm-saved seed. In the Member States, most of the existing legislation referring to seed processing services is a legislative transposition of European law to comply with Regulation No 2100/94.

However, it is important to know that most states have a pre-existing system of plant variety rights (PVR) in addition to that of the European Union. In these cases, the two systems operate side by side and each variety can only be protected by one of them. The variety then only benefits from national or European protection depending on whether the breeder holds a national or European plant variety certificate for that variety.

Nevertheless, nowadays national PVR systems are, with a few exceptions, very similar to the EU CPVR system. The Italian scheme, for example, is particularly different from the European system as it still prohibits farm-saved seed<sup>9</sup>. In this section we will present the national legislation of France, the United Kingdom and Germany.

#### <u>France</u>

In France, after a total interdiction of mobile seed processing in 1989, it was only recognised and guaranteed for a long time by the European Regulation No 2100/94 (farmers' privilege recognised but subject to the breeders' remuneration – only for European varieties under CPVR). An interprofessional agreement was signed in 2001 and introduced what is now the *contribution pour la recherche et l'innovation variétale* (CRIV), a mandatory levy on straw cereal harvested volumes to finance genetic research.

In 2011, a law on PVR<sup>10</sup> was adopted to align French law with Regulation No 2100/94. This law provides a framework for the mobile processing of seed of varieties protected by a plant variety certificate (PVC). It thus legalises mobile seed contracting for varieties under national PVR (although it gives certified seed a monopoly on hybrid seed, as did Regulation No 2100/94). It also introduces information and transparency obligations between the parties involved in these services.

Art. L. 623-24.4 : "When farmers have recourse to service providers to sort their seeds, these sorting operations must be carried out under conditions that guarantee the traceability of products from varieties covered by a plant variety certificate. [...] In the event of non-compliance with these conditions, the seeds are deemed to be marketed and considered as an infringement within the meaning of Article L. 623-25."

In 2014, 13 additional species were added to the list of 21 species concerned by the farmers' privilege: protein pea, white lupin, blue lupin, lentil, bean, soybean, rough oat, white mustard, red clover, red clover, Italian ryegrass, hybrid ryegrass, chickling vetch.

<sup>9</sup> See "Legal Developments", p. 19

<sup>10</sup> Loi n° 2011-1843 du 8 décembre 2011 relative aux certificats d'obtention végétale

#### <u>United Kingdom</u>

The law governing mobile seed contracting in the UK is the Plant Varieties Act 1997<sup>11</sup>. This Act aims to protect plant varieties by regulating the production and sale of seed and planting stock. With regard to mobile seed processing, the Plant Varieties Act allows farm-saved seed as an exception to farmers' rights, provided, as stated in Regulation No 2100/94, "to pay the holder of the rights equitable remuneration, which shall be sensibly lower than the amount charged for the production of propagating material of the same variety in the same area with the holder's authority".

Furthermore, the Plant Varieties Act 1997 recognises seed processors - Section 9 (7) - and allows the Ministers, by regulation, to "make provision enabling [...] holders of plant breeders' rights to require farmers or seed processors, and [...] farmers or seed processors to require holders of plant breeders' rights, to supply such information as may be specified in the regulations, being information the supply of which the Ministers consider necessary for the purposes of this section [...]". Indeed, today, the English mobile seed contractors are a decisive link in the Royalty Scheme as they are responsible for reporting their operations to the BSPB.

#### <u>Germany</u>

The German Plant Variety Protection Act of 1985<sup>12</sup>, *Sortenschutzgesetz* (also known as SortSchG), regularly updated after 1994, recognizes the right of farmers to use their own farm-saved seed for further production – Article 10a (2) – whether it has been reproduced by themselves or by a service provider (mobile contractor). However, such use is subject to certain restrictions, such as the obligation to declare it – Article 10a (6) – and, as required by Regulation No 2100/94, to pay fair compensation to the holder of the plant variety right for the use of the protected variety – Article 10a (3).

In Germany, there is thus an over-transposition of European requirements. Indeed, although this is allowed under Regulation No 1768/95, farmers are obliged since the *Sortengesetz* of 2013 to report the use of farm-saved seed to the holder of the intellectual property rights within three months of harvesting and to provide information on the quantity of farm-saved seed used. Mobile seed contractors are under the same obligation to declare their operations (customers, varieties, volumes), and they must also record all incoming and outgoing seed.<sup>13</sup> There are many controversies and legal twists and turns in Germany, punctuated by rulings of the European Court of Justice, surrounding the question of what information breeders are entitled to collect from farmers in order to claim royalty payments, including with mobile seed contractors.

<sup>11</sup> Plant Varieties Act 1997

<sup>12</sup> Sortenschutzgesetz in der Fassung der Bekanntmachung vom 19. Dezember 1997 (BGBI. I S. 3164), das zuletzt durch Artikel 100 des Gesetzes vom 10. August 2021 (BGBI. I S. 3436) geändert worden ist

<sup>13</sup> Wissenschaftliche Dienste, Sachstand: Regelungen zu zertifiziertem und zu freiem Saatgut, Deutscher Bundestag, 2021

#### c. Royalty Schemes

The royalty collection system is effective in 17 EU countries for cereal varieties and in 15 countries for potato varieties. Generally, the amount of royalties is comprised between 50% and 60% of the amount of royalties on certified seed.<sup>14</sup>

The following table indicates for different states the agency responsible for collecting royalties, the average amount of FSS royalties and their ratio to certified seed royalties. In red, the amount of royalties as they are levied in the state.

| State                 | Royalty collection agency | Royalty amount   | <b>FSS/CS</b> |
|-----------------------|---------------------------|--|---------------|
| Netherlands           | EigenZaaiZaad (Plantum)   | 5.25 €/q   | 65 %          |
| Italy                 | SICASOV                   | 1.30 - 6.00 €/q  | 63 %          |
| France                | SICASOV                   | 1.05 €/t (harvest)<br>≈ <b>5.40 €/q</b><br>≈ 7,56 €/ha           | 69 %          |
| United Kingdom        | BSPB <sup>16</sup>        | 5.45 £/q<br>= <b>6.20 €/q</b><br>(through NAAC)<br>or 10.69 £/ha | 53 %          |
| Denmark <sup>17</sup> | Sortsejerne               | <mark>60 Kr/ha</mark><br>= 8.00 €/ha<br>≈ <b>5.30 €/q</b>        |               |
| Germany <sup>18</sup> | STV <sup>19</sup>         | 6.00 €/q   | 50 %          |
| Belgium <sup>20</sup> | FEGRA <sup>21</sup>       | 4,10 €/q   |               |
| Ireland <sup>22</sup> | PVDO <sup>23</sup>        | 4.00 €/q   | 50 %          |
| Poland                | Agencja Nasienna          | 4.50 zl/q<br>≈ 1.00 €/q  | 50 %          |
| Spain                 | Geslive                   | 1.40 €/q   | 35 %          |

#### Comparative National Royalty Collection Systems<sup>15</sup>

14 N. OUVRARD, "Que se passe-t-il chez nos voisins européens", *Réussir grandes cultures*, n° 286, December 2014, p.8

15 A. HERVOUET, Le financement de la recherche dans le secteur végétal, STAFF, December 2022

16 British Society of Plant Breeders

17 Danske Sortsejerne, "Hjemmeavlet udsæd: Indberetning for brug af egen opformeret udsæd - korn, raps og bælgsæd", <u>https://www.sortsejere.dk/landmand/korn/korn-udsaed</u>

18 STV, Vertragssortenliste, https://www.stv-bonn.de/inhalt/nachbauerklaerung/vertragssortenliste

19 Saatguttreuhandverwaltungs-GmbH

20 Agrofront, ABS, Boerenbond, FWA, Synagra and Assinsel, Accord historique concernant le recouvrement d'une redevance équitable sur les semences de ferme, Fegra, August 2018

P. GAUTIER, « Huit semenciers demandent le payement de royalties aux producteurs belges », *Réussir fruits et légumes*, 31st May 2011

21 Belgian Federation of Cereal Traders

22 Irish Seed Trade Association (ISTA), 2015

23 The Plant Variety Development Office

For farm-saved seed, the amount of royalties is calculated, depending on the country, either according to the volume (q) of seed sorted or according to the area (ha) sown. However, two particular systems stand out: the British Royalty Scheme and the French *contribution pour la recherche et l'innovation variétale* (CRIV). The following is a short comparative analysis of two well functioning systems.

In the United Kingdom, farmers have the choice of paying their royalties to the seed sorters' organisation (NAAC) according to the volume (more economical) or directly to the collection agency (BSPB) according to the area sawn. The English system is based on an agreement dating from June 2007. 80% of the collection is carried out by mobile seed contractors at a rate applied according to the quantity sorted. This agreement between the breeders and the mobile seed contractors, under which the latter collect royalties on behalf of the former on farm-saved seed, is the originality of the English system. However, it is obviously limited to species requiring sorting and to farmers using a service provider who carries out such a sorting operation. Therefore, in the other cases, i.e. 20% of the collection, the remuneration comes from a direct payment from the farmers according to the sown area. Small farmers are in any case exempt from remuneration, in accordance with European regulations.<sup>24</sup>

In France, the remuneration of breeders is collected directly on straw cereal harvest through the CRIV, at a rate of 1.05 € per tonne. The French system, which was established by an interprofessional agreement (between breeders and farmers) in 2001, aims to make the royalty collection system more simple, fair and efficient. All cereal crops delivered to collectors (cooperatives, traders, mills) are levied a contribution of 1.05 €/t. As users of certified seed already pay plant breeders' rights when they buy seed, they benefit from a credit of 5.25 €/q on the purchase of certified straw cereal seed to compensate for the generalized contribution at harvest. It should be noted that on three occasions since 2001, in a context of major growth of farm-saved seed (+10 points of market share in 5 years), the farmers' contribution has been increased while the credit for buyers of certified seed has also increased. Indeed, the contribution was set at 0.50 €/t in 2001; it increased to 0.70 €/t in 2013, then to 0.90 €/t in 2019 and to 1.05 €/t in 2022. At the same time, the credit on the purchase of certified seed increased from 2.70 €/q to 5.20 €/q. This resulted in a substantial increase in the contribution of farmers using farm-saved seed, as the ratio of farm-saved seed royalties to certified seed royalties increased from 33% to 69%. The average contribution of farmsaved seed users increased from 3.60 €/ha to 7.56 €/ha.<sup>25,26</sup>

Although the system of royalty collection may be, as in Germany, subject to much controversy, according to H.W. Rutz (2009) "the agricultural structure, the size of the farms and the tradition to use FSS have higher implications on the level of use of FSS than any parameter of a remuneration system for FSS."<sup>27</sup>

<sup>24</sup> A. MILSTAJN, La Semence de ferme dans l'Union européenne : Enjeux, jurisprudence & systèmes nationaux, European Mobile Seed Association, 2011

<sup>25 &</sup>quot;Cotisation volontaire obligatoire recherche céréales : Au revoir la CVO RC et bienvenue à la Criv !", Wikiagri, 19 September 2019, <u>https://wikiagri.fr/articles/cotisation-volontaire-obligatoire-recherche-</u> cereales-au-revoir-la-cvo-rc-et-bienvenue-a-la-criv

<sup>26</sup> In 2022, a new agreement was signed, further increasing the contribution to 1.05 € and the credit to 5.25 €. The ratio of FSS/CS royalties has increased accordingly.

<sup>27</sup> H.W. RUTZ, Study on Farm Saved Seed in the European Union, Bundessortenamt, 2009, p. 22

### State of the Trade

#### a. Market Shares (cereals)<sup>28</sup>

|                           | Volume                                | %    | % Farm-Saved Seed              |         |
|---------------------------|---------------------------------------|------|--------------------------------|---------|
| State                     | Stateof the seedCertifiedmarket29Seed |      | of which<br><b>Mobile Seed</b> | ▼ % FSS |
| Greece*                   | 70 000 t                              | 11 % |                                | 89 %    |
| Poland**                  | 850 000 t                             | 13 % |                                | 87 %    |
| Spain**                   | 600 000 t                             | 20 % |                                | 80 %    |
| Lithuania*                | 150 000 t                             | 25 % |                                | 75 %    |
| Portugal <sup>30</sup>    | 20 000 t                              | 27 % |                                | 73 %    |
| Finland <sup>31</sup>     | 100 000 t                             | 30 % |                                | 70 %    |
| France <sup>32</sup>      | 1 000 000 t                           | 40 % | 50 %                           | 60 %    |
| Germany                   | 650 000 t                             | 43 % |                                | 57 %    |
| Hungary*                  | 275 000 t                             | 45 % |                                | 55 %    |
| Austria*                  | 85 000 t                              | 46 % |                                | 54 %    |
| United Kingdom            | 400 000 t                             | 50 % | 41 %                           | 50 %    |
| Belgium**                 | 35 000 t                              | 55 % | 40 %                           | 45 %    |
| Slovakia*                 | 80 000 t                              | 56 % |                                | 44 %    |
| Romania*                  | 550 000 t                             | 60 % |                                | 40 %    |
| Italy**                   | 300 000 t                             | 70 % |                                | 30 %    |
| Netherlands <sup>33</sup> | 20 000 t                              | 75 % |                                | 25 %    |
| Luxembourg*               | 3 000 t                               | 75 % |                                | 25 %    |
| Ireland*                  | 22 000 t                              | 77 % |                                | 23 %    |
| Czechia*                  | 150 000 t                             | 84 % |                                | 16 %    |
| Denmark                   | 150 000 t                             | 85 % | 12 %                           | 15 %    |
| Sweden**                  | 100 000 t                             | 86 % |                                | 14 %    |

<sup>28</sup> Survey of EMSA members in 2022. All data in this table have been cross-checked and are therefore fairly robust.

<sup>\*</sup> H.W. RUTZ, Study on Farm Saved Seed in the European Union, Bundessortenamt, 2009

<sup>\*\*</sup> Euroseeds (ex-ESA), 2010

<sup>29</sup> Based on Agridata, Cereals Production, Area & Yield, European Commission, 2022

<sup>30</sup> P. ROGER & M. RUBIO, Farm saved seed in France, Spain and Portugal, CPVO, 2007

<sup>31</sup> S. JUVONEN, Tilasiemen Oy - Marketing survey for the seed producing farms of Häme area, 2012

<sup>32</sup> Pôle Etudes, Veille et Prospective, *Statistique Annuelle et les séries chronologiques : Semences et plants*, Semae, Campagne 2021/2022, Paris, February 2023

<sup>33</sup> A. HERVOUET, Le financement de la recherche dans le secteur végétal, STAFF meeting, December 2022

The European cereal seed market represents 50 million hectares or **7.5 million tonnes**. The table above provides information for each state on the volume of the seed market, the share of certified seed, the share of farm-saved seed and, where it is known and verified, the share of seed processed by mobile seed contractors.

France is the largest cereal seed market in Europe, representing 1Mt. Greece, Poland and Spain are the countries with the largest share of farm-saved seed (over 80%). In contrast, the northern EU countries – Sweden, Denmark, Ireland, the Netherlands, Luxembourg – but also the Czech Republic and Italy<sup>34</sup> are the largest users of certified seed (over 70% of market share).

Once aggregated, these data provide the following statistical and cartographic materials. On a European scale, farm-saved seed represents about 58% of the seed market (about 4,5 Mt), while certified seed accounts for 42%. We estimate that the share of European seed processed by mobile seed contractors lies **between 15% and 30%** (1 Mt to 2,5 Mt). For an average cost estimated at  $450 \notin/t^{35}$ , the economy of mobile seed contracting in Europe would represent **between 450 M€ and 1,000 M€**, and provide **over 1,000 jobs**.

It is estimated that **mobile seed processing represent a saving of 350 M€ to 900 M€** for European farmers each year.



#### Seed Market Shares in Europe

<u>Sources</u>: EMSA (2022), Euroseeds (2010), Agridata (2022), H.W. Rutz (2009), A. Hervouet (2022) <u>Reading</u>: In Europe, arround 58% of cereal seed sown each year is farm-saved seed <u>Sample</u>: Cereal seeds in Europe beteween 2007 and 2023 © EMSA 2023

34 See "Legal Developments", p. 19

<sup>35</sup> Wheat price: 250 €/t; processing: 150 €/t; royalties and other costs: 50 €/t.

### Farm-Saved Seed in Europe



<u>Sources</u>: EMSA (2022), Euroseeds (2010), Agridata (2022), H.W. Rutz (2009), A. Hervouet (2022) <u>Reading</u>: In France, 60% of the 1,00,000 t of cereals sown each year are farm-saved seeds <u>Sample</u>: Cereal seeds in Europe beteween 2007 and 2023 <u>Projection</u>: ETRS89 / LAEA Europe © EMSA 2023

### b. Hybrid Seeds

| State                 | ▼ Share of hybrid seeds in <b>wheat</b> | Share of hybrid<br>seeds in <b>maize</b> | Share of hybrid<br>seeds in <b>oilseeds</b> |
|-----------------------|---|--|---|
| USA                   | 20 %                                    | 95 %                                     | -   |
| <u>EU</u>             | <u>3 %</u>                              | <u>78 %</u>                              | <u>80 %</u>                                 |
| France <sup>36</sup>  | 6 %                                     | 95 %                                     | 85 %  |
| United Kingdom        | 5 %                                     | 80 %                                     |   |
| Germany <sup>37</sup> | 4 %                                     | 85 %                                     | 90 %  |

Although they did not constitute a threat when Regulation No 2100/94 was adopted, hybrid seeds, which are excluded from the farmers' privilege, now account for 60% of European maize and rape, and up to 90% of German rape.<sup>38</sup> For maize, hybrid seeds represent 78% of the European market. Consequently, 93% of maize seed is certified seed.<sup>39</sup>

#### c. Mobile Seed Contractors

| State          | Mobile Seed<br>Organisation   | ▼ Number of <b>Contractors</b>             | Number of<br><b>Mobile Machines</b> |
|----------------|---|--|-------------------------------------|
| France         | <b>STAFF</b> (Syndicat des<br>Trieurs à Façon de<br>France)             | <b>150</b><br>of which 40<br>STAFF members | <b>350</b><br>(total)               |
| United Kingdom | <b>NAAC</b> (National<br>Association of<br>Agricultural<br>Contractors) | <b>30</b><br>of which 20<br>NAAC members   | 60                                  |
| Belgium        | Landbouw-Service  | <b>32</b><br>(total) <sup>40</sup>         |                                     |
| Denmark        | <b>DM&amp;E</b> (Danske<br>Maskinstationer og<br>Entreprenører)         | 3  | 14                                  |
| Italy          | In creation   | 5  |                                     |
| Sweden         |   | 1  | 2                                   |

<sup>36</sup> Based on Pôle Etudes, Veille et Prospective, *Statistique Annuelle et les séries chronologiques : Semences et plants*, Semae, Campagne 2021/2022, Paris, February 2023

38 See "Technological Developments", p. 18

39 See "Hybrid Seeds" box, p. 18

"Lijst van de loontrieerders, erkend tot 30.06.2024", Moniteur Belge, August 2019, p. 77381

<sup>37</sup> Deutsche Saatveredelung AG (DSV), 2019/2020

<sup>40 30</sup> mobile seed contractors in the Walloon province and 2 in the Flemish province (+10 fixed seed sorters in the Flemish province).

<sup>&</sup>quot;Liste des trieurs à façon agréés en Wallonie du 1er juillet 2018 au 30 juin 2019", *Moniteur Belge*, No 154, p. 53360

### Challenges

Beyond the local issues that were brought to our attention in the course of this study, we have identified two types of challenges for the profession: technological challenges, which would present a threat to the profession through a technological breakthrough that would take advantage of the current legal framework; and a more general, more diffuse but equally threatening challenge represented by potential forthcoming legal developments.

#### a. Technological Developments

Plant breeding is becoming increasingly international and powerful, reducing farmers' choice, especially through the use of hybrids to limit farm-saved seed options. Most seed contractors report being increasingly challenged by this growing threat from major firms that are eroding plant and business diversity. In this context, most members surveyed expressed the great importance of EMSA in representing seed processors at the international level, and in protecting farmers' rights to use farm-saved seed and thus mobile seed processing.

The first of these technological challenges comes from **hybrid seeds**. Already dominant in maize but very little developed for rape at the time of the vote of Regulation No 2100/94, which excluded them from the farmers' privilege, hybrids represent today the major part of rape for which mobile seed contracting has now almost disappeared.

Given the responses of the mobile seed contractors surveyed for this study, this issue seems to have moved somewhat away from the concerns of contractors. Indeed, although hybrid rapeseed expanded rapidly in the 2000s, the situation has now largely stabilised and cereal seed, the main market for mobile seed processing, has reached a ceiling in Europe with less than 5% hybrids.

But this apparent stability should not make us forget that, just as in the late 1990s, a breakthrough innovation can occur by taking advantage of legislation and change a market in a few years. If breeders were to develop a hybrid technology for cereals with many advantages and better yields, there is little doubt that the market would adopt it. Then, under the current legislative framework, the mobile seed processing business would be seriously threatened.

#### **Hybrid Seed**

Hybrid seed is produced by the deliberate cross-fertilisation of genetically different plants. It is used to improve the characteristics of the resulting plants, such as higher yield or disease resistance.

It originated in the United States on experimental agriculture stations in the 1920s, and by the 1930s farmers were widely adopting the first hybrid maize, which soon took over the maize seed market. According to the US Department of Agriculture, hybrid maize was one of the main reasons for the spectacular increase in agricultural production in the last half of the 20th century.<sup>41</sup> In the late 1990s, hybrid seeds were extended to oilseed rape, whose market shifted to hybrid seeds in the 2000s.

Their main agronomic interest lies in heterosis, also known as hybrid vigour. When two parents are genetically distinct, their cross-fertilisation results in more vigorous offspring. Hybrid varieties are very interesting for breeders because when they are reproduced, the offspring do not have the same vigour. So, if farmers want to continue to benefit from the productivity gain, they are forced to return each year to buy their supply of hybrid seed.<sup>42</sup>

However, although they are now excluded from the farmers' privilege to reproduce their seed, several agronomic trials on oilseed rape<sup>43</sup> have shown that apart from the loss of the heterosis effect (which is roughly equivalent to a 10% yield loss), reseeding of hybrid varieties is perfectly possible and does not impact the grain qualities or the periodicity of the crop cycle. On the other hand, it is not very interesting economically for farmers since the profit loss generated by the yield loss exceeds the cost of the seed.

Hybrid seed now accounts for 80% of the European seed market for oilseeds and maize. Hybrid cereal seed also exists, but it has not convinced even 5% of European farmers. Still, it accounts for 20% on the other side of the Atlantic.

The same questions may arise for **new breeding techniques** (NBTs). Indeed, beyond the ethical or health concerns of the civil and political discussions, seed contractors must be vigilant to future developments on these subjects.

If the CRISPR method - the central genomic editing technique of NBTs - is able to provide farmers with promising solutions at low cost, it is absolutely necessary to guarantee the right to farm-saved seed on these future varieties.

It will also be necessary to ensure that breeders do not patent the genes used, or the methods developed, as a means of circumventing the plant breeders' rights system. It will also be necessary to ensure that they do not hybridise the varieties resulting from NBTs in order to secure a monopoly.

<sup>41 &</sup>quot;Improving Corn; based on 'Hybrid Corn', published in the Yearbook of Agriculture, 1962", United States Department of Agriculture, Retrieved 14 December 2014.

<sup>42</sup> H.A. CURRY, "Breeding confusion: hybrid seeds and histories of agriculture", *The Journal of Peasant Studies*, 2023

<sup>43</sup> A. BAILLET, "Resemis d'hybrides", Variétés Colza presentation, CETIOM & RTR, 2011

Here is what Nigel Day, President of EMSA, stated in 2016 about NBTs in a letter to Commissioner Vytenis Andriukaitis:<sup>44</sup>

"EMSA, on behalf of the mobile seed processors, considers first that any plants arising from these new breeding techniques should be subjects to a risk assessment and labelling requirements applicable to other GMOs for at least three reasons:

- Precision is not the same as predictability. There are questions about just how precise these new techniques are, but even if they can make very precise changes to the genome that doesn't mean that the results can be entirely predicted. DNA is not lego and a change in one place can have unexpected impacts elsewhere.
- Classification as GM means the products of the techniques will regulated and labelled, not banned. If plant breeders are sure they are safe, why not allow them to be tested and identified by farmers and consumers?
- The new technology could well be patented with patentable methods or genes, in contradiction with the successful existing plant variety rights system, which would limit the right to farmers to save seeds and lead to a greater concentration of market power in the EU seed market."

#### **b. Legal Developments**

In addition to varietal developments, it is also essential to monitor legislative developments. Nothing can be taken for granted and we are dealing with an active lobby.

As part of its national strategy plan for the Common Agricultural Policy 2023-2027, Italy has announced the obligation to use certified seed for rice, durum wheat, soybean, sunflower, rapeseed, sugar beet, tomato and pulses as a condition for CAP subsidies.<sup>45</sup>

It should be noted that the durum wheat seed market in the European Union has historically been strongly influenced by the EU policy to promote durum wheat production, through, at certain periods, conditionality criteria in favour of certified seed comparable to those proposed today by Italy.<sup>46</sup>

Furthermore, in Italy, farm-saved seed is only allowed for varieties protected by the Community plant variety rights guaranteed by Regulation No 2100/94. Varieties protected by the national system are indeed prohibited from being re-sown.<sup>47</sup>

The example of Italy is developed here because the seed lobby seems to be particularly active there and the policy making is generally not in favour of farm-saved seed - which might explain its low penetration unlike in other southern European countries.

<sup>44 &</sup>quot;Re: Decision on new breeding techniques", *Letter to Commissioner Vytenis Andriukaitis*, EMSA, 22 January 2016

<sup>45</sup> *Relazione 2021 sul piano strategico della PAC* (versione approvata del piano strategico PAC 2023 - 2027), Ministero dell'agricoltura, della sovranità alimentare e delle foreste, 2021

<sup>46</sup> H.W. RUTZ, *Study on Farm Saved Seed in the European Union*, Bundessortenamt, December 2008 (updated in May 2009), p. 20

<sup>47 &</sup>quot;Al via le semine cereali 2017, attenzione alle frodi e alle illegalità", Assosementi, 7 September 2017, <u>http://www.sementi.it/articoli/468/via-alle-semine-cereali-2017-attenzione-alle-frodi-e-illegalita</u>

But policy shifts could occur anywhere in Europe. At the European level, some organisations still have an agenda to remove the derogation for farm-saved seed in the EU. An example is this statement from Euroseeds, the European seed association: "the farm saved seed exemption as provided in Regulation (EC) No 2100/94 [...] has to date failed to achieve the above in the following respects and therefore **should be abolished**"<sup>48</sup>

#### c. Recommandations

Notwithstanding these daunting challenges, mobile seed contracting perfectly meets the expectations of farmers, governments and civil society: it is, as mentioned above, an ecological, economic and social solution. Moreover, it is fully in line with the circular economy, which is widely promoted and supported by the European Union, which has made it, with its *Action Plan for the Circular Economy*, part of the *Green Deal* and of its general policy.

In order to make these arguments, the four recommendations issued ten years ago by the General Secretariat after the establishment of EMSA are still and more than ever relevant.

Firstly, EMSA should continue to **exercise its influence and expertise** and provide information on farm-saved seed to the European Commission and the European Parliament. To do so, the internal pooling of figures and legal, economic and technical issues needs to be strengthened.

Secondly, EMSA would benefit from **cooperation with other European organisations**. COPA/COGECA (European farmers' association) has already expressed interest in establishing official contact with EMSA in the past.

Thirdly, EMSA needs to **expand its membership**. Since its foundation, companies and organisations from Germany, Denmark and Poland have joined EMSA. Recently, the Italian mobile seed contractors' organisation as well as Polish contractors have shown interest in the association. The further expansion of EMSA would provide it with more resources, but more importantly with a better knowledge of the mobile seed processing trade in Europe, for which data is lacking. A wider representation of mobile seed contractors and a wider knowledge of the establishment of the trade in Europe are crucial arguments to interact with the European institutions.

Fourthly, EMSA has an interest in **keeping in touch with the press** in order to communicate on its actions and to defend farm-saved seed and mobile seed contractors in Europe.

<sup>48</sup> Euroseeds, Position on Farm Saved Seed, January 2011, updated in July 2019, https://euroseeds.eu/app/uploads/2019/07/11.0050-Euroseeds-position-Farm-Saved-Seed.doc-1.pdf

### Conclusion

Beyond the figures it gathers, this document is intended to ask questions rather than provide answers, in order to facilitate the work and decision-making of the European Mobile Seed Association.

In addition to proposing an approach to the mapping of European farm-saved seed and raising the challenges it faces, this study will have made it possible to identify the missing data for a global understanding of the European seed ecosystem and in particular the mobile seed processing business: the evolution over time of farm-saved seed market shares and the evolution of the demand for mobile seed processing in order to determine trends; the number of contractors in Europe, their distribution and their evolution; but also more qualitative data such as the degree of integration into the agricultural and political value chain.

While some of these data exist in some national associations of mobile seed contractors, they are difficult to use on a European scale because of the impossibility to compare or aggregate them with other European national data. It therefore seems imperative to strengthen the coordination of sorters within each state in order to produce these figures; to strengthen the cohesion and centralisation of data and issues between EMSA members; and to engage in the process of enlarging EMSA by prospecting new members.



Cereal seed sorting plant - © CEETTAR/EMSA

### **Mobile Seed Processing in Europe**

Law, Market, Challenges

**European Mobile Seed Association** 

May 2023

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