



SAVE foundation



European Agrobiodiversity Day

29th September 2011

Agrobiodiversity and Climate Change

Preservation or Adaptation? – Conservation in the face of a changing environment

The theme of the European Agrobiodiversity Day 2011 is “Preservation or Adaptation? – Conservation in the face of a changing environment”. Discussion about climate change is ever present in the media. Ways are sought to halt anthropologically influenced climate change or to mitigate the effects of it. However, much of the discussion revolves around single subjects such as CO₂ emissions. Agriculture, especially livestock keeping, is often blamed for high emissions of greenhouse gases. Agrobiodiversity provides humans with food and clothing and is, thus, crucial to continued human existence, even as the climate changes. With this year’s theme, SAVE Foundation wishes to explore the subject of conservation of agricultural diversity in the context of changing environmental conditions.

Thousands of years of human endeavour have provided humans with the food and other goods necessary for survival. This has occurred in harmony with local ecosystems to produce locally adapted livestock breeds, cultivated plants and agro-eco-systems. The keyword here is “adapted”. Humans have adapted their agricultural practices over years to meet changing needs, natural conditions and emerging technology. The value of locally adapted agriculture lies in the fact that it continuously changes as local conditions change.

Many farmers, interests groups and associations are working for the *in situ/on farm* conservation of agrobiodiversity. The value of *in situ/on farm* conservation is high – not only does it provide a living example of our cultural heritage and enrich our local ecological and economic systems, it also allows the breeds and varieties to continue to adapt to local conditions. These adaptations could be, in the future, essential for food security. However, this adaptation also means that some characteristics of the breeds or varieties may change over time. An animal in an *ex situ* collection – in a zoo or research farm away from its local environment or saved as frozen sperm or embryo – cannot adapt to local change. However, it can maintain its unique characteristics that could be useful in another region of the world.

SAVE Foundation promotes *in situ/on farm* conservation and therefore accepts the naturally occurring changes to breeds and varieties over time. Changing climatic conditions may well be the chance for locally adapted agriculture to show its qualities. Consumers are starting to question products that come from intensive systems. Monocultures and no-pasture systems are being rejected in favour of local, high quality food.

Ecosystem services

Contrary to what is often portrayed in the media, climate change is about much more than CO₂ emissions. The many cycles of life – for example water and nutrients – also have an effect on climate. Whilst industrial agriculture may well negatively affect these cycles, locally adapted agriculture works in harmony with them. Instead worrying about airmiles, there should be far more concern about the break-up of these cycles through the international transportation of food and agricultural products. Locally adapted agriculture provides ecosystem services that benefit us all. Water and nutrients remain within the local cycle rather than being exported as a part of a product. Extensive grazing provides habitats for wild plants and animals. Extensive farming helps to maintain and even improve soil quality and prevents soil erosion. And as climate changes, these systems and services can adapt to accommodate the changes whilst keeping all these essential systems functioning.

Conservation is linked to human health and wealth

Conservation of locally adapted agriculture with all its livestock breeds and cultivated plants is, therefore, good for local ecosystems. But this is not the whole story. Extensive farming provides landscapes that can be enjoyed by tourists. Local production provides jobs in rural areas. These factors can provide a much needed revitalisation of rural economies as well as having a positive effect on the personal “ecological footprint” as people choose to enjoy regions closer to home and products from local, sustainable systems.

Health scares related to food occur regularly. Consumers have been sold contaminated meat and vegetables or have found out that their favourite products contain carcinogenic ingredients or GMOs. These factors create great insecurity. However, a product from a local farm can enjoy great consumer confidence. The consumer can see how the animals live, they know if the local water is clean or not, they can check that employees are treated properly and whether they have suitable sanitary conditions. Talking to the farmer who produces the food inspires confidence and helps the consumer feel that they are part of the food production process.

Conservation and change

In order for the traditional breeds and varieties found in Europe to be conserved for future generations, local systems also need to be conserved. Where they no longer exist, historical research can show how ecosystems were managed in the past. However, this local conservation work also has to take account of change. Not all aspects of traditional systems were ecologically beneficial. Some systems cannot adapt fast enough to cope with rapid changes. Modern, scientific knowledge can help to find innovative solutions to these problems. Rather than concentrate on and worry about one aspect of change - CO₂ emissions and climate change – changes within the whole ecosystem should be taken into account and prepared for. This includes using suitable heritage breeds and varieties from other regions that display the qualities required, for example, in the case of diseases spreading into regions where the local breeds and varieties have no resistance and too little time to adapt. However, introducing breeds and varieties into new regions requires careful consideration to prevent harm occurring.

Locally adapted breeds and varieties have proved their ability to adapt to various climates and systems over the centuries. They contain within them both resistance and robustness in various harsh conditions. Thus, in the 21st century they remain the obvious choice for farming within a changing environment.

==> Please add some examples from your own country here!

SAVE foundation



In many countries in Europe, there are organisations supporting and promoting the conservation of Agro-Biodiversity. The SAVE Foundation, founded in 1993, acts as a European umbrella organisation for these organisations. It promotes and coordinates activities to conserve endangered breeds of domestic animals and cultivated plant varieties. The SAVE Foundation does not work with a romantic ideal of how it once was, rather the SAVE Foundation undertakes practical work to ensure a sustainable future for the diverse genetic material stored within the traditional breeds and species of Europe. The SAVE Foundation supports, plans and realises on-farm conservation projects alongside collecting and disseminating information about the traditional and endangered European agrobiodiversity. This work is undertaken in conjunction with the SAVE Partner Organisations.

SAVE-Network Office,
Josef-Belli-Weg 5,
D-78467 Konstanz

and

SAVE-Project Office,
Schneebergstr. 17,
CH-9000 St. Gallen

office@save-foundation.net
www.save-foundation.net

Your National SAVE Partner is: