SAVE e-News 1/2020

Safeguard for **A**gricultural **V**arieties in **E**urope

The quarterly electronic information service of the SAVE Foundation

SAVE Project Office

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Access to seeds: How free should it be?

Diversity of Products: The seed market. photo: SAVE

The seeds of many food crops are being sown in Europe these days. The time in which we considered the “lilies in the field”, hunted and gathered around is long gone. Breeding and thus seeds are strictly regulated today – often to the detriment of country varieties and traditional rural conservation breeding. The market is in the hands of a few multinational companies that determine which seeds we sow. As a counter model to the multinational corporations and legal regulations, initiatives such as "Open Source Seeds" and "Commons" movements have emerged in recent years with the aim of making seeds available to everyone for conservation and further breeding. Can this be a sustainable way to make “breeding for everyone” possible? A study (see below) shows that these approaches are also not without problems.

In 1883, national patent rights for many goods and inventions were harmonized to promote cross-border trade. Plant breeding was still in its infancy and therefore not an issue for business and trade. With the application of Mendel's Laws of Inheritance after 1900 breeding and selection became a subject of science. The improvement of the va-

rieties in terms of yield and disease resistance quickly gained in importance, especially since there was still starvation in Europe in the 20th century.

The USA introduced the first plant patent law in 1930, but Europe soon followed with a plant variety protection system (PVP = Plant Variety Protection). While patents rely on license payments, the plant variety protection system tends to reward breeders with competitive advantages through the "Original Seed" seal of quality. It was a kind of quality assurance that promised higher yield and / or disease resistance in the field. The financial advantages of the breeders were manageable. Breeding remained a niche product. Today, this system would be considered an “open source”.

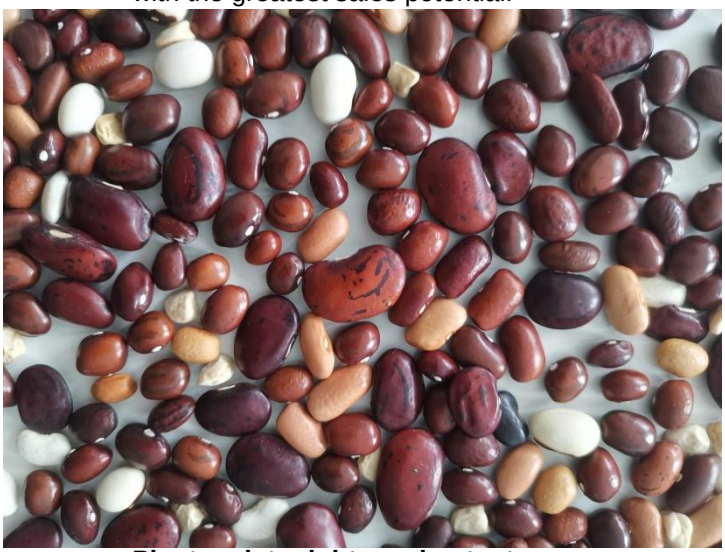
In 1961, the different plant variety protection systems were harmonized in the UPOV Convention (UPOV = Union international pour la protection des obtentions végétales = International Association for the Protection of New Varieties of Plants). The task of this intergovernmental association is to provide and promote an effective plant variety protection system with the aim of promoting the development of new plant varieties for the benefit of society. The agreement basically stipulates the right of all to freely use protected varieties for further breeding. Plant variety protection and seed traffic regulation should also increase the productivity of agriculture. With the 1991 UPOV Convention, the rights of breeders were strengthened so drastically that the exchange of seeds and propagation material between farmers was actually prohibited. In order for a variety to be officially traded, it must be registered in the official catalogue. Old local varieties and regional varieties are hardly registered due to the great technical and financial effort. Most old varieties fail due to the DUS criteria of distinctness, homogeneity and stability. As a result, many UPOV members have not signed the 1991 agreement.

Plant variety protection is a form of intellectual property right. It protects the breeder from the commercial use of others without his consent. This protection recognizes the innovation of a new breed and is also an incentive to continue. The "breeder privilege" states that breeders may also use protected varieties as the basis for further breeding. This should help to ensure that better varieties can be developed as quickly as possible. Ongoing breeding can therefore be protected without any obligation towards the rights holder.

The 1991 agreement primarily hampers countries in the global south. At a conference of the ITPGRFA (International Treaty on Plant Genetic Resources for Food and Agriculture) in Rome in November 2019, the conflict between farmers and cultivators was once again resolved openly.

The fact is that the seed sector is going through a concentration on a few producers. At the same time, the number of patent applications is increasing, especially in the United States. License fees are payable when using the genetic material. The European Patent Office is reluctant to grant patents in this area. An invention must be new, involve an inventive step and be industrially applicable. Plant varieties and animal breeds are excluded from patentability, but the “grey area” begins with “biological processes for the production of plant varieties and animal breeds”.

While early breeding advances were due to observation, botanical knowledge and manual dexterity, as well as the enthusiasm of the breeders, today's developments are more and more rather a question of capital, industrial corporate culture and subject to the laws of the market. It is not necessarily the breeding that is bred, but the one with the greatest sales potential.



Plant variety rights and patents

But what are the differences between variety protection and patent protection? The means of patent protection is chosen for further breeding with biotechnical instruments, such as the CRISPR / Cas method. Plant variety protection is used in classic breeding, i.e. in biological processes. Therefore, it is still the crucial reference for most breeders. Of course, both plant variety protection and patent rights expire at some point, with plant variety protection after 25 to 30 years.

Open source seeds

© www.opensourceseeds.org

One reaction to this development was the open source seed initiative founded in 2012 (see also SAVE eNews 02-2017, www.save-foundation.net/images/enews/2017-02-EN.pdf). It wants to guarantee fair and open access to plant genetic resources worldwide. Open source systems are particularly well-known in computer programs: Since the source code is available to everyone, every software developer can further improve the programs. "Open Source" in plant breeding strives for the free availability of as many genetic resources as possible. A license agreement for open source seeds is very different from that of patented genetic material. The central statement is: "At the same time, the license terms oblige you to underline these license terms from the seeds obtained from the available seeds and the seeds of further breeding and only pass them on to third parties under these conditions." That means: once common property - always common property. The variety will always remain free of charge and will be available to the general public. This is of course attractive for hobby breeders. But what does this mean for professional small breeders? Niels Louwaars, Managing Director of Plantum, the industry association for seeds in Gouda in the Netherlands, compared the concept of open source seeds with so-called breeders' exemptions and with patent systems for plant breeding. One of the conclusions: O-pen source targets partially contradict national sovereign rights in accordance with the Nagoya Protocol on genetic resources. The question of whether this also applies to the granting of patents still needs to be clarified. However, the problem is elsewhere. Open source can dampen economic incentives in breeding and can thus hinder the dynamics of breeding because innovations would no longer be rewarded (financially).

Are we egoists or maybe not?

Globalization makes crop protection complex. In addition to the WTO and UPOV, the TRIPS agreement on intellectual property also deals with the protection of plant varieties. At the EU level there is also the Community Plant Variety Protection System (CPVR), which is based on the 1991 UPOV Convention. But how does UPOV define a plant variety? The term is broader than that of a protectable variety, since not all conditions for variety protection need to be met here. A variety must be defined by express features that result from a particular genotype or combination of genotypes. Protectable varieties, in turn, must be more than just discoveries. They must be distinguishable, homogeneous and stable (DUS criteria) as well as provided with a list of properties. Niels Louwaars et al come to the conclusion that varieties or their corresponding resources are not used and maintained sufficiently under open source conditions if everyone has access and nobody takes responsibility. This is an ideological question, because the public use of a resource can very well be sustainable.

In 2009, the American economist Ellionor Ostrom was the first woman to receive the Nobel Prize in Economics for her study on the resource-saving use of the Valais Alps. Compared to privately used alpine areas, the shared alp was even managed more sustainably. There is one crucial difference to open source: The number of common users of mountain pastures was and is so manageable that you know each other by name. However, the breeding scene is also manageable and the open source community could develop strategies to make the responsibilities binding. In the opinion of those responsible for Open Source, plant breeding must be understood as part of the entire value chain. This also includes involving the state in the financing of breeding, after all, its work serves the common good. Louwaars et al see things a little differently: “Open Source Seeds” opens up innovation opportunities by providing plant varieties and thus intellectual property, but at the same time reducing them again he by their rigid conditions. In the USA with its patent protection, open source systems are certainly helpful. But: “The protection systems in force in Europe with their breeders' exemption already enable open access to genetic resources. However, if someone just wants to copy to compete on the market with their own product, the idea of open source is misused.

We harvest what we sow - also in plant variety protection.

Source:
www.frontiersin.org/articles/10.3389/fpls.2019.01127/full

About the Chicken and the Egg: Proveis Ultentaler

© Robert Höck www.happy-huhn.at

Chickens are today, and always were, an important part of smallholder existence. Today chickens are mostly kept as hybrids for egg and meat production. The feathers no longer matter. Where there is still breeding, the criteria are mostly adapted to the exhibition standards, but not to the agricultural use. The Proveis-Ultentaler chicken shows that there is another way. The information in this article comes from Robert Höck, a committed breeder of Proveis-Ultentaler Chicken (www.happy-huhn.at) and Monica Brunelli Thaler, South Tyrol, initiator of the conservation of this chicken breed.

Like many old breeds, the Proveis-Ultentaler Chicken was literally saved from extinction at the last minute by dedicated breeders in the Ultental, South Tyrol. It hardly fits into the strict breeding standards of the exhibition breeders. And that is a blessing because the variability in appearance and continuous selection according to the harsh conditions of a mountain farm support genetic diversity within the breed. Since they are farm animals and not exhibition animals, there is no officially recognized breed standard. Conservation breeders should use the following descriptions and breed characteristics as a guide:

- Weight: hen: 1.75 to 2.5 kg, cock: 2 to 3kg
- Colour of the barrels: light grey to slate blue in different shades, but never yellow
- Comb: medium-sized to large single comb, lies to the side in approx. 75% of all hens (Schlotter comb), M-waves are tolerated
- Eyes: Mostly orange, but also different eye colours according to the colour changes
- Ear discs: white
- Eggs: 45-55 g, white-cream coloured
- Plumage: All gradations of the wild colour between gold-wheat coloured to dark brown, with or without speckles (mottled). Colour variations "yellow-coloured", "red-coloured", "porcelain-coloured", "vine-coloured", "wheat-coloured", "wild brown", "gold-necked", "rust-coloured partridge", "cinnamon-coloured" and "orange-coloured" occur.
- Fletching: The body shape corresponds to that of a land chicken with a clear Mediterranean impact. The cock's plumage is pronounced with two long main sickles. The hens have feathers that are fanned out.
- Nature and behaviour: lively chickens, with sufficient free-range, independent, persistent feed searchers, insensitive to harsh climates.
- Mother instincts: The chickens have pronounced mother instincts and are very good luck.

The Proveis-Ultentaler chickens developed through trade relations between central Italy and South Tyrol and were continuously adapted to the harsh conditions of the mountain areas through selection. At the end of the 19th century, land chickens of the Mediterranean type were mixed into the holdings of the farms because they were more prolific. During the 20th century, a new type of chicken emerged in the Ultental, the "Proveis-Ultentaler Chicken".

The "Gallina Millefiori di lonigo", a breed of chicken from the province of Vicenza in Venice, is a porcelain-coloured or pied offspring of the Italian land chicken, probably the "Proveis-Ultentaler" and the "Millefiori di lonigo" go back to the same ancestors.

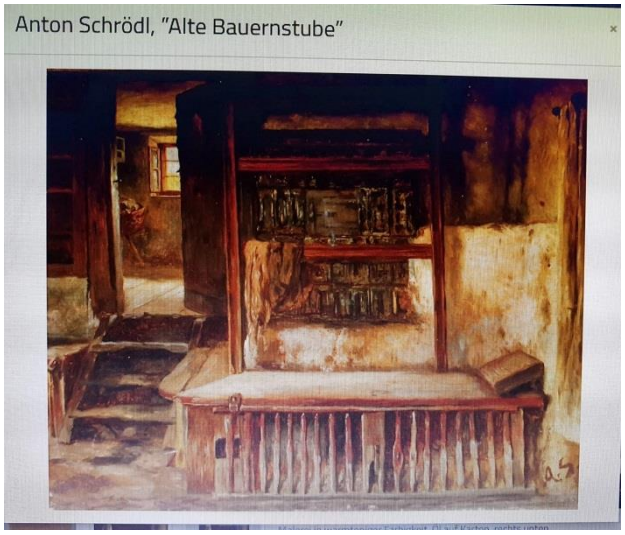
However, the Proveis Ultentalers are not directly related to the very similar looking partridge-coloured Italian chickens. The partridge-coloured Italians also came from the Italian partridges. This breed was

selected in other European countries and in the USA for high laying performance and optical perfection. From the white variant came the white leghorn, which is an important mainstream breed today (leghorn = English for Livorno).

Proveis-Ultentaler: customs and traditions

Chicken farming and breeding in the harsh mountain region has many ethnographic and social aspects. Monica Brunelli Thaler collects old customs and traditions with the support of Prof. Giovanni Kezich, the director of the ethnographic museum of San Michele all'Adige. Here is a small collection:

If there was no suitable place in the cowshed in winter, the chickens found a warm place in the room under the bench by the stove.



The Kirchenhoaserin: When someone died in the Sarntal valley, a poor woman was sent to inform the surrounding families about the date of the funeral. In return, she received eggs.

The Oiertroger: He is now a carnival figure, in the past he was the hunter who killed the fox and thus protected the chickens. After the successful hunt, the Oiertroger went from farm to farm with the fox on his back and received eggs as thanks for the hunt.

The Saltner in the Adige Valley were the guardians of the vineyards during the ripening and harvesting period of the grapes. They drove out birds and thieves and watched over the now almost ripe grapes. To make them look even more terrifying in the eyes of the thieves, they wore hats with rooster feathers along with other utensils. (The Proveis-Ulten cocks have very long tail feathers.)

©www.sarntal.com

The hat of the rifle costume must still have beautiful long cock feathers - although the mostly white feathers today hardly come from the Poveis Ulteners.

Horizon 2020 project IMAGE - Conservation and Support of animal genetic resources

With the conference "Gene banks for animal genetic resources: what's new?" on February 5, 2020 at the Facultata de Veterinaria, Universidade Complutense de Madrid in Spain, the four-year Horizon 2020 project IMAGE (Innovative Management of Animal Genetic Resources) officially ended. Over a period of four years, a dedicated consortium consisting of 28 partners from 13 EU countries, Switzerland and four non-European countries (Argentina, Colombia, Egypt and Morocco) worked on the use of genetic collections and to improve the management of gene banks for animal genetic resources. For a better use of the genebank material, especially genomic methods, biotechnologies and bioinformatics have been further developed.

One aspect of the project was the inclusion of different actors from various disciplines. The multi-stakeholder approach became clear in the 7 work-packages: In addition to the scientific aspects of ex situ conservation in gene banks, the identification of gaps in the collections, description of procedures and new methods for using the gene bank material, the exchange of knowledge with as many actors in the breeding and conservation of farm animals as possible was supported and questions on areas such as ethical aspects, optimization of costs, etc. were highlighted. The topics of dialogue forums to strengthen the discussion between different disciplines were worked out in close cooperation with the consortium partners.

As part of the consortium, SAVE's task was to promote the exchange of knowledge with stakeholders active in the breeding and conservation of livestock breeds. Four dialogue forums were held on the following topics:

Belfast, Ireland, August 2016: Genebanks for farm animals: conservation priorities and future prospects; A stakeholder perspective.

Tallinn, Estonia, August 2017: Sanitary regulations: Opportunities and obstacles for the exchange of genebank material for breeding and science.

Zagreb, Croatia, August 2018: The Economy of Conservation: Economic Conflicts between Genebank and In-situ Conservation?

Wachtebeke, Belgium, August 2020: ABS rules (Access and Benefit Sharing): What does ABS mean for the conservation, research and use of animal genetic resources (AnGR)?

In order to reach the broadest possible range of experts, the dialogue forums took place between the annual conferences of the ERFP (European Reginal Focal Point) and EAAP (European Federation of Animal Science). SAVE partners and other NGOs were explicitly invited to these meetings in order to strengthen the dialogue with the practical conservation of animal genetic resources. SAVE reported regularly on the questions and results of these dialogue forums. The issues of “sanitary regulations” and “ABS” were of particular interest to the in-situ conservation scene. Sanitary regulations, which arose from the international regulations of the OIE (World Organization for Animal Health), partially hinder the exchange of sperms and other material sometimes massive, since older material no longer complies with the epidemic hygiene regulations. But living conservation needs this material to prevent inbreeding depression.

ABS regulates the access and equitable balancing of genetic resources within the framework of the Nagoya Protocol. Questions about the cross-border exchange and use of genetic material were raised. Here, the dialogue forum in Wachtebeke, Belgium, was able to clarify many questions of the in-situ scene. The results of the dialogue forums on these two topics were summarized in short fact sheets and made available to all interested parties as downloads on the SAVE website in German (ABS and Sanitary Regulations) and in English (ABS Rules and Sanitary Regulations). A brief dossier (policy brief) of the IMAGE project is also available here

The potato of the Native Americans as an integral part of a National Monument

The "Bears Ears" area in the US state of Utah in San Juan County was declared a National Monument by President Barak Obama in 2016 through a "Presidential Proclamation". A year later, President Donald Trump issued an order to reduce the approximately 547,000 hectares by 85%. Thereupon a federal court in Washington D.C. by an interim order that the area reduction will not take effect for the time being.

For the first time in US history, the resident Native tribes asked the president to protect the country through the Antiquities Act. A traditional potato Solanum jamesii or “Four Corners Potato” also plays an important role. This type of potato is native to North America and has its distribution area in the Four Corners region in Arizona and New Mexico. It was not previously known that this potato is also found in Utah. Archaeological research has shown that the Native Americans not only grew corn, beans and pumpkins, but also potatoes. Solanum tuberosum was domesticated in South America around 7,000 - 10,000 years ago.

©https://www.archaeology.org/issues/374-2003/letter-from/8449-four-corners-potato

Solanum jamesii was also grown in North America 10900 years ago, as has now been proven. It was also found that the Four Corner Potato occurs in the areas of the Natives. This small speckled potato may have been used throughout the southwest. This would make Solanum jamesii the first proven domesticated plant in the western United States. Diné Bikéyah, a non-profit organization run by Native Americans dedicated to the protection of culturally significant ancestral areas, found that the Four Corner Potato is still occasionally grown by Natives.

In 2018, the Four Corners region's traditional food program made calls to attract local farmers to grow the old potato. Seven local farmers traveled to Red Butte Garden in spring 2019 to find out more about the cultivation. The farmers then returned in autumn to help with the harvest. Everyone went home with a bag of tubers to start growing in 2020. Their own traditional cultivation methods and traditional knowledge will thus be reactivated. Part of the fall harvest went to local restaurants in Bears Ears, creating a market for this traditional food. Compared to the conventional organically grown potato, the Four Corner Potato has three times as much protein and twice as much calcium and iron. In addition, unlike conventional potatoes, this potato is frost-resistant and frost-resistant.

Sources:
https://anthro.utah.edu/labs_and_centers/archaeobotany/domestication_potato.php
https://www.atlasobscura.com
https://the-journal.com/articles/164568
https://www.archaeology.org/issues/374-2003/letter-from/8449-four-corners-potato
https://www.youtube.com/watch?v=Gz6kSAKDecE

Bears Ears National Monument. Foto: wikipedia.org

Genetic test to include animals in the herd book

Lakenveld Cattle(Dutch Belted). © SAVE

Local Dutch cattle breeds have small population sizes and the number of breeding animals registered in herd books is limited. In December 2018 the Centre for Genetic Resources the Netherlands (CGN) and the Dutch Rare Breed Survival Trust (SZH) introduced a DNA-test to include rare Dutch dual-purpose cattle in the main section of a herd book, in case they have desired phenotypic traits but incomplete or missing pedigree data. Herd book registration is important for rare breed populations to enlarge their population, while at the same time preserving the breed and increasing the basis for sustainable breeding.

The original Dutch cattle breeds are dual-purpose breeds, suitable for both dairy and beef production. These breeds thrive in more extensive farms and in nature reserve grazing. Besides, they are part of our living cultural heritage. The Dutch dual-purpose cattle breeds are: Dutch Friesian (both black and white and red and white), Groningen White-Headed, Dutch Belted, Deep Red Cattle and Meuse-Rhine-IJssel (MRIJ). Besides the MRIJ, all breeds are threat-threatened as the number of adult females per breed is less than 6,000.

Every breeding organisation is aware of unregistered animals that are expected to be purebred, but lack pedigree information. So far those purebreds couldn't be used in a breeding programme. With the DNA-test it is possible to compare the DNA of these suspected purebreds with reference populations of the Dutch dual-purpose cattle breeds. If they have desired phenotypic traits according to the breeding organisation and there is sufficient resemblance between their DNA and the DNA of animals in the reference population of the same breed, the suspected purebreds can be assigned to that particular breed. To construct the reference populations DNA of purebred animals with known pedigree information was used.

After registration in a herd book, these animals are immediately identified as belonging to a rare Dutch cattle breed through the national Identification & Registration database combined with the database maintained by the Dutch Rare Breed Survival Trust (SZH) in which animals are identified as a rare breed; enlarging their populations, preserving these breeds and increasing the basis for sustainable breeding.

Published on: https://www.wur.nl/en/newsarticle/A-test-to-include-unregistered-rare-Dutch-cattle-in-the-herd-book.htm

SZH VOOR LEVEND ERFGOED

WAGENINGEN UNIVERSITY & RESEARCH

MoU signed between Global Crop Diversity Trust and ECPGR

Signature of MoU by Marianne Lefort (Chair of ECPGR Executive Committee) and Stefan Schmitz (DG, Global Crop Diversity Trust) at Longyearbyen, Svalbard Islands, Norway (Photo by C. Martin, Global Crop Diversity Trust)

On 25 February, 35 international and regional genebanks, as well as national institutions and civil society organizations, from all over the world deposited seeds at the Svalbard Global Seed Vault in Longyearbyen, Norway.

At that occasion the European Cooperative Programme for Plant Genetic Resources (ECPGR) and the Global Crop Diversity Trust signed a Memorandum of Understanding for enhanced cooperation.

The two Parties will strengthen their cooperation to improve conservation and documentation of Plant Genetic Resources for Food and Agriculture and to facilitate their use as a contribution to a global system of conservation and use efforts.

The collaboration will focus on the continuing development of the European Genebank Integrated System (AEGIS) and of the European accessions catalogue EURISCO, a primary component of the world catalogue Genesys. The Parties will also collaborate in the development and implementation of the global crop conservation strategies facilitated by the Crop Trust, more specifically by bringing to bear the expertise of the relevant ECPGR Working Groups.

Expected benefits of this collaboration are better and more efficient conservation of European accessions and increased access to them and their related information, as well as increased sharing of knowledge, technologies and ideas by European genebank and crop experts to enhance global conservation efforts.

"ECPGR is really excited about today's signing and continued collaboration with the Crop Trust," said Marianne Lefort, Chair of the ECPGR Executive Committee. "In a context of uncertain climate change and increasing demands for food protection and security, safeguarding plant genetic resources is more important than ever. ECPGR wants to be a lead partner to streamline access between genebanks and crop experts in this effort to build more efficient conservation of European PGR accessions."

"Partnership and strong multi-lateral cooperation are key to ensuring the world's most valuable crops for food security are protected," said Stefan Schmitz, Executive Director of the Global Crop Diversity Trust. "The Crop Trust's continued collaboration with ECPGR will make significant progress towards that protection. We welcome the expertise and existing cooperative spirit of the ECPGR and look forward to developing bold strategies for crop conservation. It is exciting to work alongside such an organization for the efficient, permanent protection of the world's crop diversity."

Droimeann cattle breed recognised as a Native Rare Irish breed

The Minister for Agriculture, Food and the Marine of Ireland officially approved the Droimeann cattle breed as a Native rare Irish breed in February 2020.

The Minister recognised the efforts of a dedicated core of breeders over many decades in collecting and selective breeding of these animals resulting in the Droimeann now being recognised officially as a key part of the rich and unique history of Irish cattle breeds.

Minister Creed said that 'there are many factors such as cultural, historic, and genetic diversity that make the Droimeann a breed with a rich history unique to Ireland. They have an adaptability that has allowed them to thrive in Irish production conditions. There are historical references to the Droimeann breed for many years, and thanks to a lot of work by many people and the advent of modern Genotyping techniques, we have finally been able to prove their uniqueness as a breed'

The Minister acknowledged the value of Animal Genetic Resources to the Biodiversity mix across the country 'Droimeann breeders have shown themselves to be very diligent in their role as custodians of this breed over many years. While numbers of these animals are very low, and can be considered 'at risk', I am confident that the dedication of the Society will allow numbers to increase in the coming years.

The Droimeann cattle breed

The Droimeann cattle breed has been recorded as a breed Native to Ireland in many cultural and historical records for a number of centuries. It has played a key role in Irish Society, and the evolution of livestock farming throughout Irish history.

Evidence for the breeds existence is supported through famous poetry and songs from Celtic/Irish history.

Based on the genetic distance from other breeds a DNA profiling has shown that the breed is very unique. The performance has been recorded as being distinct from other breeds.

The Droimeann Cattle Society was recognised by DAFM as a breed society and approved to maintain a breeding programme in Ireland in 2018. Considerable support was given to the Society over a number of years in order for it to obtain this recognition and operate its breeding programme.

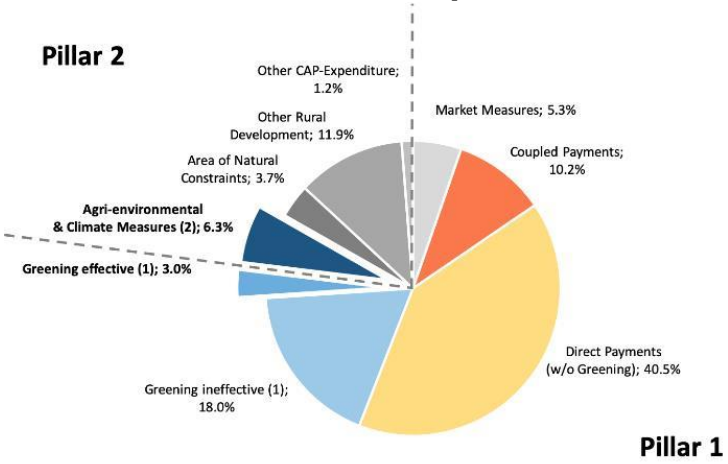
Assessment of the breed to be considered Native depended on a range of criteria including;

- General information: country of origin, Numbers of animals in breeding age: males, females, total. Trend in numbers in last 3 years: decreasing, stable, increasing. Percentage of females bred pure, Estimated risk status
- History and age as a separate breed. Ecological, cultural-historical and social value. Geographical location and isolation.
- Performance of the breed. Adaptation to production/environmental circumstances (climates, feeds, diseases, management systems, terrains).
- Breed purity i.e. influence of other breeds based on DNA/Genomic analysis. Relationships within breed, degree of inbreeding

See: www.facebook.com/DroimeannCattleSociety/

Newsflash

CAP Scientist Position Paper



Source: https://relationalthinkingblog.com

More than 3,600 researchers from across Europe call for the EU Common agricultural Policy (CAP) to take into account scientific evidence. In a position paper written by 21 authors and coordinated by scientists from the German Centre for Integrative Biodiversity Research (iDiv), the Helmholtz Centre for Environmental Research (UFZ) and the University of Rostock, the EU Commission's current reform proposals were identified as inadequate. Billions of euros of taxpayers' money are about to be poured down the drain - making it unlikely to reach the climate change and nature conservation targets or the envisaged social objectives. The researchers are proposing ten measures for a sustainable and fair agricultural policy.

One third of the EU annual budget goes into funding agriculture and rural development. This shall guarantee farmers' incomes. While according to the World Biodiversity Council (IPBES), intensive agriculture is the number one cause of biodiversity loss. An important public concern (including many farmers) is a more sufficient CAP funding for environmental and climate protection.

Scientists across Europe share these public concerns. "The post-2020 CAP, as proposed by the European Commission, is an inadequate response to environmental and sustainability challenges, and makes a business-as-usual scenario very likely," write the authors of the position paper. Twenty-one ecologists, economists and agricultural scientists drafted the position paper and posted it in the form of a petition on the Internet in autumn last year.

Over 3,600 scientists, from all 27 EU countries and 36 others, have signed the petition. It has now been closed and the position paper with the list of signatories is publishedSee: https://www.idiv.de/en/cap-scientists-statement.html.

Save the Date – SAVE meeting 2020

The SAVE Annual Meeting 2020 will take place from 17/18 until September 20th. The first preparations are already being made in collaboration with our German partner organization GEH: The Bavarian Central Agricultural Festival takes place since 1812 every four years on the Theresienwiese in Munich. It is a festival at which the topics of tradition, customs, nutrition and new trends in agriculture and forestry are presented. Old breeds and varieties will also be represented. Since this agricultural festival takes place one week before the famous Oktoberfest, our partners are currently looking for a suitable conference location near Munich. Take advantage of the rare opportunity to get to know agricultural traditions, practices and trends in southern Germany, which takes place only every 4 years. Further information: SAVE Network Office: office@save-network.com.

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DYNAVERSITY – towards European Policy Makers

The Horizon 2020 project DYNAVERSITY develops new governance models and new forms of networking in order to promote exchange and knowledge of the actors at all levels about how the respective conservation networks act. In addition to the basic research, various events have already been held, brochures have been published and a touring exhibition has been organized. Political decision-makers are also an important element. In addition to many other activities, the focus now is on planning the project completion with the presentation of all results. The official closing event is scheduled for the 4th September 2020 in Brussels. EU parliamentarians and decision-makers from the responsible commissions need to become more aware of the importance of agrobiodiversity for our food security. Against the background of the CAP reform, the EU's "farm-to-fork" strategy and the "green deal", it seems more important than ever to raise awareness among decision-makers. We will keep you up to date with the further development through our communication channels.

Further information: http://dynaversity.eu/

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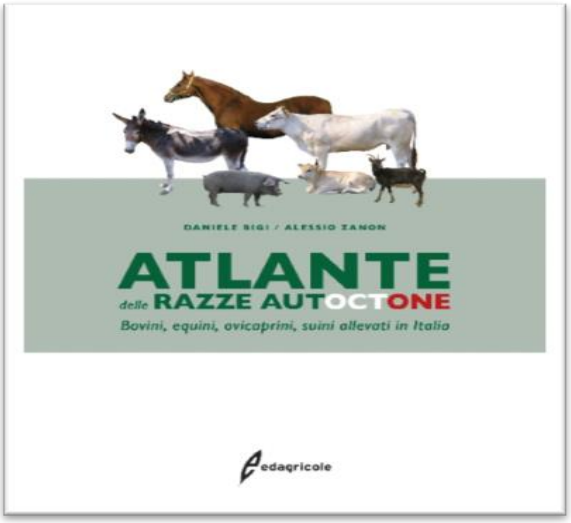
Atlante delle razze autoctone. Bovini, equini, ovicaprini, suini allevati in Italia

Atlas of indigenous breeds: Cattle, horses, sheep goats and pigs, 2nd edition 2020.

An update of the atlas of livestock breeds in Italy has been published after more than 10 years. Besides actualized data, there is a special introductory chapter for each of the six farm animal species about the evolutionary history of the species and provides a picture of the spread of breeds in Italy.

The text is divided into tabs, making it easier to find information. The alphabetically listed breed information is grouped by species. All domestic cattle, horse, donkey, sheep, goat and pig breeds raised in Italy are treated. In addition to the domestic breeds, some breeds with international distribution were included. Some of them have been used to improve native breeds. Others have led to partial or complete replacement of native breeds, particularly in cattle and pigs. The breeding system used for each breed is mentioned. The degree of endangerment is also specified. A map of the distribution area as well as informative photos completes each tab page.

In Italian:



Bigi Daniele, Zanon Alessio (2020):
Atlante delle
razze autoctone. Bovini, ovicaprini, suini allevati in Italia, ISBN 978-88-506-5561-8.

DAGENE Conference 2020

DAGENE
Dunamenti Állatfajták Génmegőrző Nemzetközi Egyesülete
International Association for the Conservation of Animal Breeds in the Danubian Region (1400 Budapest, PO Box 2. Hungary)

First call for DAGENE Meeting 2020

The DAGENE Annual Conference will take place from June 3 to 5, 2020 in Vienna, Austria. In addition to the general assembly, scientific presentations and posters on the topic of “Animal genomics for rare breeds” are on the program as well as excursions e.g. to the Schönbrunn Zoo with the "Tiroler Hof", where typical Austrian breeds are shown.

Contact: Janos Posta: postaj@agr.unideb.hu.

Greek rare Breeds as Art Objects

Kokovitiko Sheep

Greece has many traditional livestock breeds. The Australian artist Jason Roberts in collaboration with Amalthia (network for the protection of indigenous Greek farm animals) visited numerous farms, herds and shepherds with rare breeds in their traditional surroundings. While Jason studied, sketched and photographed the animals, Amalthia representatives took samples for genetic analysis.

Back in Melbourne, Jason has meticulous painted a remarkable and unprecedented series of works over the next two years that portray these breeds and the diverse wild and rural areas in which they live. Skyros ponies are depicted on their windswept Sporadic island, Greek shepherd dogs defend sheep from wolves, a farmer in Ithaca milks his herd of Kefalonian sheep in an olive grove on the outskirts of Vathy, to name just a few of the topics.

Karystos Goat

In May 2020 the pictures will be shown in Athens and published in an illustrated book. The aim is to make the diversity of Greek landraces known to a wide audience.

EpirusMolossos

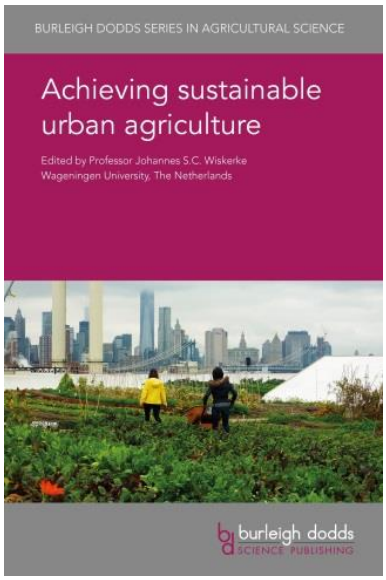
The project is funded by a grant from the Stavros Niarchos Foundation and supported by the Athens government. Jason will be present at the opening on May 8th.

Sfakia Sheep

The exhibition will take place from May 5th to 29th at the "Melina" Cultural Center, 66 Heraklidon str., Thissio, Athens - Subject to the COVID-19 situation.

Contact: amalthia.org@gmail.com

Achieving Sustainable Urban Agriculture



Urban agriculture becomes more and more important in a world, where more people live in cities than on the countryside. This is true not only worldwide but also in Europe. The book reviews key recent research on developing urban and peri-urban agriculture. The first chapter "Building urban agriculture networks" discusses ways of supporting urban agriculture, from policy and planning to building social networks for local food supply chains.

Another chapter deals with "Technologies for urban agriculture" including rooftop systems and vertical farming. The book also assesses challenges and improvements in irrigation, waste management, composting/soil nutrition and pest management. Case studies on urban farming of particular commodities including horticultural produce, livestock, and forestry round off the topic.

The book targets a wide range of people: researchers of agricultural science, urban planning and environmental science as well as urban planners and policy makers in local and national government and other bodies promoting urban agriculture.

Achieving Sustainable Urban Agriculture
Johannes S. C. Wiskerke et al (2020)
Burleigh Dodds Science Publishing Limited
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https://shop.bdspublishing.com/store/bds/detail/workgroup/3-190-83836

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Rural Europe on the move

The Forum Synergies launches its new book "RURAL EUROPE ON THE MOVE – A travel guide to transitions".

In this collective work, twelve authors share their personal stories of bringing together local communities, farmers, foresters, environmentalists, and political decision makers so as to facilitate the transition towards a more sustainable and inclusive rural Europe. Together the authors explore twenty-five years of experiences of Forum Synergies throughout Europe.

From Portugal to Latvia, from Scotland to Romania, from islands to mountain regions, you will discover people and their places, the challenges they face and the solutions they have found, as individuals and as local communities. The book reveals the importance of traditional knowledge of local communities and the innovative energy of the youth in moving towards a more sustainable and social rural economy. It shows how conflicts may be solved by constructive communication and mediation, and how local food strategies can even contribute to improved food legislation.

"Rural Europe on the move" calls upon young people to make their rural regions and communities fit, so that they can respond to the challenges of climate change, biodiversity loss and social exclusion, making their own rural future more resilient and attractive.

You can read Rural Europe on the move online and/or download for free as pdf version: http://www.forum-synergies.eu/rubrique134.html.

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Last but not least

Longer shelf life for fruits and vegetables thanks to edible coating

© https://techliciousmagazine.com/2017/12/10/apeel-sciences-longer-shelf-life-for-fruits-and-veggies/

Thin and edible layers on fruit, vegetables or meat make products last longer and reduce food waste. This could even save pesticides.

Experts currently assume that around a third of the world's food is thrown away on the way from the field to industry and consumers. Half of this goes to the account of the consumer. Fruit and vegetables in particular often end up in the trash can because of mould. That is why scientists are looking for ways to extend the shelf life of food without reducing its nutritional value and using additives that consumers accept and that are as free of plastic as possible. One of these solutions is already on the market in the United States. The Californian company Apeel Sciences coats citrus fruits, avocado and asparagus with a thin and opaque protective cover that can also be eaten. This extends their shelf life two to three times, Apeel claims.

The company's own scientists looked at the mechanisms of nature. Plants are covered with a kind of wax layer, the cutin. This ensures that as little water as possible is lost through leaves or fruits and that as little oxygen as possible gets in. Oxygen, for example, is responsible for making bananas turn brown because of their enzymatic metabolic processes. In addition, the wax layer protects against intruders such as mould, yeast or bacteria. The fact that citrus fruits have a much longer shelf life than strawberries is ultimately due to the different structure of the cutin.

Apeel sprays fruit and vegetables with a layer that resembles this cutin shell. It consists of fatty substances contained in tomato peel, fruit stalks or grape seeds, waste products from the food industry. The U.S. Food and Drug Administration (FDA) has already approved the product, and approval is pending in Europe. It is obviously safe and harmless to eat products treated in this way. On top of that, according to Apeel, the biofilms are invisible, odourless and tasteless. And if they are not eaten, as in the case of coated avocados or bananas, then like the peels, they are completely biodegradable

Source:
https://techliciousmagazine.com/2017/12/10/apeel-sciences-longer-shelf-life-for-fruits-and-veggies/

The SAVE team wishes you and your family health, lots of energy for the coming season and Happy Easter!