## Comparative examination of biodynamic and Vrkshayurvedic agriculture in Kerala, India

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This thesis proposes a comparison between biodynamic and Vrkshayurvedic agriculture in order to investigate the potential application of Demeter certification for spices grown in the state of Kerala, India.

Kerala has been a major spice exporter since 3000 BC and still is referred to as the "Spice Garden of India". To maintain and use these spices grown also in traditional ways by locals, the NGO Wayanad Social Service Society (WSSS) conducts various programs for empowering the local small-scale farmers and to trade their products to the local and overseas markets. Furthermore, they try to support and preserve the traditional practices used by the tribal communities. Among the 13.000 farmers WSSS is promoting, about 1000 consist of tribal farmers. These are said to care for their conveyed traditions and mainly stay independent from external influences. Furthermore and because of the latter, they often are a fundus of valuable traditional knowledge concerning farming. One of the trade partners is Ecoland Herbs & Spices, situated in Wolpertshausen, Germany. A main principle of this trading cooperation comprises fairness of treatment for small farmers and ecologically sound practices for their land. This means that the farmers get a price about 20 – 100 % above world market price. Additionally, all farms are certified organic or in conversion to become organic certified.

A preliminary stage of this research aims to gain information about the local, mainly tribal knowledge and agronomical practices linked to Vrkshayurveda and organic agriculture of tribal farmers and common organic small-scale farmers already producing spice crops for Ecoland Herbs & Spices. Agronomical methods and agri-culture with regard to special methods like compost- and manure-preparation, herbal concoctions against pest and diseases or spiritual matters of local tribes are partly collected and maintained in order to preserve and protect this knowledge from extinction. The Sanskrit word Vrkshayurveda or Vrikshayurveda literally means "Ayurveda for the plant" and is an ancient approach of treating the whole plant in case of pest- or disease-attack or simply keeping the plant healthy with some holistic support.

A second stage will propose a comparison between Vrkshayurveda and biodynamic agriculture. The findings of this thesis will serve Ecoland Herbs & Spices to introduce the biodynamic Demeter certification for the farms they source the spice crops from. Hereby the focus is set on the possible relation between Vedic practices and Rudolf Steiner's ideas about farming. Demeter stands for highest quality since it goes beyond the common organic practices and involves the implementation of certain preparations based on special herbs and herbal teas used to support biological processes of the land. In fact, biodynamic agriculture works according to a particular philosophy based on cosmic and natural cycles. Nature and field are interpreted as living matters that need to be treated as more than just mere

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production sites. The approach might appear to some as highly sensual and spiritual and involves more than the common Western scientific understanding of agriculture, and still it can produce profitable and measurable results.

From the literature review, it could be noted that there exist certain interdependencies, differences and similarities of the Vrkshayurvedic or Vedic ways of farming and the biodynamic Demeter agricultural methods in terms of certain holistic cycles, herbal or manure preparations for the fertilization of the soil or ways to prevent pests or diseases.

The aim of this research is to gain understanding of the indigenous knowledge and perceptions of crop protection, fertilization, preparations and spiritual practices in Kerala, India, and bring them into context with the biodynamic farming. In order to do so, qualitative interviews with local farmers and tribal farmers like the Kurichyas, Kurumas, Paniya and Uraly (tribal populations protected by Indian dedicated legislation aiming to conserve traditional knowledge) are conducted.

While similarities are expected, the results will serve as a preliminary study to assess whether introduction of Demeter-standards for the spice crop production in (Southern) India is feasible. Feasibility will be assessed on agronomical aspects, cultural and religious practices, labour and financial conditions.

The research questions of this thesis are the following:

- Do farming practices that can be associated with Vrkshayurvedic agriculture still exist?
- What are the similarities and differences between biodynamic and Vrkshayurvedic agriculture?
- Is biodynamic certification Demeter applicable to Vrkshayurvedic agriculture and how?

Study programme	Organic Agriculture and Food Systems
Life time	WS 2014 – WS 2016
Supervisor	Dr Cinzia Piatti
First examiner	Prof. Dr. Claudia Bieling
Second examiner	NA
External partners	Mr. Rudolf Bühler, Ecoland Herbs & Spices GmbH