

THE ARK OF PEPPER

Introduction:

The Malabar Coast of South India is the original place of pepper (*piper nigrum*) from where it spread to other countries and continents. So far at this very place a great diversity of different pepper varieties are found, wild species as well as more than 100 cultivated varieties domesticated and developed by the local indigenous growers and rural people over centuries.

So this abundant natural treasure of more than 100 autochthone varieties has to be considered as the common value of the local rural people. Along with the domesticated varieties there is still a huge natural treasure of wild pepper species observed.

As in the last generation of farmers, pepper was still cultivated upon the foundation of a wide range of pepper varieties, what we call agro-biodiversity. Each and every variety had its specific value: in terms of taste, content of piperine, oleoresin and essential oil, yield, medicinal value and its resistance to pests and diseases as well as its adaptation to various soil and micro-climatic conditions within the region.

The local farming communities had their own and indigenous varieties, some superior in taste, others adapted to draught or poor soil conditions depending on the area where being cultivated.

During the last decades of “modern” agricultural practices, introduced under the lead of western industrial economies and science, the traditional and autochthone Indian varieties were steadily replaced by hybrids with a large extend of estimated more than 90 %. So the agro-biodiversity of pepper, grown at the Malabar Coast up to the Western Ghats, has been chanced completely within a short time of 20-30 years only.

Science, Agricultural Boards and Extension Services were following uncritically the move to the so called “High Yielding Varieties HYV” and taught the farmers to use those hybrids along with the intensive application of chemical fertilizers and pesticides. This despite the reality, that the HYV-Hybrids serve their expected high yield only by the intensive use of the chemical inputs.

As a result of this influence and the promotion of agrochemical practices along with the “HYV-Hybrids”, the traditional and autochthone varieties disappeared completely. They are now endangered being extinct within a short period of time if there are no measures being taken to rescue them.

Furthermore, future systems of sustainable agriculture have to be proven upon new parameters, such as resource-efficiency and energy-efficiency. And on this point we can understand the great value of the autochthone traditional varieties which were developed during centuries by the work and wisdom of the local farmers to serve to the humans needs. They are well adapted to the individual local climate and soil conditions and get sustainable yield even under critical soil and climate conditions.

Furthermore we have to come up with a new and revised economic view upon the future agricultural systems: upon a macroeconomic view we have to consider the external costs created by the agro-industrial and agro-chemical system; and consider on the other hand the external benefits and values of the organic and holistic way of production looking on its balanced results and its benefit to the society.

By consideration of all these important factors, one can understand the need and value of such a project for preserving the abundant natural treasure of the autochthone pepper varieties within the Malabar Coast up to the Western Ghats.

Its not only the intensive taste that matters, but also the medicinal values as well as the natural resistances against several pests and diseases which are hardly needed for sustainable organic cultivation practices.

Therefore Ecoland, Germany, represented by its founder Rudolf Bühler, in cooperation with Wayanad Social Service Society WSSS, Kerala/India, represented by Father Bijo as Director, have started in 2016 a joint project to rescue and preserve all survived traditional autochthone pepper varieties along the Malabar Coast up to the Western Ghats in order to establish a “Ark of Pepper”, located at the WSSS Botanical Garden at Boys Town Orphanate Complex, 12 km apart from Mananthavady, Kerala/India.

The Project

The project is focusing on the following activities:

- a. Collection of the historic and traditional autochthone pepper varieties within the area of Malabar coast up to the Western Ghats, including wild species and gather them in plots and the site-buildings of WSSS Botanical Garden.
- b. Identifying them rather as pure variety upon phenotypic identification and classification as well as with genetic screening. Registration of the identified pure varieties under its traditionally conveyed name
- c. Establishing of a herbarium accordingly, to serve as a scientific ex-situ reference library at the site-buildings of WSSS Botanical Garden
- d. Conservation of the collected autochthone varieties under in-situ and ex-situ conditions: Botanical Lab and Mother-Nursery at Boys Town.
- e. Establishing field plots with selected pilot farmers out of WSSS-members for the means of scientific research upon the individual values of each variety as resistance to diseases and draught, specific soil conditions, yield, medicinal value, specific content of determining incrediences.
- f. In a later stage identify specific marketing values to provide added value to the producers in order to motivate them to shift from “HYV-Hybrids” to the traditional autochthone Varieties.
- g. Reconstructing and extension of the plot and buildings at the Botanical Garden of WSSS including Lab,

Along with the collection and revitalization of the endangered rare pepper varieties we will collect all reachable books, scripts and oral contributions by tribals and local farmers about the tradition of “Vrikshayurveda”, considered as the indigenous knowledge about organic and sustainable farming practices laid down in the ancient Sanskrit scripts. It is a important task to look into the wisdom of the historic scripts as well as to the orally conveyed wisdom and knowledge of the indigenous people. This will lead to a Library and a Archive as “Indigenous Knowledge Center” at the plot including a Training Hall for dissemination and popularizing it.

As we observe in Central Europe a strong movement to turn into “bio-dynamic” cultivation practices based upon protagonists as “Steiner, 1924” under the brand of “Demeter”, we also want to observe and research about similarities and applied preparate work and practices between both biodynamic systems, Demeter and Vrikshayurveda.

Furthermore a bio-dynamic and vrikshayurvedic preparate center will be established within the Botanical Garden plot for the future use of WSSS member farmers.

Both sides agreed that the specific part of the project which is a so called Gen-Bank will be not subjected to any trial or attempt of “Genetic Engineering” practices. The Ark of Pepper will entirely serve to rescue and revitalize the historic treasure of indigenous and autochthone pepper varieties of South India which are the common assets of the local farmers who developed them through generations and centuries. The local farmers will have always free access and use them for their organic and bio-dynamic cultivation.

The same applies to the “Indigenous Agricultural Knowledge Center” since the indigenous knowledge is also understood as a treasure of the rural societies and smale scale farmers, not jet protected by the UN Organization WIPO which covers and protects only the intellectual knowledge as a property, but not the indigenous knowledge, which can so be grabbed easily by interested groups and business followers.

So far the “Ark of Pepper” including the establishment of the “Indigenous Agricultural Knowledge Center” is being financed for the next 3 years till end of 2018 jointly from Ecoland and WSSS. Further commitments have to come up in time.

by Rudolf Bühler,
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