

SAVE e-News 2/2016

Safeguard for Agricultural Varieties in Europe

The quarterly electronic information service of the SAVE Foundation



SAVE Project Office

Neugasse 30, CH 9000 St. Gallen, Switzerland / www.save-foundation.net / office@save-foundation.net

Who pays for Seeds?

Thoughts on financing organic plant breeding



Tomato diversity – important for organic breeders

photo: Gunenfelder

Johannes Kotschi and Johannes Wirtz from the “freie Hochschule für Geisteswissenschaft, Section for Agriculture”, Dornach, Switzerland and AGRECOL, Göttingen, Germany analyzed models to finance organic (bio) breeding. Alternatives to conventional plant breeding and the concentration on very few plant varieties also in the organic breeding need alternatives. Breeding initiatives of organic plant varieties which also include rare, open flowering varieties need a broader basis – both societal and financial. Hereafter we present a summary of the study:

Plant breeding is as old as agriculture. Our crops are the result of thousands of years of selection, a human-led evolution. Modern, scientific plant breeding, however, emerged only in the second half of

the 19th century. Modern agricultural plant breeding has become an industry like any other. Increasing privatization of genetic resources and increasing market concentration of seed companies dominate this development in an extreme fashion. Consequently, important plant breeding tasks are ignored because they run counter to the logic of the market.

A new sector in plant breeding has emerged. In addition to private plant breeding and governmental organizations, independent, non-profit organic plant breeding is asserting itself as a third actor in the field. Civil society – associations, foundations and informal networks – has taken on the task of developing suitable crop varieties for bio agriculture and horticulture as well as the conservation and further development of rare traditional varieties.

Its dedication to the development of crop varieties for organic agriculture and horticulture makes patently clear its great importance in our everyday life, for it boosts ecology and defends the ecosystems. Today at last, genetic diversity, through non – profit organic plant breeding, is almost free of chemical input, which leads to the ultimate preservation of vital sources, such as water, soil and air.

Although organic non – profit breeding compared to conventional breeding, is dwarfed, its value finally was recognized and in 2013 in Germany and Switzerland, it received funds up to 2.5 million Euro, with cereals having the share of 55% and vegetables the 32% of this amount.

But the benefit of organic plant breeding extends beyond agricultural issues to high importance social issues. The whole society enjoys the benefit of organic plant breeding, because it promotes: a) The variation of organic farming (organic and biodynamic food production systems, absence of chemicals, high quality food), b) Ecosystem services (ecologically appropriate cultivation of landscapes adhered to the precautionary principles of European Common Agricultural Policy – CAP), c) The agricultural biodiversity (achieves food security, adapts agriculture to climate change) and d) Dignity and integrity of the plants.

The European CAP itself recognizes the topic of crops and their diversity conservation, as a social matter and therefore, finally supports it with subsidies. All these factors contribute to the classification of organic plant breeding as an important common good and argue that it should be financed as such.

Funding possibilities for organic plant breeding have their proponents, as well as their opponents. The proponents support the idea that breeding should be based on conservation, protection and development issues and not on the return on investment.

The organic breeding procedure aims to be part of the Open Source Licenses (the Open Source Licences protect a good against privatization and secure that it is accessible by anyone who wants to use it). For only then the seeds and their varieties will be recognized as “public good” and they will be protected against privatization. Likewise, only then it will be secured, that they will be accessible by everyone. It becomes clear that Open Source Licenses operate as a future potential, ensuring the protection of non – profit breeding and enhancing the common pool of plant genetic resources.

The selling procedure of the seeds differs from variety to variety, for instance, selling cereal seeds is different from selling vegetable seeds or organic seeds. Additionally, conventional seeds are cheaper than organic and this is the reason why organic seeds are often not used, even if they are available.

A levy is discussed, which would correspond to the price difference between conventional and organic seeds. This could support the organic breeding. Although breeding organic plants is being constantly recognized as a very beneficial factor to the society and natural environment, it cannot finance itself. Therefore a contribution from sources such as processors, traders, consumers, growers etc. is essential. Starting almost 10 years ago, promising co-operations have occurred. Co-operation for example between breeding and organizations (Naturata International, Acting Together, Kultur Saat Association), Super Market Chain (Coop), Software Foundation (collaboration with the Federal Association Natural Food Natural Products), the Keyserlingk Institute and many other companies.

Now, the role of foundations is very significant regarding to the financing of non – profit organic plant breeding. These breeding initiatives represent a social task and therefore they ought to be non – commercially organized, consequently they receive sponsorship by funds from foundations. Within governmental funding, the organic plant breeding comes away empty handed, but large amounts of money are invested in bio-technology research to promote the private sector. It becomes clear, that in order the idea of organic breeding to be financially supported and intensive public relations, lobbying, fundraising and disbursing of funds for breeding, to be far more effective, they have to operate under the context of a “Pan – European” Organization. For the reasons mentioned above, the Seed Fund of Future Foundation Agriculture (Zukunftsstiftung Landwirtschaft) was established in 1996 (the Seed Fund in Germany is the only one of its kind, world– and European wide).

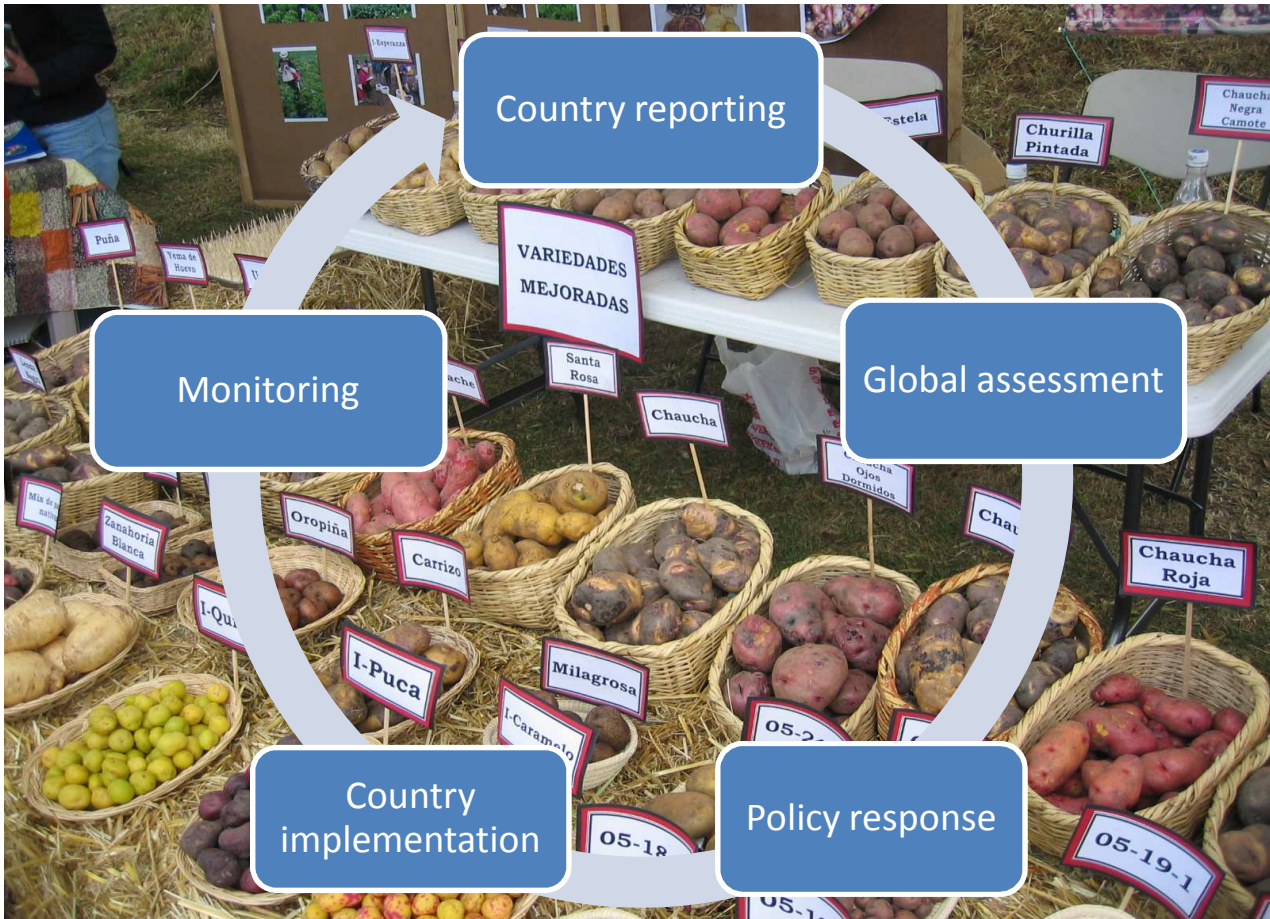
Although a centralized European Seed Fund for all EU member states, at the moment, seems to be utopian, the Seed Fund Organization in Germany is paving the way. The European Consortium for Organic Plant Breeding (ECO-PB), together with IFOAM Europe, are taking steps towards a more effective coordination of existing breeding initiatives.

The non – profit organic plant breeding has introduced itself, in a dynamic way by taking initiatives and developing suitable crop varieties for organic agriculture and horticulture.

Now, the challenge is to be competitive in the market. This will be accomplished with further strengthening of the organic plant breeding process, by building a strong social and financial Network

The whole study is available under: http://www.apbrebes.org/files/seeds/files/Kotschi_%26_Wirz%20Engl_12_05_15.pdf

Conservation and sustainable use of genetic resources for food and agriculture: FAO's Commission on Genetic Resources for Food and Agriculture



The work cycle of the FAO Commission on Genetic Resources for Food and Agriculture

Biodiversity for food and agriculture is among the earth's most important resources. Crops, livestock, aquatic organisms, forest trees, micro-organisms and invertebrates – thousands of species and their genetic variability – make up the web of biodiversity upon which the world's food production depends. Maintenance and use this wide range of diversity – both diversity among species and genetic diversity within species – means maintaining capacity to respond to future challenges, such as population growth and climate change. On the other hand, with the erosion of biodiversity, the potential to adapt agriculture to these challenges is put at risk.

Yet agricultural biodiversity is still being lost. Causes of this genetic erosion include: the replacement of local varieties and breeds by improved varieties or breeds; agricultural intensification; deforestation and land clearance; the introduction of new pests and diseases; population pressure; lack

of sustainable resource management; and inadequate policies and legislation.

Only intergovernmental body specifically dealing with biodiversity for food and agriculture



Originally established by the UN Food and Agriculture Organization (FAO) in 1983 to address *plant* genetic resources for food and agriculture, the Commission on Genetic Resources for Food and Agriculture provides since 1995 an intergovernmental forum

mandated to deal with all components of biodiversity relevant to food and agriculture. With its currently 178 countries and the EU as Members, the Commission is the only intergovernmental body that specifically deals with the conservation and sustainable use of genetic resources and biodiversity for food and agriculture. The Commission is assisted by a number of subsidiary bodies, including four intergovernmental technical working groups addressing plant, animal, forest and aquatic genetic resources. Access and benefit-sharing issues are currently being addressed by a Team of Technical and Legal Experts on Access and Benefit-Sharing with inputs from the working groups.



Between 1993 and 2001 the Commission negotiated the International Treaty on Plant Genetic Resources for Food and Agriculture which provides, in harmony with the Convention on Biological Diversity, for the conservation and sustainable use plant genetic resources for food and agriculture and the fair and equitable sharing of the benefits arising out of their use. Due to their close historical link and as both, the Commission and the Treaty, form part of FAO, they are quite frequently confused with each other. However, the Treaty has its own governing body, the two bodies differ in membership and their secretariats are separate.

The Commission's work is country-driven

At each stage of the Commission's work cycle, at the level of the assessment of the status of genetic resources, at the policy response level, at the implementation

- Countries initiate, through the adoption and revision of the Commission's Multi-Year Programme of Work, the preparation of global assessments of the state of the world's genetic resources/ biodiversity for food and agriculture.

- Global assessments of the state of the world's genetic resources are based on country reports.
- In response to the global assessments prepared under the responsibility of FAO, Commission Members consider gaps and needs identified and usually manage to agree on policy instruments, such as global action plans, guidelines or technical standards. Such agreement may result in legally binding policy instruments, such as the Treaty; more often they result in political commitments by governments, as reflected by global action plans or voluntary guides.
- The Commission also strives to facilitate and support the implementation of agreed instruments by countries and to this end supports implementation mechanisms and monitors national implementation, facilitated through web-based monitoring systems created and operated under the Commission's guidance.
- Monitoring the implementation of the Commission's action plans contributes directly to the updating of status assessments and about every ten years the Commission's work cycle, as identified in Figure 1, leads to a new global assessment of each sector of genetic resources for food and agriculture, a review of related policy instruments and of the implementation and monitoring mechanisms.

The article was provided by Dan Leskien, FAO, Rome, Senior Liaison Officer, FAO Commission on Genetic Resources for Food and Agriculture: www.fao.org/nr/cgrfa/cgrfa-home/en/



IMAGE – Genebanks and Livestock Farming



The kick-off meeting of the H2020 IMAGE project took place in Paris, May 19-20, 2016. It gathered 50 participants from 11 European countries and 1 non-EU country, Colombia.

IMAGE stands for Innovative Management of Animal Genetic resources. It started on March 1, 2016, and gathers 28 partners, including 3 SMEs, 3 NGOs, FAO, 9 research institutions, 11 higher education and research, and INRA Transfert, a subsidiary from INRA, the coordinating partner. Thirteen EU countries are involved, together with Switzerland and four non-European countries: Argentina, Columbia, Egypt, Morocco. The SAVE Project Office is one of the NGO partners within this project.

IMAGE aims at enhancing the use of genetic collections¹ and upgrading animal gene bank² management. IMAGE will further develop genomic methodologies, biotechnologies, and bioinformatics for a better knowledge and exploitation of animal genetic resources³. The ultimate goal of the project is to demonstrate the benefits brought by gene banks to the development of more sustainable livestock farming systems. The main approaches of IMAGE were presented:

Involving the stakeholders from the beginning : a first meeting will take place at the opening of the EAAP meeting in Belfast, August 28, 2016; different types of stakeholders are relevant for IMAGE and targeted meetings may be needed on a case by case basis;

- Improving the reproductive quality of the gene bank samples and their 'usability' on the field, with the development of new protocols and the perspective to assess their cost-efficiency;

- Improving the connection between gene bank managers, and support the set-up of the European Gene bank network for Animals, EUGENA, in connection with the European Regional Focal Point;
- Assessing the potential of genetic diversity present in genetic collections, by genomics and data integration ;
- Facilitating access to information and resources, by developing a new model for data integration in a web portal, and registering collections into Biosamples database of EMBL-EBI;
- Developing and testing strategies and scenarios to facilitate the use of this diversity and to enhance synergy between gene banks and on-farm management of genetic resources ;
- Increasing awareness about the value of gene banks by a multi-faceted dissemination programme, including decision-support tools for breeds and North-South workshops for capacity building.

The project is organized in 6 research work-packages (WP), one dissemination WP and the management WP. The kick-off included a half-day devoted to WP meetings and exchanges between WPs, in order to facilitate collaborations between WPs. First priorities are to launch surveys for (1) gene bank managers (2) stakeholders, and to map available molecular data on gene bank collections, in order to identify gaps and set up priorities for further characterization through whole genome sequencing. At the same time, studies aimed at improving reproductive biotechnologies will be starting.

Raising awareness about the value of animal gene banks will contribute to popularize them in the society as a whole, since they represent both a heritage and a resource for the future,

¹ Animal genetic collections are sets of biological samples, either of reproductive (semen, embryos, etc.), or other biological material (DNA, blood, etc.) obtained from animal genetic resources

² Gene banks are infrastructures aimed at collecting, storing and documenting genetic collections for research and breeding

³ Animal genetic resources are made up of all animal populations obtained as a result of domestication and selection

MOVE

Marketing of Organic VintagE plant material



Beet Seed Production; Photo: Lise Christina Deleuran

Markets for products with history, distinct characteristics and/or regional origin are in rapid expansion and constitute a promising emerging market. Recent studies suggest that differentiated development in production presents a plausible future for increased biodiversity in the food sector, with different 'worlds of production' emerging. This includes the production of vintage (rare) vegetables with distinct characteristics.

In Denmark, as in the rest of Europe, interest in preserving and utilizing vintage plant material is growing and projects focusing on e.g. history of the varieties, distinct characteristics (such as potential health aspects) and agronomic robustness have been initiated in recent years and has further increased public interest. Along with these projects there has been a resurgence of interest in making available, vintage plant material with distinct characteristics for growing mainly organic products on larger scale and hence for commercial sale. Danish organic and conventional vegetable producers are at present requesting seed of such varieties, but so far no commercial seed production of this material has been initiated.

The project MOVE (Marketing of Organic VintagE plant material) was recently initiated (2016) and therefore no results are presented here. In the coming years MOVE aims to make a model for commercial growth of interesting varieties with distinct characteristics that cannot necessarily

justify the cost of an official DUS (Distinct, Uniform and Stable) testing from discovery to final production. The project consists of three steps: 1) the process of approval and introduction onto the common Catalogue; 2) demonstration of quality seed multiplication of requested vintage varieties at experienced seed growers sites; 3) securing seed quality for organic producers of cultivars with distinct characteristics.

The vegetable varieties MOVE will focus on originates from NordGen (the Nordic Genetic Resource Center). Special attention will be given to cabbage and beets and to varieties from NordGen previously tested in the project MaxVeg (Maximising the taste and health value of plant food products - impact on vegetable consumption, consumer preferences and human health factors' supported by the Danish Strategic Research Council 2010-2015: http://www.crt.dk/media/55975/3_markets_for_bitter_and_strong_tasting_vegetables_and_the_new_nordic_kitchen_maxveg.pdf). Clinical studies in the MaxVeg project showed that bitter and strong tasting cabbage and root vegetables had an



Cabbage Seed Production; Photo: Lise Christina Deleuran

additional positive effect on diabetes type 2 patients compared to more mild and sweet tasting cabbage and root vegetables. The taste differences were obtained by use of the diversity of taste characteristics found among vintage varieties from NordGen and by influence of cropping conditions.

Project participants are Aarhus University, Vikima Seed and NordGen. Find more information about the progress of the project <http://icrofs.dk/forskning/dansk-forskning/organic-rdd-22/move/>

MOVE is a project under the Danish Organic RDD 2.2 programme coordinated by ICROFS (International Centre for Research in Organic Food systems). It is funded by the Green Development and Demonstration Programme under the Ministry of Environment and Food

Contact: Senior adviser Lise Christina Deleuran, Aarhus University, Department of Agroecology, Denmark



Farmers' Rights : Electronic Survey on the Implementation

As farmers are custodians and developers of crop genetic resources in the field, their rights are crucial for enabling them to maintain their vital role to conserve diversity for local and global food security, nutrition and poverty eradication. Realizing Farmers' Rights means enabling farmers to manage, develop and dynamically conserve crop genetic resources as they have done since the dawn of agriculture, and recognizing them for this indispensable contribution to the global pool of genetic resources for food and agriculture.

The International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) was adopted by the Thirty-First Session of the Conference of the Food and Agriculture Organization of the United Nations on 3 November 2001. The International Treaty is the only operational international agreement, multilateral binding instrument recognizing Farmers' Rights based on "...the enormous contribution that the local and indigenous communities and farmers of all regions of the world, particularly those in the centres of origin and crop diversity, have made and will continue to make for the conservation and development of plant genetic resources which constitute the basis of food and agriculture production throughout the world".

The International Treaty calls for the promotion of Farmers' Rights at the international and national levels and specifically recognizes in Article 9 that the responsibility for realizing these rights, as they relate to plant genetic resources for food and agriculture, rests with the national governments. In accordance with their needs and priorities, each Contracting Party should, as appropriate, and subject to national legislation, take measures to protect and promote Farmers' Rights, including:

- Protection of traditional knowledge relevant to plant genetic resources for food and agriculture;

- Equitably participate in sharing benefits arising from the utilization of plant genetic resources for food and agriculture

- Participate in making decisions, at the national level, on matters related to the conservation and sustainable use of plant genetic resources for food and agriculture

In this context, Farmers' Rights are basically about enabling farmers to maintain, develop, and utilize plant genetic diversity, and about recognizing and rewarding them for their contribution to the global genetic pool and food security. Thus, the realization of Farmers' Rights is a cornerstone in implementation of the Treaty. But since the implementation of the International Treaty, to what extent Article 9 has been implemented by Contracting Parties? What are the current views, perceptions and understanding about Farmers' Right? What are the measures and means to realize Farmers' Rights?

The Secretariat of the International Treaty is conducting a global electronic survey on the implementation of Farmers' Rights aimed to gather views, perceptions, options and approaches and possible strategies to advocate for the implementation of Farmers' Rights. **The survey will be online until 30 June 2016 and is available in English, French and Spanish:**

English:

https://www.surveymonkey.com/r/global_survey_FR_en

French:

https://es.surveymonkey.com/r/global_survey_FR_fr

Spanish:

https://es.surveymonkey.com/r/global_survey_FR_es

For more information or queries: please email:
PGRFA-Treaty@fao.org

Newsflash

Arca Deli® Award 2016



The Arca Deli Awards® - a price for unique products and services made from rare autochthonous plants and breeds - will be awarded at the SAVE Annual Meeting 2016 in Metlika, Slovenia. The jury welcomes your product or service which is recommendable as a model or example

of good practice to promote rare breeds and varieties.

The Arca Deli® Award is allowed for a respective single product (or service). The year of judging will

be on the label. The Arca-Deli® award can be valuable especially on local markets and encourages other farmers and producers to improve the quality of their own products and services. This means that the niche products associated with locally adapted breeds and varieties become, on a small scale, more competitive and more economically viable.

Please have a look at the SAVE website (www.save-foundation.net). You will find the rules for submission, judging and awarding. **The Deadline for entries is Friday, 9th September 2016.** We are looking forward to get your entries. If there are any questions, please contact office@save-foundation.net

SAVE Annual Meeting 15-17th September 2016



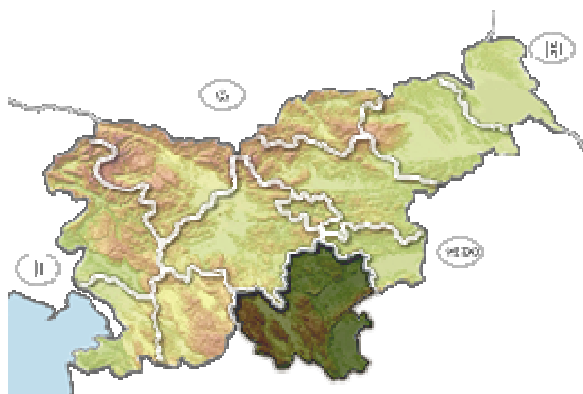
As already announced, the SAVE annual meeting in Slovenia will take place in Metlika in the Kolpa Nature Park. By derogation from the SAVE eNews 1/2016 the date changed. It will take place from **15-17th September 2016.**

Metlika lies in south-eastern Slovenia on the left bank of river Kolpa at the heart of the White Carniola region. The river Kolpa is a tributary of the river Sava and forms the border between Croatia and Slovenia.

The river gives the whole area its distinctive character. Its rich landscape and cultural history makes the nature park an ideal place for experiencing small-scale traditional agriculture, paired with traditional craft and modern tourism.

The 10. European Seminar on Agrobiodiversity will include interesting presentations about the animal sector as well as the plant sector. Also insights into the collaboration between nature protection and conservation of Agrobiodiversity will be given. Dur-

ing excursions in the surrounding area the agrobiodiversity in harmony with natural biodiversity will be observed and experienced directly. Tasty traditional food will round off the annual SAVE meeting. More information and the registration form is available under www.save-foundation.net. For any questions please contact the SAVE Network Office Wageningen: office@save-network.com.



National Genetic Laboratory in Bulgaria assist Selection in Livestock



The Agriculture and Food Minister Dessislava Taneva and Bernard Lehmann, Director of the Swiss Federal Office for Agriculture, opened a National Genetic Laboratory for DNA analysis, equipped with support from the Bulgarian-Swiss Cooperation Programme in May 2016.

The laboratory will help Bulgaria to use the latest methods for the identification of livestock breeds and implement breeding programmes, to create productive animals for meat and milk, but also for

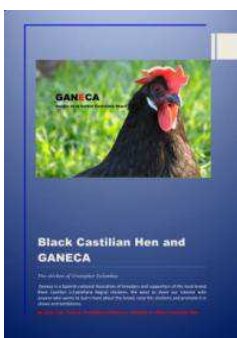
conservation of the highly endangered diversity of livestock in Bulgaria. In Bulgaria 33 indigenous breeds are official accepted, 22 of them are sheep breeds. The new set in the genetic laboratory will help to identify the genes of the indigenous livestock breeds.

The laboratory is part of the programme "Linking Nature Protection and Sustainable Rural Development" as a part of the Reform Fund established with the objective of promoting the civil society's contribution as important actors of

development and participation in the frame of the Swiss-Bulgarian Cooperation Programme

The Executive Agency on Selection and Reproduction in Animal Breeding is also involved. Bulgaria should take the niche of natural and organic products on the European market. Lehmann said the lab's opening was a great day for Bulgarian-Swiss cooperation as it will help to improve the quality of products and the environment. Swiss Ambassador Denis Knobel attended the event.

Black Castilian Hen



Ganeca, the Spanish association "Amigos de la Gallina Castellana Negra" published a comprehensive brochure about the Black Castilian Hen, the "Castellana Negra". This ancient Spanish breed is known not only in Spain but also in several European countries like England, Austria and Germany. It is said

that already Christopher Columbus travelled with this chicken to America in the 15th century. In the first half of the twentieth century, the Castellana Negra was one of the most common chicken breeds in Spain with an annual production of 220-225 white eggs. The industrialized egg production led this chicken breed near to extinction. Today, the Black

Castilian is included in the Spanish national conservation programme improvement and promotion of livestock breeds.

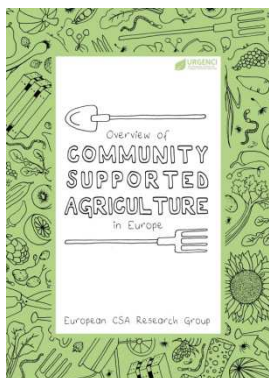
The Castellana Negra chicken is well known for its soil scratching and digging for insects. It is used to help to turn the compost, which helps the gardener to avoid for example insect pests. More emphasis needs to be paid on the recovery of organic waste in homes. Black Castilian can eat all vegetable scraps as well as rests of fish and red meat. Its manure is a very good fertilizer and activator for the compost rotting.

This interesting publication is available at: http://www.ganeca.org/PDF/BlackCastilianGaneca2015actual_v3.pdf

Overview of Community Supported Agriculture in Europe

The experiments in farming described in this book represent new social forms of agriculture which have arisen in recent years while traditional family farms have declined and industrial agriculture has increased. These new farmers involve many local families directly in the decisions and labour which

produce the vegetables, fruits, milk, and meat they eat. In that way they re-establish a link between the farm, the farmer, and the consumer. While this approach may not be the full answer to the questions posed by the modern agricultural dilemma, we believe it has much to offer.



In simple terms, these efforts arise under the name Community Support Agriculture (CSA). A CSA is a community-based organization of growers and consumers. The consumer households live independently, but agree to provide direct, up-front support for the local growers who produce their food. The growers agree to do

their best to provide a sufficient quantity and quality of food to meet the needs and expectations of the consumers. In this way the farms and families form a network of mutual support. Within this general framework there are wide latitudes for variation, depending on the resources and desires of the participants. No two community farms are entirely alike

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Geographical coverage: European Union (European Union). Full text available at:

<http://www.accesstoland.eu/IMG/pdf/overview-of-community-supported-agriculture-in-europe-f.pdf>

Award for SAVE - MET Project in Romania



A good example of sustainability is the project "Sustainable Agriculture in Remote Areas of Romania:

Conservation and Adding Value to Fruit Varieties" This SAVE - MET (Mihai Eminescu Trust) joint project ended in 2014 officially. But the activities are going on: Recently this project, supported through the Swiss contribution programme, has got the "Civil Society Gala" award in the category environmental protection and sustainability. Congratulations to our partners in Transylvania! If you want to see the fruit orchard or taste the local apple juice, please contact Mihai Eminescu Trust contact@mihaieminescutrust.ro;

web: www.mihaieminescutrust.ro

Latest travel Tip: Arca Net

Holidays are planned and you joyfully await exciting and relaxing days. Don't forget to have a look at www.arca-net.info, if you plan to experience rare



breeds or plant varieties and/or trees at your destination. With 635 entries Arca Net gives a comprehensive overview about institutions, farms, farm parks, and arboreta, which show rare breeds and varieties to the public. Some of the Arca-Net - institutions may be open only on request. Do not hesitate to call them and announce your willingness for a visit! Descriptions of the institutions, directions how to get there, offers and information on the livestock breeds kept and plants cultivated, their distribution, status of endangering and their history are available from Arca-Net. Some information about products that can be purchased in the respective institutions is also included

The SAVE team wishes you beautiful and relaxing holidays