



DYNIVERSITY

Croqueurs de Carottes (France)

Case study analysis



DYNAmic seed networks for managing European diversity:
conserving diversity *in situ* in agriculture and in the food chain



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PART 1: DESCRIPTION

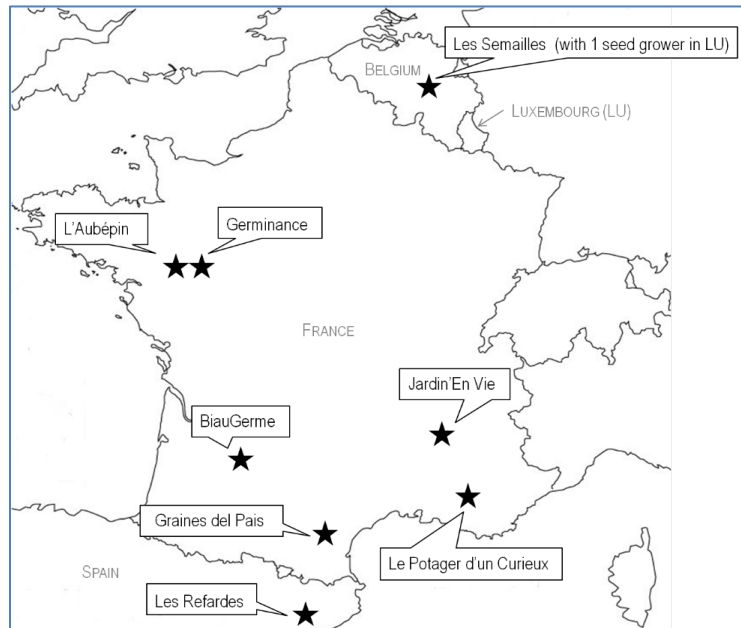
1.1 Contextualising the case

The Association des Croqueurs de Carottes ('Carrot Crusaders' in English) was founded in 2005. Today it has seven small seed companies (five in France, one in Belgium, and one in Spain). All of these seed companies produce and sell organic seeds from open-pollinated vegetable varieties from the public domain. These varieties are reproducible— open pollination is the biological component of reproducible varieties.

The trajectory of the Carrot Crusaders is linked to the French Farmers' Seeds Network (Réseau Semences Paysannes - RSP). In 2003, the emergence of the RSP came about as a response to a combination of three elements: opposition to GMOs, biodiversity erosion, and the need to react to regulatory changes concerning seeds (Demeulenaere and Bonneuil, 2010: 78). This network brings together various associations, producers, trade unions and NGOs involved in the practice and promotion of seeds that represent cultivated biodiversity. In addition to the exchanges specific to the material dimension of variety production, RSP develops and contributes to its network of practitioners a whole socio-political work as well (e.g. legal monitoring, monitoring the impacts of developments in breeding techniques, advocacy in favour of legal recognition of population variety selection, etc.). In 2005, RSP created an internal working group dedicated to vegetables. The number of species, the heterogeneity of the actors (seed craftsmen, associations, gardeners, farmers) and the diversity of expectations (technical and political discussion), provoked tensions within the group. From that basis, five seed companies (BiauGerme, Graine del País, Germinance, SCPAA de Ste Marthe, Semailles) created the association. Together they were governed by the French law of 1901 on associations and named themselves Les Croqueurs de Carottes in May 2005.

The association's purpose is "to work for the static and dynamic conservation of varieties threatened by genetic erosion and to highlight this work of heritage preservation. In particular, it will ensure, by all appropriate means, the maintenance of varieties in the public domain which may have been deleted from the official catalogue and will ensure that some of these varieties are once again available for sale to gardeners and market gardeners. It will therefore be able to encourage, develop and promote any action in this direction and will be an interlocutor with the competent authorities." (extracts from the statutes of the association - Article 2, May 2005). Furthermore, "the objectives of the Carrot Crusaders are to contribute to the preservation of old varieties by identifying varieties at risk of genetic erosion, evaluating them, making them last and registering –or re-instating– them in the most promising catalogue. A second objective is to promote the exchange of know-how and training in the maintenance of these varieties" (Semailles,2018). These objectives also involve defending the right to produce and market non-registered varieties, and finally they seek to promote and encourage the practices of artisan seed companies.

As of early 2019, seven companies have become members of the association. The locations of these seven companies in France is shown in the figure below.



Map 1: Geographical distribution of Seed Craftsmen of the "Croqueurs de carottes" (source: Klaedtke, 2017 : 33)

The above-pictured geographical distribution underlines the importance of the development of Croqueurs de Carottes. It has not been a matter of an "actor" changing scale (from small to big), but rather the intention is to cultivate collective geographic coverage by multiplying anchoring points.

1.2 « Doing »

1.2.1 Properties WITHIN the initiative (closure)

The seed system tolerates the release of non-DUS seed only at the margin. It tries to find out which varieties are put into circulation by introducing what could be viewed as derogatory annexes in the official catalogue of variety. The category entitled "varieties without intrinsic value" is intended only for amateurs. Consequently, the strong regulatory constraint comes into tension with the willingness of "seed craftsmen" to make public their seed and give the place they consider deserved for the seed and its cultivation models.

1.2.2 Properties BEYOND the initiative (outreach)

Each of the companies offers its customers a wide range of self-produced varieties from the purchase/resale of member companies of the Carrot Crusaders and external companies offering seeds from organic farming, such as Sativa and Bingenheim.

1.2.3 Transformative effects beyond the initiative

The first co-learning constructed within the Carrot Crusaders is the identification and analysis of the exclusion process of their non-DUS varieties from the formal catalogue. This understanding, in turn, allows seed producers to better publicize the injustice perceived against them and their non-DUS varieties.

A second source of co-learning concerns the inclusion of varieties in the catalogue within this derogatory annex, supported and provided by the Carrot Crusaders. The Carrot Crusaders opt to support the maintenance of non-hybrid varieties in the catalogue. For this, they have become collectively involved in the maintenance activities of these varieties. The maintenance of varieties listed in the catalogue means guaranteeing the availability of seed, and, if or when necessary, provision of samples to control authorities. The registration of varieties in the catalogue annex is carried out by the Carrot Crusaders, but the maintenance of the varieties is a task distributed among the members according to their availability and the pedo-climatic requirements of the variety.

Registrations by the Crusaders are done within two categories in the catalogue. List B is accessible to professionals, while List D, "varieties without intrinsic values", is intended for amateurs. For the Crusaders, it is a challenge to maintain the non-hybrid varieties obtained by mass breeding in List B while still allowing professionals to access these varieties. In fact, the removal of a variety from List B has generally led to the total obliteration of the variety, or to the possibility of its re-introduction in the catalogue within List D. The latter option, takes, at minimum, two years to carry out. For both of these reasons, access to market gardeners is reduced. Thus, the sum of the varieties maintained by the Carrot Crunchers and their members is represented by six varieties contained within List B (i.g. the Vertus beef heart, the Louviers early cabbage, the black-headed red cabbage 3, the Rennes Petit Gris melon, the Valence round eggplant, and, soon, the Elbeuf leek).

The registration of varieties in list D requires less binding application of the strictly applied DUS used for the other categories. According to our interlocutors in practice, *a priori* controls to exclude non-DUS varieties do not exist. However, the quantity per bag is very limited. Annex II of Directive 145/2009 (European Commission 2009) entitled "Conditions to be met by seed" contains a specific weight distribution of 5, 25 or 250 grams to be exchanged, depending on the species. As for the other categories (A and B), the registration costs are borne by the maintainer, a steep 290 Euros per variety registered (CTPS 2018: 5).

Thus, the registration in List D of varieties registered and maintained by the Carrot Crusaders, after negotiations with the GNIS (French Interprofessional Organisation for Seeds and Plants), exceptionally benefit from free access. We hypothesize that GNIS accepts free access of seeds in order to respond to critics of the catalogue who denounce it as an instrument that has led to the erosion of diversity in the service of major players in the seed sector. Thus, by the derogation list, or List D, the European Union and the GNIS in France show the existence of genetic diversity within the catalogue and its intention to include it. Therefore, free access could be aimed at encouraging the registration of varieties that support this argument. That said, other varieties are waiting for registration, but the payment of registration fees still seems to be the subject of controversy between parties.

Thus, the orientation of Carrot Crusaders towards maintaining varieties in the catalogue leads them to learn more about the functioning of seed legislation. On this occasion, they found a loophole in the interpretation of the scope of the legislation allowing them to release unregistered varieties for amateur use. Paraphrasing Isabelle Stengers (2006: 126), the members of the Carrot Crusaders put themselves in a learner's position. "... a learner who seeks how to "hold" a situation and how it can be transformed, who creates knowledge that does not refer to an object or a fact, but to a learning journey nourished by his own attempts at modification. "Their purpose is not to [...] know, but to 'improve' a mode of functioning, in this case, a socio-political functioning" (Stengers, 2006: 131).

1.3 « Organising »

1.3.1 Properties WITHIN the initiative (closure)

Each member remains autonomous with regard to its own practices. Coordination is based on regular meetings and conference calls. Interpersonal knowledge between members allows information exchange in confidence.

1.3.2 Properties BEYOND the initiative (outreach)

To go beyond the network, the Carrot Crusaders are members of the French Farmers' Seeds Network (Réseau Semences Paysannes - RSP). Within RSP, the Carrot Crusaders are the bearers of issues concerning vegetable gardens, specifically for professional seed producers.

1.3.3 Transformative effects beyond the initiative

The mutual reinforcement between members of the Carrot Crusaders is based on three dimensions.

First, members provide each other with services in terms of know-how, technical knowledge, and machine acquisition. For example, several machines used at Germinance come from Belgium after hearing from Semailles of the resale of second-hand seed equipment. Similarly, members exchange information on computerized stock management and online sales media. Thus, the mutual support between companies embodies a first principle, which is also reflected in the association's statutes: "mutual aid and participation rather than competition" (Les Croqueurs de Carottes, 2018). Collaboration involves everyone and allows coordination between all. In order to maintain the confidence necessary for collaboration, the Carrot Crusaders join forces. The entry of a new member works by consensual co-option. As an

illustration of this operation, a new operator multiplying and marketing seeds of old varieties was once refused entry into the Crusaders because one member considered the new operator as unfairly in competition with them.

The second dimension concerns the relationship with plants. On their website, the Carrot Crusaders propose to be in contact with plants in a process of co-evolution. They call their work "doing with the living: [...] our job consists in accompanying plants in a co-evolution with the terroir, producing and disseminating population varieties adapted to the different practices of organic farming, both for gardeners and food professionals. We do not just grow seeds selected for chemical agriculture for one year in organic farming. To claim to be a craftsman is, on the contrary, to choose to anchor our companies in their territory as close as possible to the needs of the population, not to separate design and production, to commit to a quality approach: we favour the possibility of doing with life, rusticity, adaptability, flavour and food value!"

Thus, the Carrot Crusaders move from a conception of controlling life to accompanying it. This translates, for example, into shifting from considering a pathogen as an element to be eradicated to seeing a pathogen as an element to learn how to live with, i.e. from pathogenesis to salugenesis (Klaedtke, 2017b) (i.e. working on plant health rather than attacking pathogens). This co-evolutionary relationship, including this concern over the management of these diseases, is highlighted by the Carrot Crusaders: "a new approach to co-evolution, "ownership" and plant health: doing with and respecting living organisms means not seeking to eradicate pathogens, but promoting symbiotic life to limit their impact to a level that does not affect yield and our health."

In sum, this dimension consists of a change in our relationship with plants. It is based on the principle of "co-evolution with the plant" and it is a form of companionship.

Finally, the third dimension of mutual reinforcement between members of the Carrot Crusaders concerns the passage of the Carrot Crusaders from being a place of work and practical exchange to be a 'political' space that collectively pursues recognition for their societal contributions. This dimension does not preclude work on the socio-material dimension of seed production. On the contrary, it complements it. In fact, the gathering of seed craftsmen within the Carrot Crusaders does work to denounce the non-recognition of the craft profession. On their website they indicate that they want "...to have our profession recognised in order to give everyone the opportunity to choose quality food, from population varieties."

Thus, the association positions itself as an interlocutor with the competent authorities (cf. article 2 of the association's statutes, as previously mentioned). Their denouncing of the injustice they believe they are suffering starts with the service they provide to circulate seeds. Through the packets of seed from each member, they in turn convey their criticism. Consequently, the Carrot Crusaders articulate socio-material and socio-political dimensions of cultivated biodiversity.

PART 2: ANALYSIS

2.1 Knowing

2.1.1 Properties WITHIN the initiative (closure)

Knowledge is co-constructed on the basis of exchange between members. The knowledge created is on matters of both seed production and seed legislative frameworks.

2.1.2 Properties BEYOND the initiative (outreach)

Carrot Crusaders are publicly debating the restrictions on the release of non-DUS seeds. The various companies involved in this battle derive their legitimacy individually and collectively from their territorial attachments. Their concern is to bring back to life varieties that have been selected for their local adaptability.

2.1.3 Transformative effects beyond the initiative

These points were directly addressed in the previous section (i.g. co-learning on the inclusion of varieties within an

annex to the regular catalogue; services provided on technical know-how, or technical knowledge and acquisition of machines; "doing with life", or a change of relationship with the plant; conception of a perceived co-evolution with a plant). This allows us to show how Carrot Crusaders articulate the production of knowledge, know-how and social organization.

2.2 Framing

2.2.1 Properties WITHIN the initiative (closure)

The Association exists to bring together seed companies of similar size, sharing the same profession as small seed companies with little mechanisation and with the speciality of providing population varieties.

2.2.2 Properties BEYOND the initiative (outreach)

The central point of deployment for the company is articulated around the self-qualification of seed craftsman. The category "seed artisan", which recently appeared in the French-speaking world, is not precisely defined (Klaedtke, 2017a: 16) but is agreed to define an individual or a group of individuals "who maintain a peasant background spirit, but with a craftsman's posture, and who have given a new meaning to technical know-how and practices, at the crossroads of old restored techniques, modern knowledge, technological tools and personal knowledge. This knowledge is intended to enhance, disseminate and market a range of quality farmer seeds made within the framework of agriculture and work that respects people and living organisms, aiming at the joint development of both, with the ultimate objective of achieving the autonomy of farms and individuals, to perpetuate companies and the seed sector upstream, in a transparent approach towards the customer." (Bellia, 2018: 36). This small professional category has been built from the gathering of several seed companies offering AB seeds from a mass selection of population varieties.

The initial denunciation of the Carrot Crusaders, in particular, concerns the "derogatory" status of their practices of mass selection for population varieties that must be reserved solely for amateurs. This limited recognition produces a further limitation by making the varieties unavailable to market gardeners. The Carrot Crusaders defend access to biodiversity for the entire population and for this reason, they consider their work critically important and in need of a transition from the derogatory regime to a legal one. This transition would involve recognizing practitioners as public utility actors in the maintenance and development of the management of cultivated biodiversity while also making them accountable for the maintenance of the adaptive potential of varieties in response to consumer demands for taste and diversity and climate change, in particular.

The major difficulty in recognising their practices and seeds is not that their seeds are not in alignment with DUS criteria, but rather, that DUS does not allow the characterization of seeds of old varieties/peasants. The difficulty, therefore, lies in how to define what is a "good" seed if it is not a DUS variety. The DUS industrial qualification does not adapt to the production of "old varieties"/"regional varieties"/"peasant varieties", as these are dynamic and constantly in a process of adaptation and change. This implies agreeing to use other selection criteria than DUS. The Carrot Crusaders defend as criterion the following characteristics to gauge 'good' seed: "intra-varietal biodiversity; disease tolerance; taste and nutritional value; adaptability and evolution capacity" (Croqueurs de Carottes, 2018).

Thus, the development and maintenance of this biodiversity requires both the expansion of criteria for the mass selection of population varieties *in situ*, and the possibility of dynamic variability management, which is excluded by the standardization imposed by the DUS reference. In addition, the space created by the Carrot Crusaders allows us to share and learn about how such a classification system commits an injustice to both humans (as practitioners of cultivated biodiversity) and non-humans (plants and their seeds). This double concern is then made present through the co-evolution work and the "uncontrolled" relationship with the plant that exists as a kind of accompaniment. Carrot Crusaders also identify the work of practitioners of biodiversity as 'seed artisans' as they link practical mass selection and the identity of the humans who co-evolve with these seeds. The construction of the identity of the seed artisan is the result of a process that is created also among members of the Carrot Crusaders.

In 2016, two members of the Carrot Crusaders (Jardin'Envie and Graines del país), navigated a junction concerning the problem of craft trades, as previously defended by the Minga Association of Equitable Economy, of which these two are also members. Minga favours, beyond the artisanal dimension of the profession, the social dimension of the company, and integration into society. On June 13, 2016, the members of the Carrot Crusaders issued a press release with Minga entitled "Cultivated biodiversity is also a matter of trade. For a recognition of the profession of Seed Craftsman" (Minga et al., 2016). This press release highlighted the importance of organizing food chains and recognizing artisans whose efforts deserve fair compensation, aiming "to re-organize food chains around identified, autonomous and linked

professions, through the recognition of their respective contributions, to quality food". They consider it necessary to develop the profession of seed craftsman, and to allow the crafter correct and equitable remuneration for their services. Minga et al. (2016) conclude that there is a need to unify efforts to help build "an economic model of the food chain based on peasant varieties and to obtain recognition for the profession of Seed Craftsman."

The press release concludes by denouncing the relations of domination imposed by the major seed groups on artisanal seed companies and their collective, dynamic, and location-specific (*in situ*) management of their seeds. Following this press release, six members of the Carrot Crusaders (i.e., BiauGerme, Germinance, Graine del pais, Jardin'En Vie, Les refardes et Semailles) are issuing a new press release signed "Association Les Croqueurs de Carottes: Professional Organisation of European Seed Craftsmen - SEAFO". This is based on the following denunciation: under the pretext of consumer protection, the sale of varieties of seeds not included in the official catalogue between farmers is still prohibited. For this reason, the registration criteria and the limits of the catalogues continue to disadvantage landraces and populations. As a way around this issue, the communiqué expresses a radical affirmation by creating a new figure in the seed world, that of the artisan seed producer of variety-population seeds. Carrot Crusaders gives voice to these new figures: "We, artisan seed producers, producers of variety-population seeds, are working to improve the taste and nutritional quality of food, within the framework of the realities of our time: the seed, the environment and the cultivation method that determine the quality of our food. " (Croqueurs de Carottes, 2016).

The work of the seed artisan is part of a food system that seeks to improve both taste and nutritional qualities. This perspective, however, only makes sense in relation to the practice of craftsmanship.

Artisan work retains an irreducible manual dimension that in some cases can limit the financial profitability of the work. The profession of seed craftsman, but even more so the identity it has generated, and which becomes a resource for making their practices public, arises from the articulation between the socio-material dimension (the 'making of the craftsman') and socio-political dimension ('political thinking').

2.1.3 Transformative effects beyond the initiative

Reframing in relation to the conventional system consists of linking a seed design as 'open', paired with a manual art of transforming the seed to taste or local conditions. This approach results in the claim of the existence of a close connection between plant, seed, and practitioner.

2.3 Networking

On the basis of the previous development, we can say that a bridge between members is created and reflected in the construction of a common identity, that faces an adverse regulatory framework. This includes the practice of the profession of seed artisan and the three organizational dimensions of the Carrot Crusaders (collaboration, co-evolution with the plant, and policy). The identity of the seed craftsman is very much a practical and political issue.

PART 3: SUMMARY

The various companies involved in Carrot Crusaders have developed companion relationships with each other. This allows them to transmit know-how and value in the practice of seed production. Members are involved in a co-evolutionary relationship. It is collective action and reflection that allows them, beyond the individual enterprise, to develop an identity that differentiates them from conventional seed production. The effects from excluding these farmers and their seeds from the regulatory framework, and thus on the population's access to the biodiversity cultivated in their fields, gardens and plates, can thus be denounced with a stronger voice by the collective when they speak together.

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