

## Regional legislation in Italy for the protection of local varieties

**E. Bertacchini**

*'Cognetti de Martiis' Department of Economics University of Turin, via Po 53, Turin, Italy, e-mail: enrico.bertacchini@unito.it*

*Abstract:* This article analyses the consequences of regional legislation in Italy on protecting local and autochthonous varieties. In accordance with the objectives of the FAO treaty on plant genetic resources (ITPGRFA), these laws have emerged as one of the most interesting institutional attempts at Italian and European level towards enhancing and protecting agricultural biodiversity. A description of the regional laws and their implementation highlights the importance of supporting farming systems that are close relationship with the territory and local communities, creating sufficient juridical space for the varieties that are not part of the 'formal' seed system.

*Keywords:* Regional laws, genetic resources, autochthonous varieties, ITPGRFA, on-farm conservation

### Introduction

Italian regional legislation is one of the few operational examples at European level for protecting and enhancing the genetic resources for food and agriculture. In many ways it can be considered a forerunner of regulations at national and European levels in line with the aims of the FAO Treaty on plant genetic resources for food and agriculture (ITPGRFA).

The origins of this experience are to be found in the Tuscan Regional Law 50/97 on 'The protection of autochthonous genetic resources'<sup>1</sup> which was later followed by similar initiatives on the part of the Regions of Lazio<sup>2</sup>, Umbria<sup>3</sup>, Friuli

<sup>1</sup> Pursuant to the coming into force of the FAO treaty, the law was substituted by Regional Law 64/2004 'The protection and enhancement of local breeds and varieties of interest to agriculture, husbandry and forestry'.

<sup>2</sup> Regional Law 15/2000 'The protection of autochthonous genetic resources of interest to agriculture'.

Venezia Giulia<sup>4</sup>, Marche<sup>5</sup> and Emilia Romagna<sup>6</sup>. Underlying these initiatives is the awareness that there are only a few remaining local or old varieties being grown in Italy today (FAO, 1998). The interest of individual farmers in maintaining autochthonous breeds and varieties is declining since there is no economic gain in preserving and exploiting agricultural diversity. This means that the heritage of species and variety of interest to agriculture and husbandry present in the territory is at risk of genetic erosion and hence requires measures that will encourage conservation and provide incentives towards sustainable use of autochthonous genetic resources.

In the Italian context, the regional laws also act as a useful local test bench since the Italian constitution states that<sup>7</sup> Regions are empowered to legislate on matters of agriculture. Furthermore, the Italian law transposing ITPGRFA<sup>8</sup> expressly states that the Regions are the principal subjects with whom responsibility lies for implementing the Treaty. The experience with the Regional laws, therefore, highlights the importance of the local context in addressing the question of the sustainable use of genetic resources. In particular, combining territorial development with agricultural biodiversity appears to be an appropriate strategy for harmonising local incentives and global objectives in pursuit of the common good deriving from the sustainable use of genetic resources for food and agriculture (Helfer, 2005).

<sup>3</sup> Regional Law 25/2001 'The protection of autochthonous genetic resources of interest to agriculture'.

<sup>4</sup> Regional Law 11/2002 'The protection of autochthonous genetic resources of interest to agriculture and forestry'.

<sup>5</sup> Regional Law 3/2003 'The protection of animal and plant resources in the Region of the Marches'.

<sup>6</sup> Regional Law 1/2008 'The protection of local breeds and varieties of the Region of Emilia Romagna of interest to agriculture'.

<sup>7</sup> Constitutional Law Nr. 3 of 18 October 2001 'Amendments to Title V Part II of the Constitution' amends the legislative area of responsibility between State and Region defining which matters are the exclusive responsibility of the State and which are subject to joint State/Region legislation. Not being expressly earmarked for either State or joint legislation, agriculture is one of the residual matters of Regional responsibility. For more details see Germanò (2003).

<sup>8</sup> Law Nr. 101 of 6 April 2004 'Ratifies and implements the international Treaty of Plant Genetic Resources for Food and Agriculture' including the Appendices thereto as adopted by the thirty-first meeting of the FAO conference in Rome on 3 November 2001.

## Objectives and tools of the regional laws

The objective of the regional laws is to safeguard and enhance the heritage of autochthonous genetic resources, especially those at risk of erosion. In some cases, only animal and plant varieties of agricultural interest are considered (Lazio, Umbria and Marche), whereas in others, protection and enhancement is extended to forestry resources (Tuscany and Friuli).

Although the purpose of the majority of laws is to protect autochthonous genetic resources, more recent versions (Tuscany and Emilia-Romagna) graduated towards expressly considering local breeds and varieties while acknowledging a juridical correspondence between the two concepts. This semantic shift seems to have the objective of moving towards a more organic perspective of genetic resources in which the prevalently economic worth of the term ‘resource’ is combined with ecological, agricultural, cultural and historic factors which encompass the concepts of ‘territory’ and ‘variety’.

The definition of autochthonous breeds and varieties include:

- Those which are originally from the regional territory;
- Those which although not originally from the regional territory have lived within it for a long time - indicatively more than 50 years<sup>9</sup>;
- Those originally from the regional territory and no longer present on it, but conserved elsewhere.

From this definition, and the second criterion in particular, the concept of autochthony clearly emerges as being broad and especially dynamic<sup>10</sup>. It is by contemplating varieties that have become integrated over time that the idea of the heritage of autochthonous genetic resources does not become rigid but stays adaptable and ‘elastic’ to shifts in local farming methods.

The regions take on the responsibility of safeguarding and enhancing this heritage by means of a series of tools which are essentially based on the following points:

- establishment of a voluntary, free-of-charge regional register for species,

<sup>9</sup> Not all the laws specify the duration but in most cases it is set as 50 years.

<sup>10</sup> This is a very similar definition to the one introduced by Decree of the Minister of Agriculture, Food and Forestry (MiPAAF) of 18 April 2008 ‘Measures applicable to the commerce of conservation varieties’. Article 1 states that the definition of ‘conservation varieties’ encompasses non-autochthonous varieties which have never been registered in the National Seed Register, provided they have been integrated within the local agricultural eco-systems.

- breeds, varieties, populations, cultivars, landraces and clones;
- establishment of technical-scientific committees to assess the fact-sheets of the subjects listed on the regional register;
  - establishment of a network composed of farmers, associations, public and private bodies, research bodies, universities, gene banks to conserve and safeguard the varieties registered;
  - pursuant to Article 8j of the Rio Convention on biodiversity, recognition of local communities as the stewards of the resources (e.g. Lazio and Umbria), or the Region itself (e.g. Tuscany<sup>11</sup>, Emilia Romagna), as guarantor and manager of this heritage.

Of these tools, the voluntary regional register, and the conservation network are the most effective and innovative means for pursuing the objectives of protecting and enhancing local varieties.

The regional register is crucial firstly for identifying the varieties that are present in the region and secondly for giving them a precise, indisputable identity - both basic factors for exactly evaluating the point of genetic erosion reached and thus the most solid measures of protection needed (Dutfield, 2004). For example, the Tuscany regional register presently counts 564 arboreal and fruit species and 58 herbaceous ones of which 400 and 50 respectively had been considered at risk of extinction. 100 species have been registered in Lazio so far, 29 of which are herbaceous.

By the same token, the network of conservation and protection performs the functions of conserving, multiplying and disseminating the genetic material registered in full conformity with present legislation. The network, with its mechanism of selection and enrolment of applicants, can be seen as a first attempt to create an integrated institutionalised system at grass-roots level for *ex situ* and on-farm conservation. It puts a variety of actors in touch with each other who are interested in the protection and sustainable use of autochthonous genetic material.

In the first instance, ex-situ conservation is undertaken by the region's public and private research institutes; in some cases the law provides for the *ad hoc* establishment of a regional germplasm bank (Tuscany, Marche and Friuli Venezia Giulia). In the second instance, on-farm conservation is entrusted to 'steward' farmers who perform the task of maintaining and multiplying the local varieties that have been assigned to them. The laws normally allow farmers within the network to save and to locally exchange a modicum of seed, in quantities agreed for each single subject when they enrol in the regional register.

<sup>11</sup> Art. 1(2) Tuscany Regional Law 64/2004

## Synergies with Article 6 of the FAO Treaty

The regional laws examined are a clear example of juridical measures and institutional frames for promoting the sustainable use of plant genetic material for food and agriculture in conformity with Article 6.1 of the FAO Treaty. Furthermore, the tools provided for in these laws are fully in harmony with the measures described in points a) and g) of Article 6.2 of the Treaty, according to which the contractual parties shall launch policies that favour local farming practices and where necessary, modify the regulations on the trade of varieties of seed and their distribution.

Europe and Italy are both witnessing a rapid decline of both plant and animal agrobiodiversity, due mainly to a series of economic and institutional factors which, instead, have encouraged the spread of varieties that maximise productive efficiency on vast farming areas. These varieties ensure high profit margins for the large seed companies who promote their produce instead of the autochthonous varieties which historically are more suited to the local contexts but have a low commercial value except for use in restricted settings and which are hard to insert into a production chain of a more agro-industrial nature (Swanson *et al.*, 1994). Institutional factors emerge as being particularly significant for analysis. The way that seed distribution is institutionalised in Europe, Italy included, provides no incentive towards the use or commercialization of autochthonous varieties. The system of plant variety rights and the system of registration in the Catalogue of Plant Varieties have very strict requirements of distinctness, uniformity and stability (DUS), as well as how the seed is to be marketed (Almekinders, 2000; Louwaars, 2000).

These institutional constraints makes it less inviting to use local, autochthonous varieties which now only tend to be cultivated in limited, marginal areas with a consequent loss of the heritage of the agricultural biodiversity of the territory. This heritage is only the first link in an agricultural and food chain that reflects the cultural roots of the territory and which, if enhanced, can favour high returns both economically and in terms of local development.

While autochthonous varieties today occupy a niche within the seed system, which is often marginalised and negatively affected by institutional constraints, Italy, through its regional legislation, has created new juridical openings that favour this niche. This new legal space does not run counter to the framework of existing incentives, which are tailored towards a model of varietal innovation for the seed market. The objectives aim rather more towards completing the existing system by giving a clearer, better defined juridical status to autochthonous varieties and

producing a new series of measures and incentives to conserve and enhance them.

In the first place, these laws tend to view autochthonous varieties and breeds as a collective heritage of local communities. As already mentioned, the idea of a collective heritage emerges clearly from the texts of the laws which refer back to Article 8 (j) of the Convention on Biological Diversity<sup>12</sup>, or provides that the Region itself be recognised as party responsible for the autochthonous genetic resources. At the same time, the regional laws do not contemplate the institution of any form of individual exclusive rights over the variety. The individual or juridical person who suggests a variety be registered enjoys no exclusive right to the variety involved, just as no third party may lay claim to it and request a plant variety right. Rather, enrolment in the register and access to the resource accrues first and foremost collective benefits for the community as a whole in terms of conservation and enhancement of the heritage of autochthonous genetic resources. Furthermore, some laws (Tuscany and Emilia Romagna), also regulate the use of autochthonous genetic resources to create new varieties. Members of the conservation network who intend applying for a plant variety right, or a patent on a variety essentially derived from one enrolled in the register, must request prior authorisation to do so or give timely notice that they intend doing so to the Region or to the body responsible.

These characteristic elements in regional laws have many analogies with the institutional framework created by Articles 12.3 (d) and 13.2 (d)(ii) of ITPGRFA, which respectively forbids any form of monopoly on the genetic resources registered in the multilateral facilitated exchange system and regulates of the compensatory regime for the new varieties that used genetic material from the multilateral system.

A second tool for promoting the conservation and enhancement of autochthonous varieties is the right of 'steward' farmers and members of the network to locally exchange seed without any form of monetary compensation. This institutional innovation recognises the importance of farmers' practices which, in the past, have brought about varietal innovation and the continual adaptation of varieties to the territory exactly as the premise to ITPGRFA recognises. This right can be especially important in coping with the risk of extinction of local varieties by putting them to use in agriculture. Further, it is

<sup>12</sup> Article 5 of the law of the Lazio Region is more explicit on this point: ...'Without prejudice to the right of ownership of every plant or animal in the register pursuant to Article 2, the heritage of the genetic resources embodied in these plant varieties or animal breeds belongs to the local native community ...'.

also a way of safeguarding and enhancing the cultural heritage and traditional knowledge which are tied in with autochthonous crops. In this sense, saving and exchanging seed inevitably allows farmers to exchange information, which leads to a strengthening of traditional knowledge within the community. One of the obligations that Article 9.2(b) of the Tuscan Regional law provides for steward farmers is to spread knowledge and cultivation of the genetic resources that they are custodian of within the principles of this law. In the same way, Article 13 of the Emilia Romagna Regional law recognises the protection offered by the regional body to the knowledge, techniques and customs of the local communities linked to the agricultural biodiversity of the territory.

### **Unresolved issues and future development**

The experience gained in applying the regional laws presented in this study is undoubtedly an important source of normative reference for the conservation and enhancement of autochthonous genetic resources. One of the main lessons to be learned from it is how institutions can be innovative in promoting measures for the sustainable use of agrobiodiversity.

However, as for all institutional processes, some issues still remain unresolved as to the implementation of these laws and future developments on the Italian and international normative scenario.

While the objectives of the regional laws can be universally shared, and the innovative tools they provide appreciated, the implementation of the norms and how they work depend on many factors *inter alia* technical, bureaucratic and political.

With this complexity in mind, there are differences in how the various Regions are implementing the laws that they have approved. The laws are already operative in Lazio, Marche and Tuscany, partially operative in Friuli and Emilia Romagna and non-operative in Umbria. In the areas where the laws are operative a census has already been carried out on the autochthonous genetic resources and the regional register and technical scientific committees are functioning. The Tuscany Region has also begun to select and register steward farmers as the basis for the future network for conservation and security.

In addition to the differences in implementing the laws, there are also important unresolved issues in how the local genetic heritage is best managed. Considering that legislative tools are regional while conservation and enhancement of genetic resources go beyond the purely local context, there cannot but be problems of coordination among the different institutional levels. Links among

the Regions therefore need to be reinforced in order to coordinate efforts to safeguard autochthonous genetic resources.

Furthermore, although the texts of regional laws share many similarities more caution is needed in assessing the operative aspect of the laws (e.g. measuring its effectiveness). For example, the data contained in the regional registers must be uniform if there is to be any thought of integrating the repertoires within a nationwide dimension in some future time. The material catalogued in the various registers, however, is still heterogeneous and does not always refer to the same type of descriptors for varietal characterisation<sup>13</sup>.

In the same way, the regional activity can be at a disadvantage by being limited to a local setting, if, for example there is a lack of technical skills for managing the system of conserving the autochthonous genetic resources properly.

Lastly, relevance must be given to how the tools of present regional legislation will fit in with the new EU directive on the so-called 'conservation varieties'<sup>14</sup>, which must be implemented by EU Member States. The points of greatest interest and clarification are as regards 1) the definition of the concept of genetic erosion, 2) the economic incentives deployed in marketing conservation varieties and 3) the issue of the circulation of seed, also considering farmers' exchange.

#### *1) Definition of the concept of genetic erosion*

The question of genetic erosion and the need to conserve varieties at risk is dealt with both in the EU Directive mentioned above concerning conservation varieties and in the Regional laws studied here.

According to the EU Directive, conservation varieties are those which are naturally adapted to the local agricultural systems and threatened by genetic

<sup>13</sup> The criteria for selecting the variety characterisation descriptors for autochthonous varieties is also of great importance. The descriptors given in the UPOV guidelines tend to privilege the uniformity and stability of the variety while those suggested by IPGRI are more suited for describing the diversity and the degree of variability in populations of autochthonous varieties. It is clear, therefore, how nationwide selection and coordination of this seemingly technical aspect can affect the juridical definition and cataloguing of the heritage of autochthonous varieties.

<sup>14</sup> European Directive 2008/62/CE 'providing for certain derogations for acceptance of agricultural landraces and varieties which are naturally adapted to the local and regional conditions and threatened by genetic erosion and for marketing of seed and seed potatoes of those landraces and varieties'. For a treatise on this subject see the article by R. Bocci in this issue.

erosion. Similarly, the most innovative tools provided by regional laws - such as, for example, the network of steward farmers - were expressly created to conserve the varieties that are considered at risk of genetic erosion.

It is therefore fundamental to understand how the risk of erosion is to be determined since the compliance or non-compliance of a variety to this criterion can have juridical implications. In this regard, the EU Directive is rather vague defining genetic erosion as ‘... loss of genetic diversity between and within populations or varieties of the same species over time, or reduction of the genetic basis of a species due to human intervention or environmental change<sup>15</sup>’.

At the regional level, Emilia Romagna has emerged with a detailed proposal for defining the basic criteria for considering a variety at risk of genetic erosion. In fact, the implementing regulation of the law identifies minimum levels of cultivated land which vary in accordance with the species, and contemplates not only the ecological and agricultural properties of the varieties but also, indirectly, natural factors and the production capacity of the farms on the territory.

In many instances, the risk of erosion or of disappearance is mainly due to the scarcity of farmers cultivating the crop. The definition of risk, therefore, must also take into account this human factor which is only indirectly linked to the ecological and agricultural properties of the variety.

This sensibility in defining the risk of erosion gives highlights the role of the farmers and their capacity to use autochthonous varieties and safeguard their genetic heritage of interest to agriculture.

## *2) Economic incentives and marketing conservation varieties*

The aim of enhancing conservation varieties is pursued through the derogation from the present seed system by enabling the variety to be registered in the Common Catalogue and with a proper procedure to be followed in selling the seed. This second aspect of marketing of conservation varieties, which is one of the lynchpins of the new European legislation, is practically absent from Regional laws.

In this sense, registering varieties, entered previously in the Regional Register as conservation varieties, may be regarded as a supplementary tool for enhancing these resources.

Being able to market the seed varieties registered in the Common Catalogue - even considering the constraints on quantity specified by law - could be an

<sup>15</sup> Art. 2(b) EU Commission Directive 2008/62/CE.

important step forward towards a revitalised production of autochthonous varieties. In this way, the economic return from the sale of seed becomes an incentive by which farmers can recover the costs of conservation as the holders of plant breeders' rights can recover their investments in varietal innovation by marketing the seed of commercial varieties.

One particularly interesting idea for enhancing the benefits of marketing local varieties is already comprised in the Tuscany Regional law which has transposed the new European regulation on conservation varieties into law earlier. In addition to the commercialization of seed, a regional mark has been devised which may voluntarily be set on the products constituted that contain or are derived from material in the register<sup>16</sup>. This creates a distinguishable brand to favour the broadest possible consumer awareness and knowledge on food products obtained from local varieties and breeds at risk of extinction, and consequently enhance demand for the product itself.

It is to be noted that being able to market the seed is the most significant economic incentive but not the only one available for encouraging the re-adoption of varieties at risk of erosion. The Regional laws also provide for expense reimbursements to steward farmers for their work in conserving the assigned varieties. Lastly, the Rural Development Plans can envisage other forms of allowance for enhancing and conserving autochthonous varieties, thus tracing a more complex frame of economic incentives both market and public based.

### *3) Question of the circulation of seed and exchange among farmers*

One issue which is not clarified by the EU Directive on conservation varieties concerns the distribution of seed by the traditional practice of farmers exchanging it amongst themselves.

These practices are an integral part of so-called 'farmers' rights' and as has been underlined earlier have always lain at the base of the continual innovation and adaptation of varieties to the ecological conditions of the environment (Andersen, 2005; Girsberger, 1999). In recognition of the enormous contribution of farmers in conserving, improving and making available plant genetic resources, the Article 9.3 of ITPGREFA establishes that nothing shall be interpreted to limit any rights that farmers have to save, use, exchange and sell farm-saved seed/propagating material, subject to national law and as appropriate.

This weak affirmation of farmers' rights in the question of the exchange of

<sup>16</sup> Art. 11 Tuscany Regional Law 64/2004.

seed seems to create more doubt than certainties. In Italy and Europe, the root of the problem is that present regulations of the seed system focus mainly on the issue of commercialization of seed and neglect or fail to identify directly seed exchange between farmers as a non-profit transaction.

In this sense, even the European Action Plan in favour of Agricultural Biodiversity is oriented towards the idea of marketing, recognising that ‘... conservation and the *in-situ* ad on-farm improvement of plant genetic resources also depend on the real possibility of using these resources in the long-term, and thus legislation that enables the commercialization of diversified genetic material’<sup>17</sup>. In the same way, the aim of the EU Directive for conservation varieties is mainly to confer juridical legitimacy to these varieties allowing them to be marketed on the seed market.

It is therefore important to establish whether the traditional practice of non-profit exchange of seed among farmers falls within the concept of marketing or not in order to implement appropriate strategies of *in situ* and on-farm conservation for local varieties.

The varieties not registered in the Common Catalogue, including the local and autochthonous ones, are particularly vulnerable to this problem because marketing them is expressly prohibited. At the same time, these varieties, lacking commercial interests, fall in a legislative and juridical vacuum that legitimises their exchange and circulation out of the formal channels of seed distribution.

Absent a juridical legitimacy, the informal exchange of seed of varieties that do not appear in official registers can be formally against the law but be practised because of the lack of enforcement of the regulations. In other cases, to get round the problem, exchange takes place within groups of farmers who have formed associations (Almekinders and Jongerden, 2002).

This is why it is important to understand how the concepts of selling and marketing are defined in seed legislation. For example Louwaars (2005) points out how seed legislation in South Africa and Malawi expressly states that the definition of seed sale also includes exchange and barter of seed, which makes this practice illegal when the varieties exchanged are not in the official register.

With this perspective, EU Directive 98/95/CE and Italian Legislative Decree 212/2001 state that ‘marketing shall mean the sale, holding with a view to sale, offer for sale and any disposal, supply or transfer aimed at commercial exploitation

<sup>17</sup> Communication of the Commission to the Council and the European Parliament of 22 May 2006 – Action Plan in favour of Biodiversity in Agriculture.

of seed to third parties, whether or not for consideration.<sup>18</sup> As can be seen, by including commercial exploitation with or without consideration this definition leaves doubt surrounding the legitimacy of the non-profit exchange of seed.

The Regional laws have sought to respond to these drawbacks and to the fact that even the free exchange of seed risks to be interpreted as an act that falls within seed regulations and therefore subject to its rules. The conservation and safeguard network has been set up precisely with the aim of being a legal tool that allows the exchange of seed between interested parties who are registered as belonging to the network. However, we still have to understand the extent to which this tool is in harmony with regulations regarding seed both as regards autochthonous varieties which will be inserted into the Catalogue as conservation varieties, as well as for the autochthonous varieties not at risk of erosion which will, instead, not be included.

## Bibliography

- Almekinders C., 2000. *The Importance of Informal Seed Sector and its Relation with the Legislative Framework*. Paper presented at GTZ - Eschborn.
- Almekinders C. and Jongerden J., 2002. *On visions and new approaches. Case studies of organizational forms in organic plant breeding and seed production*. Working Paper Technology and Agrarian Development, Wageningen University, Netherlands.
- Andersen R., 2005. *The History of Farmers' Rights*. The Farmers' Rights Project Background Study 1.
- FAO, 1998. *The State of the World's Plant Genetic Resources for Food and Agriculture*. Roma, Italia: FAO.
- Germanò A., 2003. *Il Governo dell'Agricoltura nel Nuovo Titolo V° della Costituzione*. Atti dell'incontro di studio. IDAIC, Firenze.
- Girsberger M.A., 1999. *Biodiversity and the Concept of Farmers' Rights in International Law*. Factual Background and Legal Analysis, Peter Lang, Berne.
- Dutfield G., 2004. *Intellectual Property, Biogenetic Resources and Traditional Knowledge*. Earthscan, London.
- Helfer L.R., 2005. *Using Intellectual Property Rights to Preserve the Global Genetic Commons: The International Treaty on Plant Genetic Resources for Food and Agriculture*. In: Reichman J.R and Maskus K. (eds). *International Public*

<sup>18</sup> Art. 4(2) Directive 98/95/CE and Article 2(2) Legislative Decree 212/2001.

- Goods and Transfer of Technology under a Globalized Intellectual Property Regime. Cambridge University Press.
- Louwaars N.P., 2000. *Seed Regulations and Local Seed Systems*. *Biotechnology and Development Monitor* , 42, 12-14.
- Louwaars N.P., 2005. *Biases and bottlenecks. Time to reform the South's inherited seed laws?* *Grain, Seedling* July 2005.
- Swanson T., Pearce D., Cervigni R., 1994. *The appropriation of the benefits of plant genetic resources for food and agriculture: an economic analysis of the alternative mechanisms for biodiversity conservation*. CPGRFA Background Study Paper, 1.