UNFREEZING THE SEED:
STATE, EXPERTISE AND PATRIOTISM AT THE SUCEAVA GENE BANK

By

Daniela Ana

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Supervisors: Prof. Vlad Naumescu

Prof. Guntra Aistara

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Abstract

This paper explores how the current crop diversity conservation strategy at the Suceava Gene Bank in Romania took shape in the light of the agricultural policies carried out by the state, as well as the global transformations in agriculture and food chains. Through ethnographic fieldwork I identify practices and actors that led to a non-typical genetic material conservation strategy performed at the Bank. I argue that a sense of responsibility driven equally by expert knowledge and patriotism led the conservationists at Suceava to reintroduce traditional crops in Romania through a yearly seed distribution campaign. This form of "horticultural patriotism" (Comaroff and Comaroff, 2012) took shape in a paradoxical environment; first, the expert discourse becomes extended with cultural arguments. Secondly, on the background of this story lies the Romanian state which considerably withdrew its support from agricultural research in the post-socialist decades. Additionally, I analyse a similar conservation initiative carried out by grassroots association EcoRuralis, where the absence of the state yielded a more radical discourse, that of food sovereignty. Finally, voices of traditional seed cultivators reveal similar concerns and convictions towards industrial and respectively, traditional production of food.

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Contents

Introduction: the seeds of the nation

Industrial agricultural practices throughout the last century have led to massive plant genetic erosion. Communities and governments across the globe came to shape various ways of countering this loss of plant species and varieties. One of the responses is gene banking, an ex-situ[1] method of plant genetic resource conservation. Generally, gene banks are concerned mainly with genetic diversity conservation, and there is a rather reduced institutional interest in conserving the social relations that develop around seeds. Nevertheless, the Suceava Gene Bank - Romania's national gene bank, in use from 1987 - has recently taken an extended approach to biodiversity conservation in order to ensure that the biosocial[2] component (Van Dooren 2010) is also kept alive: the bank delivers free traditional seeds to peasants across Romania since 2009. The gene bank belongs to the Romanian state; while the support it received from the state has been rather reduced over the years, practices at this bank go beyond the official requirements. Moreover, the Bank's employees intertwine expertise with patriotism when motivating the alternative conservation strategy they practice.

Why should the alternative biodiversity conservation strategy practiced at the Suceava Gene Bank be a problem for social science? In social theory, historically the actors were predominantly humans, while ignoring "disease, agriculture, chemicals, or technology [as] externals - nature, tools, obstacles, resources - whose role is essentially passive" (Mitchell 2002: 29). In this research I came to grasp that seeds do not have a passive role in the configuration of

[1] Ex-situ plant conservation refers to conservation outside one's natural habitat (e.g. gene banks); the alternative is in-situ conservation, referring to conservation in the gardens and/or in the natural habitat (it is also called on-farm conservation).

[2] Van Dooren's understanding of biosociality refers to *the way in which humans are inextricably entangled with various non-humans in both the cultivation of crops and the making of agricultural socialities, knowledges and practices.* (2009: 4)

agricultural practices, and that they can yield changes in practices, and they can also be perceived as agents of national continuity. My motivation to focus on the relationship humans develop with the seeds is further enhanced by the fact that in twenty-first century agriculture, giving control to the farmers is not as much translated into ownership of land as it is into ownership or access to inputs – seeds, chemical fertilizers and pesticides (Verdery 2003).

Thus, echoing Mitchell's account of the social embeddedness of all things "natural" saying that "the river was already as much a technical and social phenomenon as a natural one" (2002:34), this research follows the seeds at the Bank in a similar manner. The seeds conserved at the Bank are primarily technical things: they are plant genetic resources to be frozen for scientific purposes. But they are also social things, as this research will explain. Seeds are genes but they can also be understood as the cultural expression of a region or country. Expressed through the diversity of taste and the meaning of practices, seeds can be "memories of home and a marker of tradition" (Aistara, 2014: 1). And the fate of plants can depend on the national politics. An example where local plants are assigned meaning in relation to the history of the state and even the survival of the intra-species diversity depends on this history is the example of Vanuatu. After independence, in 1980, local farmers started to cultivate predominantly taro, and reject coconut cultivation as it was a crop that was associated with the colonial era. Here, coconut varieties became socially devalued since they were associated with colonial times and Western economic imperialism (Caillon and DesGeorges 2007), and the survival of coconut varieties is currently in danger.

The analysis of the Romanian seeds collection revolves around the experiences of the experts working at the Suceava Gene Bank, and also to a lesser extent, around cultivators of traditional seeds and a grassroots organization, EcoRuralis, carrying out a similar project to the one the

Bank does. The tension here springs from the fact that first, the Bank, although funded by the state, does not receive substantial support in its projects that go beyond the basic requirements of a gene bank – namely, freezing seeds. Secondly, experts usually frame their practices as technical mainly; however in this case expertise is doubled by patriotic arguments accompanying conservation activity. Thirdly, the projects funded by the state favour production, monocultures and eventually food imports, and give less attention to agrobiodiversity. Nevertheless, at the Bank I found a team of enthusiastic crop diversity conservationists, who, while acknowledging the aforementioned dissatisfactions with the Romanian state, still carry out their activities at a level that goes beyond their job requirements, and express a patriotic attachment to the varieties of seeds that they conserve. I found out that matters of taste and quality of food, practices, and love for plants are fuelling their enthusiasm, as much as the reaction against food imports and the stagnation of agricultural research in Romania.

During the ethnographic fieldwork done at the Suceava Gene Bank, I traced its project throughout its existence, from the early 1980s until the present day. This research aims to answer several questions; principally, I ask how does an expert practice such as institutional agrobiodiversity conservation come to take on a patriotic ethic, while the state considerably diminished its support for agricultural research? How do expert arguments get extended by cultural ones in the case of the Suceava Gene Bank? Furthermore, how did national and global politics around conservation and food production influence the Bank, as it came to practice a maverick conservation strategy – that of mailing free samples of traditional seeds to cultivators across Romania?

I attempted to find answers to these questions by deconstructing the discourse I met at the Bank, displaying layers of culture and science which consolidate in a more social strategy of

crop diversity conservation. My research reveals that this is driven by the responsibility coming with expertise as well as the responsibility of being a Romanian conservationist, aware of the cultural subtleties local plants carry with them. Throughout my discussions at the Bank, reference to conservation as a process of simultaneous evolution of crops, communities and climate was recurring. This understanding goes in line with Foster's concept of "coevolution" (2000), entailing that recognizing the importance of scientific-material conditions does not deny cultural aspects, but that these material conditions are interrelated with what becomes culture, ontology, ideas. When it becomes localized, this co-evolutive understanding of the human-environment relations can translate into a particular attachment to local crops, or flora, as described by the Comaroffs in the case of South Africa referring to "horticultural patriotism" (Comaroff and Comaroff 2012: 12). There, it is described as an abstraction for nation-building whereas in the present case, I understand horticultural patriotism primarily as a reaction towards the apparent loss of identity in the case of Romanian crops. The endeavour of understanding how the formation of this form of patriotic attachment came about becomes more gripping as it is revealed that the ethnification of conservation and cultivation happens in a paradoxical environment, one where the Romanian state is more interested in endorsing privatization of agriculture (or the mere shut down of some agricultural research institutions), or prioritizing food imports over domestic production, material conditions that came to configure the Bank's activity and the dispositions of its experts.

The discussion over the Bank's conservation strategy and the material conditions laying the basis for their ecological view is tied to the Romanian territory; I will base my analysis of crop diversity conservation as spatialized on Ferguson and Gupta's notion of the "spatialized state" (Ferguson and Gupta 2002:105). Here, states are seen as "constructed entities that are

conceptualized and made socially effective through particular imaginative and symbolic devices" (Ferguson and Gupta 2002:106). Along the same lines is the argument of Appadurai who claims that the national economy is crushed by globalization, and what survives is ethnicity and "the compensatory focus on purity, boundaries, and borders" (Appadurai cited in Friedmans 2013:247).

This research project has been ignited by the traditional seed distribution campaign that has been carried out by the Bank, motivated by both techno-politics[3] and social arguments. This activity is atypical for a national gene bank, and the conservation model it supports – the on-farm one – is done by spreading local populations of plants for food and agriculture across the country. These local crop populations[4] are adapted to the environmental conditions in Romania for hundreds of years, and, as the experts in the Suceava Gene Bank argue, developed higher resistance, better taste, and richer nutrients. Apart from biological traits that make conservation varieties more valuable, the conservationists at the Bank emphasize also their ethnic importance: they are associated with local knowledge, traditional products and are generally seen as contributing to an idea of Romanian national identity. The two discourses, scientific and patriotic, do not have a separate trajectory at the Bank, but they coexist as science becomes embedded in an idea of the nation.

This analysis will unfold over two chapters. In the first chapter I introduce the reader the main research site – the Suceava Gene Bank, together with the political and economic background in which it was funded and developed its activity. I trace how the necessity for conservation of crop diversity came about in a global and national context and I link this context

[3] Techno-politics, in Mitchell's *Rule of Experts* refers to the intervention of technology in the social world, and the complex way in which it comes to transform it

[4] Local populations are known also as conservation varieties (in European legislation), landraces or traditional seeds;

with the creation of a patriotic discourse around a segment of the "national nature", the Bank's seed collection.

In chapter two I focus on the meaning of tradition in crop diversity conservation as understood at the Suceava Gene Bank. Furthermore, I analyse the other two main categories of actors who keep traditional varieties in cultivation; first, I look at the grassroots association EcoRuralis, which also carries out a similar seed distribution campaign as the bank. Secondly, I analyse the cultivators of traditional seeds, be they from the Bank or peasants who saved seeds over decades independent of the first two institutions. In the analysis of the two actors I will compare their discourses with the one at the Bank in order to understand to what extent tradition or nationalism are relevant in their cases.

The choice to place the peasants the last in my analysis of the actors involved in crop diversity conservation, although they are seen as central by both EcoRuralis and the Bank, is more suitable as the two conservationist projects come with a vision on what peasants are and what they expect. The discussion on my findings among cultivators faces the discourses of the Bank and of EcoRuralis.

I will end with concluding remarks and suggestions for further research in the light of the findings of the present paper. Although the red thread I follow here is how a gene bank's seed collection became an object of patriotism, the purpose of the research goes beyond that. By gathering stories about the history of the Suceava Gene Bank, about the biographies of the employees, or about other actors involved in crop diversity conservation, a wider picture on the status of conservation in Romania, and the attitude of the state towards food sovereignty becomes visible.

Methodology

The data I analyse in this thesis is the result of a five-week long ethnographic fieldwork carried out at the Suceava Gene Bank, the single public institution appointed to conserve Romania's national collection of crop genetic material. During my stay in Suceava I was able to conduct with 13 of the Bank's 14 employees, two interviews with each of them; these interviews brought me closer to their daily activity at the Bank, and it also acquainted me with the staff's biographies. Equally important, they shared with me reflections on the mission of the Bank, and also in relation to the Romanian state and the socio-political environment. The conservation efforts are strongly plugged into international discourses translated into treaties and standards of practice applied top-down. The main treaty that configures the bank's activity is the International Treaty on Plant Genetic Resources for Food and Agriculture, and it is a member of Bioversity International (former IPGRI) from 1993. Through my fieldwork I came to better grasp the interplay between global imaginaries on nature worthy for saving, and their effect on local processes in the case of plant genetic conservation (Gille and O'Riain, 2002). My stay at the Bank coincided with the spring seed distribution campaign, starting on 15th January and ending 28th February 2015. In my initial research plan, I was intending to help out with the seed distribution, but eventually it proved that the Bank staff taking care of this activity was too busy to afford the time to train a novice. Nevertheless, the large amount of time each of the employees offered me for two rounds of interviews throughout this busy time sufficed for me to get an in-depth grasp of their activities and discourses. My first encounter with the Bank took place in August 2014, when I also conducted the first interview with Silvia Străjeru, the Gene Bank director, and where we arranged my arrival at the Bank for half a year later. That particular discussion with Silvia came to shape my research project: the free seed distribution campaign

was intriguing in itself, but in addition to that I was acquainted with the patriotic sensitivity accompanying a set of scientific arguments that justified their campaign. On that day in August 2014, when I left the Bank, I paid better attention to the surroundings and I saw two large Romanian flags displayed near the entrance of the Bank. This detail fitted well in the discussion we had just ended, where I learned that scientific arguments behind their conservation strategy are equally important as cultural ones, as references to tradition and national identity.

While at Suceava, I took a short weekend trip to Cluj on February 21st attending a seed fair named Semințe Libere (Free Seeds). This allowed me to engage in the seed exchange, and also interact with urban and rural gardeners alike, who cultivate local crops. The fair also proved to be a fruitful environment for me to encounter cultivators with whom I conducted interviews later in March.

In the second week of March I worked with the grassroots association EcoRuralis in Cluj, a network of peasants and activists running a seed library – here I helped with the evaluation and sorting of the association's catalogue seed collection, and I also conducted an in-depth interview with the seed campaign coordinator. Gaining first-hand experience in crop conservation activity gave me valuable insight in how conservationists evaluate and care for the seeds.

Furthermore, I conducted several interviews with traditional and urban cultivators in Cluj, Sibiu and Alba counties. Three of the interviews with the members of the Semințe Libere community took place online; these were cultivators of seeds coming from the Suceava Gene Bank, whom I asked about their reception of the Bank's dissemination initiative and their understanding of the idea of tradition. Other two interviews were carried out with two urban gardeners in Cluj, one of which also cultivated seeds from Suceava. Finally, I took a trip to Cisnădie, Sibiu County, where I spent an afternoon at the house of a traditional cultivator – Lili –

who saves and selects her vegetable seeds for over 35 years. She does not have a link to any of the conservationists mentioned, the Bank or EcoRuralis, but she is enthusiastically sharing seeds and seedlings each spring to neighbours and friends outside Sibiu. I left her house with an extended interview and lots of seeds.

Access to rare publications referring to the history of the institution and letters from cultivators to the Bank have been kindly provided to me by Silvia, Danela and Dana. Research on this archival material helped me better understand how the creation of the Bank became possible and also how the cultivators approach and perceive the Bank.

By taking this snapshot of conservation practices I followed how a scientific practice such as agrobiodiversity conservation can yield a patriotic ethic of conservation and consumption. Although the Romanian state is hardly endorsing on-farm conservation, the Suceava Gene Bank staff goes beyond job requirements and sends traditional seeds to cultivators in Romania at their own initiative, annually since 2009; here, the scientific arguments walk side by side with the national ones, as the national gene pool of crops is presented by the experts in the Bank as yielding a national or regional identity.

Finally, a short note on positionality: throughout my research I shifted my position in the field several times; I was, at first, a neophyte in a place where scientific activities were carried out, and there were areas where access was forbidden for non-internal people. These were the conservation walk-in freezers in the Bank, being categorized as national "critical infrastructure". My access to the offices in the Bank were arranged by two of the oldest employees there – Silvia Străjeru, the director, and Danela Murariu, the agronomist engineer, this being my main legitimisation to conduct interviews in the institution.

At EcoRuralis I had the feeling I became a fellow activist in the struggle for food sovereignty: I worked together with the staff and the interns there, and I was handed various tasks such as sorting, evaluating and labelling different collections.

2. Crop diversity conservation, the state and its experts

This chapter will present the Bank with an overview of its history, and continue with an analysis of the idea of biodiversity conservation – I will trace how it became necessary and I will situate conservation in the Romanian context. A critical engagement with state support for agricultural research will follow, and finally I will get closer to explaining how, in spite of reduced attention from the state, a seed collection – primarily an expert's object – can become a patriotic object as well, part of the "national nature".

2.1. The Bank: a history of the institution conserving crop diversity in Romania

On the 1st of May Boulevard in Suceava, before entering the side-road taking to the Suceava Gene Bank, one can see a yellow plate advertising "Seeds and Fertilizers", as the same perimeter hosts both the Bank and the Suceava Agricultural Research and Development Station. There is also a second plate announcing the Research Station, but none referring to the Gene Bank.

The Suceava Gene Bank is the national institution appointed with conserving the national collection of crop germplasm[5]. But most people don't know about the Bank, not even in the small town of Suceava. They either mistake it for the Research Station, or they simply have not heard about it. Cezar C., the institution's IT engineer, who found out about the Bank's existence in the newspaper announcement of his future job says that "many people of my age didn't hear about it. I am an online gamer and I have colleagues from all over the country and they ask me where I work, I tell them 'at the Gene Bank', and they ask me 'what is it?' They don't know. Even I didn't know about it." Phytopathologist Daniela P. refers to the Bank in her college years

[5] Germplasm represents the living tissue of (here) plants; they can be either seeds or other tissues in the case of plants reproducing asexually.

– late 1980s – as a "ghost-unit"; no-one heard of a gene bank, they were not studying in school about such things. Yet this unique institution is in charge with securing reproductive material of old crops that used to be commonly cultivated on the Romanian territory and it is known only to a niche of people. When industrialization of agriculture took over in Romania, along with the collectivization of land[6], these local varieties were progressively replaced with the more productive seeds, the hybrids that were promising the global food welfare in the post-war decades.

The story of the Gene Bank is linked to this advent of modernization in agriculture. The Green Revolution starting in the late 1940s meant the introduction of hybrid monocultures, chemical fertilizers and pesticides on a large scale in numerous regions across the globe. Hybrid seeds were the agricultural innovations of that time, with a tenfold productivity increase due to the heterosis phenomenon, also known as 'hybrid vigour'[7]. Mihai Cristea, the pioneer in corn breeding in Romania, and the "founding father" of the Bank – as he is frequently referred to those who know him - was aware that when hybrids were to be introduced on a large scale in Romania, the huge diversity in local corn populations would be lost. He was to become the director of the Suceava Gene Bank 30 years later, the institution that was initially conserving this local corn population collection. Mihai Cristea, along with other researchers did a series of collecting expeditions in Romania in 1962-1963, gathering local corn populations – over 700 samples. One of the oldest employees in the bank, engineer Danela M., said that the only one who understood that this collection will be lost in lack of proper conservation technology was Mihai Cristea. Since there was little knowledge on conservation equipment at that time, "what he did was to get a refrigerator from a slaughter-house – this is what he knew back then, in the

[6] Collectivization in Romania started in 1949, and continued intermittently until 1962, when the process was completed in the non-mountainous regions of Romania (Kligman & Verdery 2012)

[7] Def. Merriam-Webster: the marked vigor or capacity for growth often exhibited by crossbred animals or plants

1960s, and in that refrigerator he put metal jars with corn seeds. He made the tops and he kept these samples like that for thirty years, until 1990 when the construction of the Bank was completed."

The construction of the Bank itself was a complex process; after keeping this collection in the refrigerator for almost 30 years, Mihai Cristea managed to convince the state authorities that a proper gene bank was necessary to secure the national collection of plant genetic resources. But when the idea was put forward, a competition between agricultural research institutions ensued, and the Romanian socialist state had specific conditions for the creation of new institutions. Danela M, who was involved in Cristea's corn collection at the opening of the Bank, reveals that

> …those were difficult years, everyone wanted the bank to be somewhere at the centre, in Bucharest, but Mihai Cristea, who had the idea for the construction of the bank, also had the idea to build this unit from local resources. Meaning, the equipment and the material were supposed to be made in Romania. This was the essential condition; this is how this project was accepted. This is how things were at that time, things needed to be built with Romanian supplies. Those at Fundulea[8] also proposed the construction of a gene bank but they wanted imported equipment; maybe they were right, but their request did not get approved. And this is how the construction started. (Danela M.)

This episode in the setting up of the Bank also shows a patriotic strategy in the construction of an institution which was later going to be the harbinger of a national ethic in plant diversity conservation. The construction began in 1985, but because the plan exceeded the budget, Cristea decided to split the construction in two phases – first the laboratories and

[8] This is the Research Institute for Cereals and Industrial Crops (INCDA, Institutul de Cercetări pentru Cereale și Plante Tehnice Fundulea), the main state agricultural research institute founded in 1962; it is located in Fundulea, Călărași county, 38 km East of Bucharest. Suceava is located 438 km North of Bucharest.

afterwards the walk-in cold stores. When the cold stores construction started, they realized that they needed 2 tons of stainless steel, which during that time was classified as strategic resource, hence very difficult to have it approved. Mihai Cristea had to forward the request to "Cabinet no. 2", which was headed by Elena Ceausescu as of 1979. The First Lady gave her signature, yet as the construction exceeded the budget again, funding for laboratory equipment has not been provided. Resources in socialism were often difficult to access due to the economies of shortage practiced by the state, as a result of scarcity in supplies (Verdery 1996)[9], and the 1980s were some of the harshest austerity years throughout socialism. Danela recounts that when they reached lab construction stage, they could not find specialists in conservation freezers in Romania, so Cristea contacted Tehnofrig, a refrigerating equipment producer in Cluj-Napoca, "to make the conservation freezers just like the refrigerators on oceanic fishing boats. And this is what they did – a real factory". But the huge machinery that was supposed to reach -20°C did not manage to reach but a minimum of -15°C, and it was also a huge energy eater; so the bank gave up on the base collection[10] for a while. The makeshift Bank freezers were needed until 1990, when amidst political turmoil Cristea found an opportunity when the first post-socialist government was formed in Romania, and had the Suceava Gene Bank founded as a stand-alone unit.

In the present, the Bank's conservation activity meets the international standards in gene banking, set by the FAO International Treaty on Plant Genetic Resources for Food and Agriculture. But until reaching this stage, the Bank was confronted with the political ambiguity

[9] More in Verdery 1996, *What was socialism;* "Central decisions together with hierarchical interactions between planners and producing firms, then, resulted in "economies of shortage" that generated "scarcity" in Romania, a scarcity primarily of supplies rather than of demand (the scarcity central to capitalism)." (p. 42)

[10] Gene banks have two collections, usually: "those holding seed samples for long-term security—referred to as *base collections*—and those holding seed samples for immediate use— referred to as *active collections*." (FAO/IPGRI, 1994.Genebank standards. FAO and IPGRI, Rome)

of the post-socialist Romanian state. In the next remaining sections of this chapter I will analyse how, despite low presence or indifference from the state, the Bank managed to keep their activity going, at the same time instilling a patriotic ethic in their practices.

2.2. Seeds under siege – how the need for 'seed guardians' came about

Before tracing the Bank's trajectory amidst the more recent economic and political transformations of the Romanian state, it is necessary to question the need for crop diversity conservation, and particularly how this need came about in Romania. Apart from the experts at the Bank who acknowledged and acted upon the genetic erosion occurring on the Romanian territory, there are also grassroots initiatives of seed savers such as EcoRuralis, with whom I worked as part of my fieldwork. The latter is a non-governmental association based in Cluj, gathering activists, researchers and peasants in a network opposing crop diversity loss and land grabbing in Romania. I will develop more on the activity and relevance of EcoRuralis in chapter 2; EcoRuralis' participatory breeding and multiplication network of peasants is called "Seed Guardians", a name that I find evocative for crop diversity conservation. The idea of seed guardianship appeared also in my discussions with the Gene Bank director, Silvia Străjeru: while I was preparing to ask her for a description of her activity, I realized that her name is surprisingly fitting to what she was doing. Not only Silvia come from the Latin word for ‚forest', but her last name, Străjeru, means ‚guardian'. She told me that sometimes people point to this onomastic correspondence and that „yes, this is what I am doing, guarding the seeds". Drawing upon the testimonies from EcoRuralis and the Bank, as well as literature analysing causes and scales in genetic erosion, I will develop below on how the need for „seed guardians" came about.

Genetic erosion in crops is the outcome of industrial agriculture practices that focused on a narrow number of varieties (Fowler and Mooney 1990). In Romania, industrial agriculture was

introduced further to the collectivization of land and resources that took place in the 1950s. The people practicing uninterruptedly traditional agriculture and cultivating local varieties were predominantly those in places where collectivization did not occur – mountainous Romania. In the post-socialist years, local populations of seeds started to be used again in some de-collectivized areas as well, yet this process was mainly driven by need rather than by cultural convictions. Verdery gives the account of the villagers in Aurel Vlaicu (village in Hunedoara County in Romania) who reintroduced local populations because they could not afford to buy hybrids, and traditional seeds were some of the "vital means of production" (2003: 102). Yet, these pockets of mainly unintentional conservation have reduced throughout the years as the recent decades witnessed the ageing of the population or the migration to the city or abroad (Cartwright 2014; Bouniol 2012). Another important element was Romania's absorption into the global food market, as increased imports of food combined with lack of subsidies for small producers reduced the incentive for people to consider producing their own food (Clapp 2014). Loss of agrobiodiversity in Romania is also the result that over twenty years of transition economy had on the livelihoods of the people who had been struggling with successive flows of peasantisation and de-peasantisation, dispossession and re-appropriation. Below I will give a brief account of the transformations that rural Romania underwent in the last half a century, and the effect globalization had on the way food came to be produced. This is informed by the views of the employees of the Bank and it will set the context for the analysis of the crop diversity conservation strategy led by the Suceava Gene Bank and of the roots of the "defensive" conservationism as a reaction against globalization of identities.

Transformations in rural practices in Romania

Across over two decades of expeditions for collecting traditional seeds, the Bank team was able to get a close insight on the changes in different regions in Romania. The expeditions took place in areas which have not been collectivized - Apuseni Mountains, Bucovina and Maramureș, most frequently. The villages in the rest of the country went through the collectivization process, which was experienced as an assault over rural practices and ways of life by the peasants (Kligman and Verdery 2011) and, I add, it was implicitly an assault on local populations of crops. Now, seeds come predominantly from older people in these villages, and rarely from young ones. Dan S., one of the engineers in the collecting team, tells me that old people used to keep these old seeds primarily because they did not have money for hybrids, and also because usually they have small plots of land. In plain areas, where large quantities of vegetables are produced for sale, they found no trace of local populations as everyone had greenhouses. But throughout the years, they noticed that the rural communities were ageing, old people and their practices disappeared, and young people preferred to leave the village for a job in the city or to work abroad. The tendency towards de-peasantisation has also been seen through data regarding land use: it was found that almost 10% of agricultural land in Romania is abandoned (Cartwright 2014, data from 2012). The built-in crop diversity conservation in the villages – the original form of on-farm conservation, as one of my informants put it – was shrinking and a sense of emergency instilled in the minds of those experts having an overview on the crop diversity status in Romania. As "with every aging person who leaves for the other world, a variety could be lost as well" (biologist Dana C.), the older employees in the Bank came to grasp the utility of a country-wide action of reinstating traditional crops. Diana B. has worked

in the Bank for 13 years and she is one of the two engineers responsible with seed collecting. She talks about the changes she saw in the village in the following terms:

> I noticed an aging workforce. And this is also a cause for the loss of these varieties. I noticed migration from the village to the city, people go for better paid jobs, and this is normal in a way. Agricultural work can be very demanding. Those who stay in the villages are those who have an extended family where everyone works. I've noticed the shrinking of farmland surface: from one year to another, people reduced their farmland because they could not cope with the costs. They didn't receive subventions. Some sold their land, some leased it, and the majority are old people. Even if they are interested in keeping the tradition, they took this decision out of need. (Diana B).

Thus these varieties were rapidly lost in the last decades. Sometimes children of the old people still practicing traditional agriculture encouraged them to give up on working the land – manual work of the land involves great effort – as they can send them money to buy food from the market. Slow marginalization of small-scale subsistence farmers in post-socialist Europe is not something new (Mincyte 2011), but the effects this has on crop diversity and food production are more complex. Industrial food production has an obscured journey in terms of socio-economic and environmental costs, meaning that the costs are placed in the 'shadows' of the food chain (Clapp 2012). These shadows are the geographical, physical, socio-economic and environmental costs, which are toned down in the process of distancing as a result of financialization of food. One of the externalities of industrial food production is genetic erosion in crops.

Globalization and the financialization of food

Financialization started to play an ever increasing role in the global food chains in the recent decades (Clapp 2014; 2012; Edelman 2013; McMichael 2013; Isakson 2013). An important concept in explaining the effect that globalization and subsequent financialization had

on food is that of *distancing* (Clapp 2014: 2). Distancing in the case of food means that the knowledge about where our food comes from, and at what cost, becomes blurred. This has a two-sided effect; first, through this process of distancing, people get less and less used to imagining the possibility of producing their own food and thus come to endorse the industrial mode of production of food (Clapp 2012). Secondly, the same phenomenon of distancing led to reactions of resistance against a mode of production that shadows the information about the impact our food has on humans and the environment (Nonini 2012). This happens as the enlargement of the food chain leaves little chance for tracing information on the physical distance the food we consume has taken, or the environmental and social costs (Clapp 2012). At the same time, marketing strategies help in keeping these data obscured (McMichael 2013). As financialization enhanced the already set-in causes of genetic erosion and took them to a larger scale, it also generated reactions that translated into conservationist initiatives, as my research suggests.

At the Bank I found positions that echo the body of literature discussed above. Silvia believes that globalization and the promotion of monocultures led to genetic erosion and that now conservation is necessary as an "aid for nature", which was invaded with industrial practices that sought the immediate gratification of human needs. Along the same lines, a colleague of hers, horticulturist Dan G., expressed a deep discontent in relation to the way food is produced in Romania:

> Yes, I am very displeased. Why? We have national traitors who facilitate imports for what they get in their pockets. In Romania, we could secure our needs for agriculture; I don't know why we would need vegetables from New Zealand or Auchan. How could they come from New Zealand to Auchan? […] Transportation should have an astronomic cost, so no one can afford [these products], yet they arrive at a price that competes with our producers. I feel a very big dissatisfaction in relation to that. (Dan G.)

He continued with a plea not necessarily for the use of local populations, but for varieties that are produced locally, and not foreign hybrids that might as well not be productive for the conditions they encounter in Romania. A chapter in Verdery's *National ideology under socialism* named "Antecedents", reviews the 19th century Conservative program as a "a combination of antipathy to all that smacked of foreign impositions, praise for the "barbarian" in the Romanian past, and worship for that past as giving vital indications for the proper future course" (1996: 39). The history repeats itself today, not as a farce but as resistance against the already-tested massive industrialization of agriculture and against hybridization of identities.

Hybrid seeds are the harbingers of the Green Revolution just like the genetically engineered seeds are those of the Gene Revolution[11]. After successive attempts at industrializing world agriculture, "news" about failures of the past has reached the countries in the periphery. And they react back in attempts to reclaim (or invent) their roots (Friedman and Ekholm-Friedman 2012), and experts in conservation can be read as the output of the drive for the industrialization of agriculture. Their biodiversity conservation initiatives with an ethnic signature came as a reaction to the standardization of crops brought by globalization. At this stage, exploring how the Romanian state configured its agricultural policies and conservation strategies in the last three decades would lead to a better understanding of the national discourse and maverick practices at the Bank, closely analysed in the last chapter of the thesis.

2.3. The state – how does it govern its seeds?

The Suceava Gene Bank was born during socialism and grew up in the capitalist Romanian state. Socialist state-led industrialization of agriculture erased species, but so did the capitalist state. Silvia told me she believed this institution might not have been possible to have

[11] The Gene Revolution is a byname drawing on the Green Revolution referring to the period starting in the early 1990s, with the advent of genetically modified crops cultivation.

been created after 1989 and that there were times when it was very difficult to receive attention, or funding from the government. This might lead one to think about the socialist state as, if not the good, then the more benevolent actor in the story of plant genetic resources conservation. But Mihai Cristea (who was in place from 1987 until 1996) mentions in his memoirs that it took many years of persuasion effort to convince the Socialist Republic of Romania (SRR) of the necessity for this bank to exist, as developed earlier.

A compelling anecdote blurring the apparent kindness of the SRR is Cristea's story about one encounter with the state authorities: in the early 1980s when a state official, gathering preliminary data for the approval on the bank construction, asked Cristea what "the price of a gene" was (Cristea 2012: 107). A colleague technician of his, just to speed up the approval process and bypass explanations "on the value of life", came up with an improvised estimation of a price that was accepted. After this scene, they were both amused by their fabulation, as they believed that genes – or for that matter, life, should not be assigned a price. This anecdote has echoes in the present when it comes to the relationship with the state. Dan S. believes that there is a weak understanding of the Bank from the government, and their collaboration is not what it is supposed to be, laws are frequently only formal and not put into practice. He emphasizes the Bank is the only institution of this sort in Romania and they never had a visit of minister or of a high official. But then he says, if you look at one of the previous ministers of agriculture, Valeriu Tabără[12], he was backing GMOs – what can you expect? He is hopeful though, because the recent years, when on-farm conservation has been promoted at the Bank, can serve as a portfolio to take this action further to the ministry: "those in Bucharest don't buy theoretical stuff. Facts, graphics; they read numbers, not stories."

[12] Valeriu Tabara is also an agronomic engineer, distinguished with gold medal for hemp breeding.

When it comes to the support the state gave to the Bank, there are several reoccurring discontents. But there are positive testimonials as well – they received funding for renovation, and certain parts of the equipment. There is an acknowledgement for the funding received but there is also a deep discontent with the staff cuts and the blocked vacancies.

The relative success of the institution in comparison to the agricultural research stations seems to be founded on very diligent networking skills and personal networking. Even from the planning stage of the Bank, Danela M. tells me that Mihai Cristea's wide researchers network mattered dramatically. These skills, which were continued by the current director, led to various advantages for the Bank. In 1993, Mihai Cristea was contacted by the Plant Resources Committee in Rome and the Bank became a member of this institution. This institution was to pay for many of the Bank staff visits abroad, trainings, collaborations. Danela M. refers to this process of gradual embeddedness in the European conservation institutions network as "constituting our national identity in relation to the plant genetic resources conservation". Their importance became recognized at an international level more hastily than it happened in the national context. But currently, the collaboration with the direct governmental official, the Laboratory director, is a fruitful one since she came to understand and appreciate the importance of the Bank's activity. Through a governmental bilateral project[13], they even took her on a delegation to China, and she came to understand the Bank's activity and importance better.

The aspect recalled over and over again by every Bank employee is the fusion of the Bank with the Central Laboratory. This happened in 2009 when the Ministry of Agriculture had to close departments. The Bank then had its juridical personality revoked and the research code taken. This prevents the institution from applying to numerous international projects. While

[13] A 2 year project (2013-2014) financed through UEFSCDI, a public institution under the Ministry of Education and Science, on genetic resources collection from central Romania and the Yellow River Delta, China.

mentioning this topic, the discussions often shifted to the role the Bank team considers they have in conservation. They see conservationist experts as crucial in the promotion of on-farm conservation; while they recognize the peasant as a central figure in genetic resources conservation, they see scientific expertise as the permanent central actor that structures it. However, the merging with the Laboratory hinders this process. Dan G. reflects on how biodiversity conservation is received at government level and he is surfing through possibilities "I believe that in Romania people are not prepared. They don't care. Or perhaps it's different – there are more flagrant issues, more urgent, and this one stays at the periphery. Maybe in Romania there are so many issues that agrobiodiversity is not that important."

Hardship was stronger during the 1990s; for example, the Bank received a SUV[14] from the government that never worked. Then they got a Dacia from FAO for a Bank through a project, and it had rain getting through it for some years, until the Laboratory bought them a new car in 2014**.** Also, the number of employees shrank considerably: in the 1990s there were 40 people working there, they had 7 greenhouses and I was told that they were cultivating plants between the greenhouses too. At the moment, there are 14 employees left and two greenhouses.

But Danela tells me that compared to the fate of the state agricultural research stations, the Bank was in a somewhat privileged position. Their activity, although successively challenged by lack of equipment, staff cuts, or funding, survived the political chaos of the 1990s and the financial scare of the 2000s. But the 2008 crisis set the Bank in a deadlock: in early 2009, there were two months of uncertainty as to what will happen to the institution. The Bank made several attempts to communicate to the government and make it clear they were not a national agency but a research unit, but they were not taken into account, they were 20 employees and it was not looking like a priority to anyone, as one of my informants put it. Then this was it, the fate of the

[14] The Romanian ARO

Bank was subordinated to the Laboratory and the salaries were cut up to 50%, along with the bonuses. Vacancies are still blocked at the moment.

Beacons of hope for a better future show up timidly in some of the Bank's corners; although politics in Romania put off their enthusiasm frequently, when Daniela P. spoke about Mihai Cristea's initiative in making possible a gene bank in Romania, she compares the situation with Romania's incumbent president Klaus Iohannis' electoral slogan, "Romania of the thing well done". The paradox in which conservationist experts dwell becomes even more visible in this case, as they are the products of the process that they fight against – industrial agricultural practices. Through conservation they oppose the consequences of industrial agriculture, but at the same time there is no clear cut position against modernization in agriculture. It remains to be seen how conservation strategies will transform if president Iohannis' electoral plans of modernising agriculture and consolidating lands succeed.

2.4. High responsibilities on low wages

Another essential aspect shedding light on the relationship between agricultural research and state is the economic condition of the employees in the Bank.[15] This was an issue that was decried by each of my informants in the Bank, along with the fact that the current number of staff does not allow the institution to carry out all the activities desired. Being short of staff at the Bank also means more manual work for everyone and difficulties in transferring tasks as more central personnel is close to retirement: as jobs are blocked, they cannot hire someone to take over the knowledge from the decades-long experienced colleagues. Dana C., the biologist taking care of the in-vitro collection and the seed distribution wants to train someone in taking over her

[15] The number of permanent staff at the moment is of 14, out of which three are biologists, two agronomist engineers, one horticulturist, one ecologist, one chemist, and two laboratory technical personnel, one engineer in thermal machinery, two agricultural workers and one IT specialist. Out of them, seven are researchers.

activity. The person who would like to take over this task - Nuța, one of the laboratory workers - gets a bit over the minimum wage after 25 years of work. Dana C. expressed that "It is slightly weird, having 900 lei a salary after 25 years of work. It is sad. It is sad, especially for someone who works like her, she has a photographic memory…she sees immediately any mistake, anything!" My first-hand experience in working with seeds at EcoRuralis, carrying activities specific to the seed distribution campaign, made me reflect on Dana C.'s story about Nuța. The capacity to handle hundreds of different varieties of seeds, each requiring a specific type of care, is essential both in keeping the seeds healthy and also in having a correct and speedy process of seed distribution.

The seed distribution campaign adds extra-work for a few months every year, for which no salary raises are involved, yet the Bank's conservationists insisted not only to continue it but also to improve it. In the first year, people were requesting seeds via phone, and then they would also ask for cultivation advice. After a couple of years, Danela M. started a website[16] that is interactively built: people can ask for advices about the cultivation of local varieties of plants, and she replies to them with articles. The website was a Christmas present from Danela's son who is an IT specialist. The Bank team was overwhelmed with the phone calls from people asking for agricultural advice, so she took this on the website and spread the word about agronomical knowledge. Danela says that the choice to interact with the community comes not from their job description but rather from enthusiasm:

> Just by chance I moved somewhere near the city, and my articles come from the work that I carry out on a daily basis, from what I am doing with these local populations. It is important for people

[16] The website can be accessed here: http://www.dmurariu.eu/

> to see what you've done, what you've obtained. And they are impressed. I liked this job and when you like it, nothing else matters. I liked working in agriculture ever since I was a kid. (Danela M.)

There was a lot of work during the socialist years, and sometimes people would stay overtime, but they would do it because they loved their job (interview with Saveta, former Suceava Research station employee). Lower-ranked agricultural workers did not have big salaries, but they would suffice to live decently. One thing that doesn't exist today for the workers, and existed in the past was the labour union. Saveta tells me that unions could solve "the housing matter, the gas cylinder matter", even if sometimes with delay – but they would help, unlike today when no-one listens to a worker. She would find it "useful to return to a more organized system [like the socialist one]; now, you're going to the mayor…workers do not solidarize. […] The interest towards people is diminished. During the communist years there was interest towards more people, now everyone minds only their own job." And she believes that there are no chances for unionization today. People old enough to understand the stake in unions, are retiring, jobs are being blocked and young people are not hired so they do not interact with the old ones. This is Saveta's view on the death of the union culture in Romania, and in the individualist post-socialist Romania, she reflects that "all that we have left now is to pray to God for health. Today, our only labour union is God."

But amidst the inconveniences that pertain to remuneration, I learned that there is a sense of responsibility that fuels their enthusiasm. The uniqueness of the institution and the challenging tasks that he has to follow on his own is what keeps Cezar, the IT engineer, working on a salary that is around three times smaller than what he would receive in the private sector. His activity at the Bank exceeds his job description too: apart from maintaining the database, he redesigned the Bank's website, created presentation brochures and in general he comes with new ideas about

how to make the Bank more visible.[17] His job position was vacant for a year and a half before he was hired. The fact that officials such as prime-minister Victor Ponta, at a national fair, took pictures with the Bank presentation brochure created mostly by him gives him a sense of pride. He names his entire extra-mile endeavour a "rebranding campaign" that would make the Bank even more popular, but the director wants it to be more subtle: they would not be able to honour an increased number of requests with 1 hectare of land and insufficient personnel.

Dan S., the ecologist, admits he is not motivated by the financial part either but that the dynamism in a research position, never allowing him to get bored, is the bright side of his job. Not reduced to Dan S.' case, there is a deep sense of responsibility permeating the discussions with the Bank team. Guarding the seeds of the nation transcends the politics of the day. Dan S. concludes the discussion on the Bank's mission: "in fact, what we're doing here is preparing dinner for the next generations." The distribution of seeds is indeed a step further from saving the dinner towards preparing it, but it is still incomparable with the years before 1989, when the agricultural research stations would "prepare the bread for the entire country, [when] the results were extraordinary", as Saveta tells me. Throughout her 20 years of work at the research station, she tells me that she contributed to the creation of "5-6 breeds of wheat, 3-4 of two-rowed barley". She reminisces that the employees of the station were "truly attached" and they can't believe their eyes that the institution is almost dead now. In the following section I will introduce

[17] Cezar added pictures of vegetables from the varieties that the Bank distributes so that people can imagine better what their crops would look like; he created a Facebook page in January 2015 where he shares articles in Romanian and English on the activity of the Suceava Gene Bank, gene banking in general, healthy diets, etc. In his ambition to make the Bank as visible as possible, Cezar even came up with an idea to install webcams pointing to the experimental field "so that people can see online how the Gene Bank works every day. People would need to be dressed in work overalls. It would be nice if there were more employees for the field, you could see many people on the camera. We'll see if we can do it; the idea is good but let's see."

the reader to the decline of agricultural research in Romania, as I consider it to be a key detail in understanding why the Bank chose to reintroduce Romanian varieties in agriculture.

Agricultural research stations

Particular attention to the status of the agricultural research stations is highly relevant in better grasping how certain fields of research came to be downshifted, in order to make room for neoliberal practices between the state and agribusiness companies. In the present, agricultural research stations have a very low production of local breeds compared to the socialist years. This is not a singular case in post-socialist countries; one example is Latvia, where traditional seeds and seed breeding also became "irrelevant to the state" (Aistara, 2014: 5). The older employees in the Bank, some of which also used to work at the Suceava Agricultural Research Station, frequently evoked the fate of these institutions, which after 1990 were left by the state in a process of slow death. At the same time, foreign agribusiness companies have been accommodated in parallel with an encouragement of large scale agriculture. It can be claimed that capitalism is the order, and not the protective state. But the capitalist machine is not the mere free, deregulated market; it is the alliance between state and capital (Braudel cited in Friedman 2013). The apparently absent state is actually present, a key framework assisting the interests of the capital: as Peschard (2009: 64) puts it, "we are in a world of re-regulation rather than deregulation."

Research in agriculture had the fate of the general field of research in Romania - the state reduced or withdrew support, while private actors, international and domestic, took over (Verdery 2003). But in the 1980s, when Dana C. was working there, the Suceava Research Station was very successful and active. After 1990, experts on crop breeding either left for the

foreign companies which have laboratories in Romania, either were old and they do not exist anymore. Young researchers are not hired since salaries are hopelessly low.

The research law in Romania appeared very late after the revolution, in 2003[18], and the agricultural research law was modified only in 2009[19] given the corruption in the country at governmental level. The ambiguity in the latter law made room for land speculations to thrive – all the state agricultural research institutions had land on which they were carrying out their experiments, and after 1990 they were taken over by diverse actors. One example that Danela M. brings is the one regarding the Constanța Agricultural Research-Development Station, where former president Băsescu's brother fragmented the state institution and grabbed the lands in the end. And during the time the research law was delayed, many research stations were closed down. Along with them, numerous germplasm collections vanished – some of them deteriorated, some of them are thought to have been taken by the engineers in the private companies where they found jobs after leaving the research station. These cases of "bio-piracy" (Hann 2006: 119) arose as agribusiness companies started to capitalize on genetic material conserved or bred by state institutions. The research stations that still survive today saw a drastic decline; if in 1995, the Suceava Station had 400 employees, out of which 30 were research engineers, in the present it has 30 employees out of which 3 are research engineers, as Danela, close collaborator of the Station, tells me. And the slow death of the research stations happened through their special position among public institutions: they are self-funded, meaning that they receive very little support from the state, and outside that, they need to support themselves by selling seeds. But in the context where there are minimum personnel left, the institutions cannot outlive the post-

[18] Law no. 319 8 July 2003 (http://www.ucv.ro/pdf/invatamant/legislatie/20121121_LEGE_319_2003_statutul_personalului_de_cercetare.pdf)
[19] Law no. 45 20 March 2009 (http://www.asas.ro/wcmqs/noutati/legislatie/ROF%20-%20Academia%20de%20Stiinte%20Agricole%20si%20Silvice.pdf)

socialist state indifference, as they need substantial workforce and resources for production. Plus, if they produce a new variety it needs to be registered at the State Institute for Variety Testing and Registration[20] and the costs need to be supported by the research station also. In contrast to the stations though, the Gene Bank was privileged when it came to state support: at least the minimal funds have almost constantly been provided.

Danela also speaks about a certain kind of envy that exists between the Bank and the research stations, since the latter had to be concerned for their salaries, while the former had only to think about how to conserve their germplasm. A better communication between the Bank and the station would have saved a lot of germplasm, Danela reflects: "perhaps we should have visited them directly instead of sending letters…it is also about our lack of cooperation, and their disinterest. And I strongly regret this, because I am an agronomist, and my regret is that a lot of material has been lost. It is true that we became very popular throughout these years with the seed distribution, but at the same time I regret that very few breeders need us"; and the better communication would have also perhaps translated into a revitalization of agricultural research in Romania.

Perhaps it is not far-fetched to understand this decline in domestic agricultural research and in creation of local varieties as being the suitable background for Romania's entrance on the globalized food market, which, as this research shows, led to the standardization in taste and massive imports of food. The post-socialist years in Romania meant increased privatization, primarily of land and industry, but also of research.

[20] Commonly referred to as ISTIS, the state institution appointed with "the technical examination of the varieties which apply for the registration in the Register of Varieties published in the Official Catalogue of Varieties and Hybrids Crop Plants in Romania." (www.istis.ro)

Up to this point, the thesis outlined the big picture necessary for the analysis of the conservation strategy practiced at Suceava. Having the background set, it is possible now to move on to see how patriotism appears in the Bank experts' discourse, and more specifically, how does a gene bank's seed collection become an object of patriotism? This question is even more intriguing given the lack of interest by the state in agrobiodiversity conservation outlined above. Also challenging the norm is the insight conservation is done by experts, whose practices usually fall in the realm of presumed official, value free science (Brahy and Louafi 2007).

2.5. The Suceava Gene Bank collection: a horticultural identity of the state

Here I will give an account of how the nation became relevant in plant conservation, tracing the presence of a national ethic in biodiversity conservation and also analyse the meaning of tradition in the discourse of the experts at Suceava. I am going to explain the concept of "national nature", which captures the intermingling of the human-built ideas of nationalism and nature. Lastly, in this key I will look particularly at the national collection of plant genetic material at the Bank and the patriotic discourse around it.

National nature

The dawn of national initiatives for conservation goes back to the nineteenth century, where they were related predominantly with the scenery that was considered picturesque and representative to an identity of a region - only in the late 1930s did the concerns for biodiversity entered the stage (Radkau2002). The birth of conservation initiatives was contemporary with the creation of nationalist ideals of the 19th century, thus nationalism and conservation frequently intersected. Nationalism meant that everyone had a nation, which on a larger scale, it was homologous to belonging to a family. One comes to belong to a nation non-conditionally: "you belonged to your own nation 'just like that', by virtue of your own corporeal nature, which is

conceived as part of a collective nature" (Radkau 2002: 226-227). National identity frequently fed into descriptions and categories of the "natural history" of a region: the commonalities and the related differences of the flora and fauna of a region. As an example, Norway, when it separated from Denmark in the nineteenth century, picked a national identity based on the presence of mountains and trees, so different from the flat Danish land, which made the Norwegians "the men of the mountains", also different from the Danish people (Radkau 2002). Romanianness also found numerous articulations of this sort. Just as an example, being Romanian, as coined by philosopher Lucian Blaga in the interwar period was seen as an expression of a stylistic matrix giving "a certain sentiment of destiny" (Blaga 1994: 125) that was homologous to the undulated geography of Romanian territory. He was describing the Romanian popular soul as configured by the successiveness of valleys and hills.

Comparable to national flags or national days, the national genetic resource collection can also serve a symbolic regime that creates continuity in the life of a nation (Elgenius 2011). At the same time, it is one of the symbolic devices that make the state socially effective, as in Ferguson and Gupta's analysis. Certainly, the practical part in growing local crops most of the time surpasses the symbolic one – both in the case of conservationists and cultivators, but these material attributes are merged with the symbolic ones in what I found at the bank as the "notions of sameness and oneness" (Elgenius 2011: 187). Similarly, the image of crop diversity as being characteristic to a deeper notion of Romanianness echoes the arch-motive evoked in national school books on the Romanian territory. Romania is synonymous with the "carpato-danubiano-pontic space": the Carpathians are the heights, the Danube is the plain and the big river, the pontic[21] space is the Black Sea. This merging of diverse geographical expressions happens on the territory of a single country, and it is understood as the background for the Romanian "oneness",

[21] From "pontos" (Greek) meaning "sea"

especially on linguistic grounds by the Latinists during the Austro-Hungarian Empire, claiming Transylvania as Romanian land, reinforcing a notion of Romanian "national essence".

The form of ethnic attachment I encountered at the Suceava Gene Bank also frames the national collection of plant genetic material as an instance of identitary glue, similar to the Comaroffs' concept of "horticultural patriotism" (Comaroff and Comaroff 2012: 12), defined as the particular attachment for indigenous species. In the 2014 interview, Silvia referred to the plant diversity conservation and yearly distribution of traditional seeds to peasants as "restoring a segment of tradition". Also, she decried the reduced interest of the state in on-farm conservation as "feeling ashamed of our own tradition as Romanians". The Bank team and some consumers display horticultural patriotism as the prioritization of the local flora. In the Comaroffs' South-African context, it is seen as an allegory for nation-building; in my case, I understand horticultural patriotism as a reaction towards the apparent loss of identity in the case of Romanian crops. Furthermore, press articles and interviews with the Bank director suggest that conservation strategies feed into a post-modern anxiety of loss of tradition, roots or identity.

In some of the cases I exemplified above there are various non-human actors which come to be instrumented in the construction of a national identity. If the dawn of nationalism was primarily concerned with territory as a basic component of the nation-state, present day globalization brings new, more sophisticated challenges to national identity. In the light of the research so far, we can understand national seeds as being under siege. The next section explores how standardization of seeds coming with globalization can yield a patriotic attachment among conservationist experts at Suceava.

Patriotic attachment to seeds

The seeds in the Bank's collection come predominantly from expeditions in Romania; apart from Cristea's old corn collection, there are the seeds which have been collected from 1990 onwards. The Bank stores mostly local varieties and their wild relatives, and they are not very interested in conserving hybrids. The collection started with the corn samples gathered in the 1960s, but after 1990 yearly collection expeditions occurred, some of them in collaboration with gene banks abroad or within international projects. When the Bank collects new samples, they try to get material with Romanian origins, or from regions having similar pedological and climatic conditions, so they are suitable for the Bank's experimental field.

Silvia believes that people think in the first place of the quality and taste of their crops rather than of any cultural aspects. But in her case, she says that she often thinks about the cultural identity of these local populations, along with arguments of a more practical nature:

> When I talk to the people asking for seeds, I make a plea for what is Romanian. Even now when the distribution is closed, they ask us where they can buy seeds from. And I tell them to buy local varieties and not hybrids. Because if it is a hybrid, you can't use the seed next year. I beg them to buy Romanian products, creations of the Romanian researchers, for these stations to have a better life, to be able to develop. I really wish this for them and I am a convinced patriot, and these are not just words. I am the same in what I say and what I do, and I trust that I have a patriotic behaviour. I believe this is what I am [a patriot]. (Silvia S.)

The pride the Bank takes in its seed collection is also related to the situation in which Western Europeans countries' agrobiodiversity is. Many projects in which the Bank has participated in and received important funding over the years are international ones, supported by other European governments, such as the Swedish government. Their involvement in these

initiatives is explained by Dana C. as being the realization of the Western countries that Eastern Europe is on the verge of losing old crops, as they did long ago. Since they understand the importance of these varieties, they give a hand to Eastern countries not to do the same mistake they did. Dana recalls being in Maramureș[22] in a meadow during a collection expedition, having a Swedish specialist in the project telling them "in this meadow there are more species and varieties than in all of Sweden." A seed collection or the plant diversity of one country can become a part of one's country identity. Billig refers to national identity as coming with "flattering stereotypes of themselves, and demeaning stereotypes of other nations" (1995: 65). In this case, these are not widely circulated stereotypes, but rather more "specialized" ones, in the vernacular of the conservationists.

But as much as conservation, and more specifically on-farm conservation is related to tradition and identity, my informants also refer to its shifting character. For Dana C. on-farm conservation is strongly related to tradition, yet tradition in agriculture is formed over time: she says that almost nothing was here from the time of the Dacians, and "people bring this or that and add a new species or variety which adapts; then it finds a niche and can be used in the same manner as the local traditional species." Conservationists seek to save the character or identity in varieties but the question of how "natural" or "traditional" crops can be is worth pursuing. There are "degrees of naturalness" (Castree 2013: 11), since most of the staple crops are imported plants, which were cultivated and adapted to new climates. Hence the traditional is also the subject of a gradual and changing process. Even when imported plants became „naturalized", they are constantly open to further changes. The most obvious example is that of allogamous plants, which reproduce through cross-fertilization. If alien pollen (from intra-species varieties) reaches the plant, the outcome will be a different one from that which was sown. Also, the

[22] Region in Northern Romania

integration of what can be called 'traditional' nowadays had a difficult entrance in Romania: corn, the species that led to the creation of the Bank, was imported in Eurasia from the Americas[23]. In the nineteenth century, imbalanced maize cultivation and consumption led to both soil depletion and harmed the people with pellagra, a condition caused by B3 vitamin deficiency which led many of the Romanian peasants to commit suicide at the turn of the centuries (Radkau 2002). Pellagra was a consequence of the partial importation of corn (without its traditional preparation method in Central America), and suicides are related to the "horrible and mysterious" (Hacking 1990: 225) nature of pellagra at that time. Yet at the moment one can easily find traditional Romanian recipes that include variations of cooked corn. Now, if tradition is acknowledged as a process, depending on a context, the following question arises: what is tradition for the team working at the Bank and into what other processes does it tie into, as to become necessary in an expert discourse?

[23] Corn was introduced in Europe at the end of the fifteenth century, by Christopher Columbus, from Central America. Its entrance in Romania is still debated, yet the first document referring to corn in Romania comes from the seventeenth century. (Murariu et al., 2012)

3. Horticultural patriotism

This chapter will focus on the meaning and importance of tradition at the Suceava Gene Bank, which, I argue, contributed to the choice of the experts to practice an alternative conservation strategy, the dynamic one. Alternatively, I analyse a similar seed distribution action carried out by a grassroots association, EcoRuralis; eventually, I explore how the cultivators perceive these actions in relation to the Bank's and EcoRuralis' discourses.

3.1. Tradition in the discourse of the Suceava Gene Bank

In each of the interviews I conducted with the personnel in the Bank, I received a detailed description of their activity. Every section – collection, evaluation, multiplication, phytosanitary control[24], germination control, conservation – has a set of scientific standards on which they base their practices. How do seeds enter the collection? They do not enter directly, and in fact they have a complex journey until they get in the conservation drawers. First, the sample is sent for phytosanitary control, and then the germination of the sample is checked. If germination is under 85%, the sample is sent to the experimental field for regeneration. If the sample has proper germination, but the number of seeds is small, it is also sent to the field, for multiplication. For the larger seeds to be added to the collection a number of 2000 is necessary, and for the smaller ones, and the wild relatives ones, 10000. The active collection is subjected to viability tests every 5 years, a test showing whether the seed is capable of developing normal root and plant. Chemist Petruța P. shows me a fridge filled with Petri dishes and folded filter paper. She explains to me that for each variety, there are specific germination conditions and they are described by the International Registry from the International Seed Testing Association. The paper rolls she handles while explaining to me reveal thin, bright-green plants signifying a successful batch of

[24] The process certifying that the plants do not carry pests or disease

wheat. She rips the growing plants off one of the papers, and only 5 non-germinated seeds remain: the germination is of 95%. Now, the seeds are scientifically proved viable and ready to be conserved. And these are all standards agreed by experts; Dan G. explains that all practices are set by IPGRI and that "we follow their standards, we're not going to invent others. Even our minimum number of seeds follows some standards; they did research in the field, they know why we need a certain number of seeds."

But in every interview, from a point on, discussions also shift to references to tradition, cultural identity of the region through its crops. The scientific discourse that has acknowledged the ongoing genetic erosion of crops merges with references to nationalism, patriotism and national identity. Tradition takes the shape of identity, as national security, as valid knowledge. Dan S. makes a link between food security and the Bank's role:

> Tradition is tradition. As long as the crops have been maintained for hundreds of years, and people lived off these things, I think this is of more value than now, when you put all kinds of plants in the ground and you cannot save their seeds. The purpose of the bank is this one, food security. Food security is part of national security of each state. When you don't have vegetables coming from Bulgaria and Turkey anymore, let's say that no one has them, what do you do? (Dan S.)

Traditional seeds signify valid knowledge and national security in his view, but at the same time tradition is taken as a characteristic of the continuous, organic nation, as opposed to the "forced" one evoked by imported food: authenticity and food autonomy become dependence and a denial of organicity (Verdery 1996).

But certainly they acknowledge the regional differences, as there is no necessary uniformity at the country level when it comes to tradition. To paraphrase Castree's degrees of

naturalness, my informants acknowledge there are degrees of "traditionalness" in seeds. Dana C. says that "Now we say traditional…how traditional, in Dacians' times there were no tomatoes. Tomatoes were introduced in the nineteenth century and got naturalized here. And we have probably selected them, because many people who come to Romania say that they are tastier. But probably they have eaten only from the hydroponics[25]." Tradition is equally acknowledged as a construction by the Bank team, but one which ties into the environmental conditions of Romania, a notion similar to that of the terroir. Barham defines the latter as "an area or terrain, usually rather small, whose soil and microclimate impart distinctive qualities to food products" (2003:131) in analyzing AOC labeling. Although initially referring to wine production, terroir can be extended to other products as well; in this research the terroir of different regions in Romania gave shape to what I understood as seed-locality, on which basis one can make cultural claims, understood as identity: Dan S. describes on-farm conservation as "one country's identity", as the local varieties cultivated there and the way it is done is unique to that region. Dan G., although sceptical towards the practical ability of traditional agriculture to generate food security, speaks in general terms about the importance of tradition in the life of a nation as an element of continuity supplying identity to a country:

> [tradition] is very important. If we forget our tradition, we forget our ancestors. The idea of tradition is very important for us all. Regardless of the fact that we have communities of different nationalities in the country, we should keep our tradition. We will be in a united Europe where borders will vanish. It is something very important although I don't think that Romanians care anymore. Communism destroyed a lot. (Dan G.)

[25] Hydroponic gardening is the "the process of growing plants in sand, gravel, or liquid (or other mediums), with added nutrients but without soil." (www.hydroponics.com)

Along the same lines, Daniela P. believes that traditional knowledge is central, in agriculture and elsewhere alike. Knowing your roots guarantees a rectilinear trajectory, and 'when you lose your origins you're floating somewhere in the air […] and these roots, every country has them in a way." The conservationists' reclaiming of tradition seems to tie into the Friedmans' view of postmodernity understood as an instance where "culture has liberated itself from place" (Friedman 2013: 246). This is apparently happening in the present case, and Suceava conservationists oppose this fleeting instance of culture. The urge not to feel embarrassed by one's own tradition is an attempt at reclaiming national tradition and putting culture back in its place. At the same time, a globalized world is not fully rejected – Silvia affirms at some point that "we are not against industrial agriculture, it is impossible without it, but we want these two together" - but the ambiguity that globalization seems to instil at the moment is opposed to by the Suceava Gene Bank.

Another aspect that stands at the basis of the Bank's ambition to reintroduce local populations refers to productivity. Although traditional varieties have a lower productivity than the modern varieties, the Bank holds that these products' nutritional qualities are superior to the industrial ones. Moreover, the agricultural systems in which they are cultivated have a reduced impact on the environment: they are more resistant, hence chemical fertilizers and pesticides are necessary on a lower scale, or not. The Bank is primarily a promoter of traditional agriculture; however the employees are aware that traditional agriculture alone would not be able to provide the global necessary food production. Dan G., although pro-cohabitation of industrial and traditional agricultural systems, criticizes the neo-Malthusian approach to food shortages which claims that not access, but production will sort global hunger:

> This word, 'food'… do you know why humanity suffers from food scarcity? I can tell you. All are lamenting that Romania does not produce as much as it consumes. It is a fat lie and who says this, is either bad-intended, either non-informed. It is not true. We produce more than we can consume. But one has this (he makes a gesture with his hand showing a small segment) and another has this (he opens his arms). Here is the difference. It is not related to production. Who keeps saying that we need more production so it can suffice for people's need – and I've seen this at Bioversity – this is a bla-bla. The problem is not here, it's somewhere else. And I don't know why they don't admit it.[…] And it's everywhere, not only in Romania, but in the US and Australia as well. (Dan G.)

Dan G.'s cry depicts the successive waves of privatization in various spheres in post-socialist Romania. Arable land, forests and agricultural research and their land were all subjected to privatization and they eventually entailed increased inequalities and devaluation of labour (Verdery 2003). This is also symptomatic for the neoliberal economic model, which in the name of an efficient economy, promotes ownership claiming that this would incentivise people's performance (Hann 2005).

This analysis led me to understand the presence of tradition as a consequence of the disruption in what is perceived as an organic mode of producing food – pragmatically and nationally. The state does not endorse food autonomy, but the opposite, and this sets an alarm on the cultural continuity that the conservationists cherish. Furthermore, I will explain how in practice, the Bank's patriotic discourse becomes dynamic conservation.

3.2. Dynamic conservation – an alternative conservation strategy in a gene bank

A close description of the alternative conservation model practiced at Suceava singles out material and cultural aspects that render the distribution of seeds to be a statement against the loss of tradition. Along these lines, Silvia tells me she makes "pleas on the phone for traditional varieties, for keeping the individuality of the Romanian villages, so that people can produce food for themselves […] we should return to traditional activities, which bring a certain joy." At the same time, there is an implicit criticism towards ex-situ conservation practiced alone, in discussions with some of the Bank's personnel. The classical approach in gene banks is concerned predominantly with genetic diversity conservation, and the institutional interest is lower in conserving biosocialities – what van Dooren (2009) calls complex, more-than-human agricultural environments. Nevertheless, the Bank has taken the extended approach to crop conservation in order to ensure that the practices and tradition are also kept alive through its seed distribution campaign. The Bank is funded by the Romanian state, but the support it receives from it has been rather reduced over the years, as I developed in previous section, and the seed distribution initiative that goes beyond the Bank's official requirements springs from the bank personnel's commitment. A central aspect of my research lies in this tension between a dynamic conservation strategy that addresses the importance of culture as well, and the reduced support from the Romanian state in on-farm conservation. In this section I will trace the emergence of the seed distribution at the Bank in relation to the scientific and cultural arguments of the Bank team, as well as in relation to the national socio-economic and political climate of Romania in the last decade.

The idea of the distribution campaign appeared in 2008 as Silvia S. was giving an interview for a health magazine[26]. She was mentioning that the Bank conserves local populations of plants, which are tastier and healthier; the interviewer asked whether there was a way for the public to get hold of seeds from these crops, and Silvia spontaneously answered that people can call the Bank and get small samples of seeds. Introduced to this idea of distributing seeds, Silvia recalls that the majority of her colleagues were sceptical about its importance, and so were the authorities. She had a deep belief that this activity should be carried out though; she recalls the general reaction to the idea among the Bank team:

> 'Why do we have to do this thing, we have enough things to do…we conserve, and Silvia gives the collection away, she's throwing it away, this will have no echo, etc'; but I had the belief that this was a good thing, and from the very beginning I put all my energy into this. I the first years when the requests were coming via phone I was all day on the phone, 8 hours and sometimes even more. (Silvia S.)

She wanted to close the circle: to give to the community that which came from them, as there is little value in merely keeping the seeds frozen. Ex-situ conservation is a static method; plants will stagnate at the evolution level they were at when they were taken from their habitat. This conservation strategy is known as 'dynamic conservation'. When the engineers at the Bank explain the dynamic conservation strategy, often they display an understanding of humans as being an equal part of nature, just like the other organisms, emphasizing that humans evolve together with the environment around them. Silvia expresses that we should be in constant check with the environment, "otherwise nature revolts, and puts us back in our place; and I believe that this is correct". Then their dynamic perspective on conservation is informed by the

[26] Formula As article: http://www.formula-as.ro/2008/824/spectator-38/dr-biolog-silvia-strajeru-o-comoara-salvata-semintele-taranesti-9756

acknowledgement that humans and the external world are inter-related, a view that echoes Foster's concept on coevolution that signifies a Marxist understanding of nature as part of humans, while humans are also part of nature. They can't be separated, once nature allows humans to live. Aware that Marx is more often seen as an anti-ecological thinker, focused on production and the control of nature rather than an ecologist, I find Marx's conception of inter-relationality between humans and nature very useful in this case. At a first glance, biodiversity conservation can be understood as partly the awareness that nature is man's "*body,* and he must maintain a continuing dialogue with it if he is not to die" (Marx 1932: 31) - the Marxist call for awareness of the inter-relationality between humans and nature (or better said, their inseparableness). But the conservation act in itself is a response to the increasing estrangement of humans from nature.

At the Bank, they do not undermine the crucial importance of frozen seed collections, since this is the safest method of conserving genes, but emphasize that the critique of mere genetic conservation is necessary in order to reinforce the gap that is born between people and their social practices on the one hand, and genes as presumed self-sufficient entities on the other hand. This critique on mere genetic conservation draws the attention to the nature of capitalist disembodied practices: biodiversity is set outside its relational environment while, in reality, agricultural environments gather humans, plants, animals in a very tight relational web. Agricultural environments are par excellence social and can't be reduced to genetic material only (van Dooren 2010; Muller 2014). Plants and seeds are made of genes, but their sum goes beyond that: these clusters of genes are socialized and become entities that carry with them "specific ways of life" (Haraway 1997:89), with no way back to the mere genetic aggregate. In the case of the Suceava Bank, the specific way of life attached to the traditional seeds is articulated through

the merging of the scientific and cultural arguments around the dynamic conservation strategy. Furthermore, mere cataloguing and freezing seeds without further dissemination action fits into Latour's "material inscriptions" (Latour, 1986: 18), the tools that make things appear as real (such as statistical reports, plans, manuals, catalogues, etc). The case of gene banks is similar: cataloguing and storing genetic material can confirm their existence, although they might not get to be used at all. They frequently are not integrated in agricultural communities and are difficult to access for farmers. This is where the cultural arguments come into the stage in their discourse on the alternative conservation strategy. Because dynamic conservation conserves taste, practices, specific Romanian crops – meaning culture, and culture is here the equivalent of tradition.

3.3. EcoRuralis: the grassroots conservation project beyond the nation

Here I will look at a similar distribution initiative, where the motivation does not lie in the attachment to tradition, but is rather being plugged into the international discourse on food sovereignty. Distribution of traditional seeds and the promotion of on-farm conservation can have a patriotic support, or, as this alternative case shows, it can be participatory and based on the food sovereignty discourse.

This is happening in Cluj-Napoca, initiated by the peasant network EcoRuralis and the University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca (henceforth USAMV). EcoRuralis' activity started five years ago and they expand based on crowd funding, donations, international projects grants while rejecting help from the state. The joint work that started in 2011 is a successful example of collaboration between different levels of expertise and different discourses. EcoRuralis is a grassroots organization, with a predominantly activist stance, and USAMV is, as expected, a research institution, run by experts who prepare future

experts in the field of agronomy. In professor Aurel Maxim's words, "this is participatory research: the scientist works together with the practician, each with their own practices, which can be harmonized." They have had partnerships with a few farmers across the years, and EcoRuralis refers to them as being not only pragmatic subjects, but also political ones. Their project has a defined activist purpose – that of promoting food sovereignty – but at the same time it is a statement against the ivory-towered scientist, whose practices are separated from those of the practician, as professor Maxim puts it. In their partnership, the two actors practice a certain division of labour – EcoRuralis plants and harvest the seeds, and they also distribute it. But the whole process is underlined by the presence of two USAMV professors and the access they give to equipment, such as conservation cells, greenhouses, molecular analysis and expertise.

As I had the chance to conduct an in-depth interview with Ioana, the agrobiodiversity campaign coordinator at EcoRuralis I understood that even though their seed distribution campaign seems very similar to the one carried out at Suceava, it differs in some essential aspects. I was told that they do not see the seed distribution as a purpose in itself, but rather as a means to politicize peasants in Romania, and facilitate their transformation in more autonomous actors, able to intervene in decisions on food production and land use:

> We want everyone to have direct access, without constraint, to traditional seeds. Sovereignty does not necessarily refer to autonomy, but to the ability to make decisions on your practices. You have to be the main actor. An informed actor, one who wants to continue food sovereignty. Sovereignty is a right and a responsibility. […] in my opinion it is not about national identity, it is about who can make decisions. (Ioana)

But going deeper in their choice to also distribute local populations of crops mainly, I am told that this is a symbolic one, which can be better understood by people, "it represents that seed

that you can re-cultivate". This is central to the discourse on food sovereignty – peasants having access to seeds that can be saved from one year to another, bypassing the dependence on yearly purchasing of seeds from biotech companies. Kloppenburg argues that "'food sovereignty' must necessarily encompass 'seed sovereignty'" (1989: 1221); EcoRuralis picked up this tenet intuitively, as Ioana expresses. A comparison which echoes Romanian pastoralist tradition, she tells me that EcoRuralis is against property rights on seeds as "a seed is like the popular ballad. It is of the people, it belongs to the peasants, to those that for over 10000 years breed crops."

The work of the EcoRuralis-USAMV partnership is not accompanied by the same patriotic discourse met at Suceava. Scientific arguments for crop diversity conservation are underlying both initiatives, but they part ways when it comes to the symbolic meaning of traditional seeds or traditional agriculture. Rather than "tradition", "identity", at EcoRuralis I meet "food sovereignty", "efficiency", "syndicalism", "politicization". Ioana tells me that tradition is something very difficult to assess since during the socialist years a lot of peasant knowledge was lost, but that there are threads that outlasted the successive changes on agricultural politics in Romania. And despite the fragmentation of the land, or the indifference from the state towards small-scale farming, "peasants are conservative and they lean towards nationalism, but we're striving for [the network] not to become a nationalist thing."

I understand the EcoRuralis discourse on crop diversity conservation as transcending a national ethic, being rather fuelled by pragmatic and political convictions. This paragraph in McMichael's account on the history of the food sovereignty movement captures accurately the pragmatic localism of the Cluj-Napoca association: "Karl Polanyi anticipated food sovereignty when, observing competitive pressure on European producers from cheap New World grains in the initial food regime, he remarked: "it had been forgotten by free traders that land formed part

of the territory of the country, and that the territorial character of sovereignty was not merely a result of sentimental associations, but of massive facts, including economic ones" (1957:183-4)." (McMichael 2013: 2). But while the two conservationist initiatives frame their actions differently, they appear to react to similar national and global phenomena affecting agriculture: uniformization of seeds, products, and taste.

The purpose of this analysis was to understand whether the "national nature" that I explored in the first chapter through the eyes of the Suceava Gene Bank accompanies other seed savers as well. It is visible that a form of localism exists in the case of EcoRuralis as well, albeit it is driven by pragmatic reasons, as a reaction to state politics detrimental to ecological, small-scale farming.

3.4. How do cultivators relate to tradition?

In this last section I bring forth the voices of those who use the traditional seeds that the two conservationist initiatives promote. The aim is to see whether the concerns and convictions found in the two discourses I analysed so far – the traditional one and the food sovereignty one – can be seen among the cultivators as well. In other words, I inquire how cultivators of traditional seeds react to the consequences of the withdrawal of the state from agriculture.

My informants are urban and rural cultivators alike. There are two large opposing tendencies among the peasants: those who stick to their land and practices, and do small scale, organic agriculture, and those who, because of the scarcity of profit from their land, give up on agriculture and either move to the city or abroad, or they rent or sell their land. Lewontin speaks about the historical possession of "two powers that stood in the way of the development of capital in agriculture" (Lewontin 2000). The first one was the possibility of choosing what is grown and in which quantities; literally it was a rather pure form of owning the means of

production. The second one refers to the ability of the farmers to produce their means of production themselves. Here I focus on the latter category, and their perception of tradition in agriculture. In the cultivators' accounts, matters of distrust towards industrially produced crops that threaten health have been primarily emphasized.

A vignette provided by professor Maxim, when I interviewed him in the summer of 2014, captures the dynamics behind those who choose to switch to eating or cultivating ecologically or traditionally, and deserves to be quoted at length:

> One of the ladies who make ecological bread in Sibiu[27] – do you know how she got converted [to ecological agriculture]? She was in Hungary; working in a greenhouse for some years. At the stock of the tomato, they were injecting a solution that would make the fruit red in two days. Then that lady said "I don't want this anymore". I want to go back to my county and make my own food, healthy food. Many farmers don't see anything but profit. They don't care what happens next, what impact their products have on the consumers' health. I was stupefied, now I am revolted. For example I was recently in Arad County, in a parish where there is vegetable production. People told me that they have friends who do not consume what they sell at the market. There was this garden, on one side the spinach was very well developed, it was dazzling. And he said 'no no no, not from there. That one is for sale. It is very dangerous.' And you see, no one is monitoring these things. This is why ecological agriculture is the safest – it is monitored. I don't mean to say that there aren't attempts to create fakes there as well. But there is an inspection organism that monitors, that certifies. It's something else. (Aurel M.)

If read in the light of the analysis this thesis provided throughout the thesis, the above captures the different relations that led, in the case of the Gene Bank, to consider traditional seed

[27] In Hosman, Sibiu County, there is an ecological bakery

distribution as an adequate act of resistance. The consumers resist to industrial food produced abroad and in their country, and the conservationists lend them a hand in this.

Not only conventional industrialization of food is resisted, but also genetically modified organisms (GMOs) appear frequently as matters of concern. Against the scare of GMOs, the Romanian origin of the seeds is often brought in as the safe space in the realm of seeds. One of the letters received at the Bank from people who asked for seeds from their collection, says: "I am a great lover and consumer of our Romanian vegetables, and I respect you for the work you are doing in keeping these seeds which are truly Romanian, unmodified genetically" (D. I.). Also, pragmatic, health-related concerns and reactions against GMOs are voiced out as well: "my name is […], I am 50 years old and I live in […]. I found you on the internet and I am interested in what you advertise. I would be interested to get hold of vegetable seeds that are not genetically modified, as I am ill and I need food that is as biologically "clean" as possible...and I would like to produce my own food." At the same time, the Bank's discourse was echoed by one retired teacher from southern Romania who asked for "traditional Romanian seeds to be reintroduced in culture" in his village.

Also taken into account by conservationists is the fact that people are supra-saturated by the products they buy from the supermarket. Silvia talks about the short-lived mirage about imported food that people in Romania have gone through: for a while, people believed that anything foreign equals better. This "fashion", as she calls it, can be unmade as it was made; but if the experimenting time is too long, many varieties can be lost. She observed that the "illuminated" cultivators are usually not moved by the impact that chemical agriculture has on soil, pollinators, other species, etc. but they think about their health and their children's. Another informant – Cami, urban gardener in Cluj, referred to her preference for traditional seeds and

ecological products as "a matter of local economy, rather than local culture." Also sometimes equally important is the cultural factor – "the majority have this nostalgia for varieties kept from their parents, having a different taste, categorically have more resistance, are more robust, were cultivated in a traditional agricultural system which means more health both for the environment and for the consumers." Lili B. is one of the nostalgic cultivators, saving traditional seeds for over 30 years. She behaves like a miniature gene-bank: she is saving around ten varieties of tomatoes, and other vegetables for decades, and some of the varieties come from her father, who was a gardening enthusiast. Altieri argues that traditional agricultural systems are "in-situ repositories of genetic diversity" (Altieri 1999: 292), and this is what I found in Lili's garden in Cisnădie. Her motivation is as much related to taste and passion for gardening as it is to distrust in imported food; she tells me her activity is the "safe way to get rid of these stupidities from Holland (referring to imported tomatoes)."

The above accounts confirm particularly that there is a de-legitimization of the WTO-based food regime (McMichael 2013), but at the same time a de-legitimization of the Romanian state occurs as well. The lack of interest of the state in ecological agriculture, research, or initiatives concerning healthy consumption patterns are acknowledged, while people put their faith in institutions like the Bank, or in the self-organization of the peasants. One of the cultivators of traditional seeds replied, when asked what his knowledge was about crop diversity conservation in Romania, that "I know it's just theory. And this is enough to know [referring to state-supported conservation]. And related to crop diversity conservation – the phenomenon produces spontaneously, involuntary, meaning that people in the villages, not having access to resources, carry traditional methods further, which implicitly conserve biodiversity. Anyhow, this is also something close to disappear, because of the natural cross-pollination between two

neighbouring plots of land. Concerning the influence of the state in conservation, from what I know is almost null" (N.A., 30).

In this section I analysed the manner in which cultivators of local populations perceive the idea of tradition in agriculture, as well as how the distrust towards the state is expressed. Their choice to cultivate the food themselves is framed as a lack of confidence in industrial food chains, and in this way they become receptacles for the two discourses identified among conservationists, the one related to Romania tradition and the food sovereignty one.

5. Concluding remarks

This purpose of this thesis was twofold; first, I sought to analyse how the national collection of crop genetic material can become a patriotic object in the conservationist experts' discourse. Secondly, underlying this analysis was a critical engagement with the state presence in agricultural research and policies, showing some structural tensions that undermine domestic research in agriculture. The conservationists – institutional or grassroots – expand their activities in spite of the contradictory signals that come from the government. Still, crop breeding in Romania is massively ignored and the supplies that could be produced in Romania are replaced by imports or agribusiness off-shore laboratories.

This research shows how crop diversity conservation can be understood as both a scientific and a socio-cultural act, and if looked at particularly in relation to state support, it can be both a political and economic act. I have identified the motivations configuring dynamic and on-farm conservation as being, again, two-fold. In the first place, at work are the responsibility of the expert understanding what is at stake if genetic erosion is not monitored and confronted, and also a responsibility that comes with belonging to a specific country – the patriotism emerging from being situated in one's own "national nature" (Radkau 2002). On the other hand, the maverick conservation strategies are a reaction to standardization in taste, varieties, and practices, which are ultimately perceived as an assault on one region's identity and also over nature as understood by the team at the Suceava Gene Bank. Or, alternatively by EcoRuralis, as an assault over the dignity of the peasant. The outputs can be traditionalist or food sovereignty discourses; and the consumers pick up on one of the two, or, also led by distrust towards the

state, put their hopes in certification and non-governmental institutions. And the cultivators of traditional seeds can become paradoxically the radical agriculturists of the present day.

This research would have benefited massively from ethnographic material coming from the Ministry of Agriculture officials; exploring the voices of the officials reading numbers, granting funding and research codes could shed light in the problematic understanding of crop diversity conservation and domestic agricultural research that was visible in this paper. Resources did not allow for this pursuit and I believe further research in this direction could come as a communication bridge between decision makers and conservationist experts.

Finally, part of this thesis can serve as preliminary research for further investigation on the fate of state agricultural research in Romania. Testimonies point to a substantial withdrawal of the state in supporting the research stations, and as well to cases of bio-piracy regarding the genetic material collections of these institutions. Also, the experimental fields of the stations fell in the hands of former state functionaries or post-socialist business enterprises, with little regulation and monitoring. This last suggestion would translate into research on new property relations both on land and genetic resources, with a complex contribution to the body of research on shifting post-socialist property regimes.

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