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Local knowledge in National Park Hohe Tauern and adjacent areas in Eastern Tyrol (Austria) about wild gathered plant species for phytotherapy as a basis for organic animal husbandry

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Summary

The FAO claims that agricultural lands falling under categories V and VI of IUCN protected areas should be encouraged to convert to organic management. One element of organic farming is the restriction for the use of allopathic medicine, and the explicit legal statement to favour phytotherapy (EC-Regulation 2092/91). In the years 2004 and 2005, 144 respondents were interviewed in Eastern Tyrol in the Nationalpark Hohe Tauern (and adjacent communities) about the use of gathered plant species in folk veterinary phytotherapy. All 144 respondents reported 98 plant species (52 out of them were gathered) and other ingredients, used alone or in combination in home made remedies. In total 1,328 home made remedies (multiple answers possible) were reported. 1,085 home made remedies have at least one plant based ingredient. Local knowledge about the use of plant species in folk veterinary medicine is disappearing rapidly and urgent activities have to be undertaken to safeguard this knowledge. The diversity of home made remedies including the knowledge about gathered wild species used by farmers can be a basis for sustainable approaches to animal disease control in protected areas. Promoting the utilization of gathered species should always go hand in hand with measures to ensure sustainable harvest and introduction of selected species into cultivation.

Keywords

ethnobotany, ethnoveterinary medicine, local knowledge, gathered wild plant species, phytotherapy, home made remedies, organic farming

Duration of the project

12/2003-03/2006

Area of study

Eastern Tyrol (Lienz district) incl. villages of the Nationalpark Hohe Tauern in Eastern Tyrol, Austria

Introduction

While several agricultural approaches make sustainability claims, organic farming is the only well-defined agricultural management system, including restricted practices that aim at environmental protection and food safety. Therefore the FAO claims that agricultural lands falling under categories V and VI of IUCN protected areas should be encouraged to convert to organic management.

Gathering of wild plant species is a typical and important activity of many people in rural communities worldwide also in protected areas. It is also an activity done frequently by farmers, including organic farmers e.g. in villages in and adjacent to the National Park Hohe Tauern. The species gathered by farmers are used usually as food, teas, ornamentals, but also as fodder or for human or veterinary medicinal purposes.

Due to the restrictions for the use of allopathic medicine in organic farming, and an explicit legal statement to favour phytotherapy (EC-Regulation 2092/91), the local knowledge of farmers about phytotherapy based on gathered plant species is of importance for the organic farming movement.

Local knowledge about folk veterinary practices is usually studied under the disciplinary context of ethnobotany (Martin 1995, Alexiades et al. 1996) and ethnoveterinary medicine (Mc Corkle et al. 1996, Martin et al. 2001) or veterinary anthropology (Mc Corkle 1989).

Methods

In Eastern Tyrol, i.e., Lienz district in Austria, gathering is a practice widespread among farmers (CHRISTANELL et al. 2009).

In the years 2004 and 2005 as part of a research project (VOGL-LUKASSER et al. 2006, VOGL-LUKASSER et al. 2007, VOGL & VOGL-LUKASSER 2003), 144 respondents were interviewed in Eastern Tyrol about the use of gathered plant species in folk veterinary medicine. Methods used for data collection included freelists, semistructured interviews, structured interviews as well as non-participant and participant observation (BERNARD 2002). Collected data was analyzed according to ranks, frequencies and parameters of social network analysis (WELLER & ROMNEY 1988; BERNARD 2002).

Results

In Eastern Tyrol, all 144 respondents reported 98 plant species (52 out of them were gathered) and other ingredients, used alone or in combination in home made remedies. The 20 most frequently mentioned plant species (*=gathered) were: *Achillea millefolium**, *Allium cepa*, *Arnica montana**, *Artemisia absinthium**, *Avena sativa*, *Brassica rapa* ssp. *rapa*, *Calendula officinalis*, *Camellia sinensis*, *Cetraria islandica**, *Cinnamomum camphora*, *Coffea arabica*, *Gentiana lutea**, *Hordeum vulgare*, *Juniperus communis**, *Larix decidua**, *Linum usitatissimum*, *Matricaria chamomilla**, *Picea abies**, *Sambucus nigra** and *Secale cereale.*

In total 1,328 home made remedies (multiple answers possible) were reported. 1,085 home made remedies have at least one plant based ingredient. Most home made remedies are known from "earlier times" only and are not used any more.

The social network of the respondents and the persons recommended by the respondents as to be an "expert" can be characterized as i) highly fragmented (e.g. only few recommendations of persons in other villages and other valleys; no recommendations of persons outside the district), ii) uncertain about experts on the topic (e.g. many persons with high outdegree but no persons with high indegree) iii) and missing of persons that might be described from an outside perspective as knowledgeable about the topic. Respondents also report that veterinary doctors of the study area do not recommend plant based remedies.

Conclusion

A remarkable high amount of knowledge about plant based remedies is held not by single folk experts, but dispersed over a large diversity of respondents, who mostly do not practice this knowledge any more. Local knowledge about the use of plant species in folk veterinary medicine is disappearing rapidly and urgent activities have to be undertaken to safeguard this knowledge.

The diversity of homemade remedies used by farmers can be a basis for sustainable approaches to disease control, but further efforts have to be made by veterinary science to test them, by veterinary doctors to be trained in their use and by advisory agents to make explicit their importance in organic farming.

Local knowledge of (organic) farmers about plant based home made remedies maintaining animal's health or curing animal's diseases might be a starting point for the further development of sustainable animal health care programmes in protected areas and adjacent regions. Promoting organic farming and implicitly the utilization of gathered species should always go hand in hand with measures to ensure sustainable harvest and introduction of selected species into cultivation. Further efforts have to be made for the sustainable use of wild gathered plant resources.

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