Caribbean Agroecology Networking Symposium

"Productive Agrosystems and Resources Conservation in an Island Environment: an Agroecological Challenge for Caribbean Sustainable Development

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The INTERREG-DEVAG project: a regional network for the development of agroecological cropping systems for horticultural crops in the Caribbean.

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Context of horticultural crops in the Caribbean:

- (6) MARNDR (Ministère de l'Agriculture, des Ressources Naturelles et du Développem (7) SECI (Station d'Essais en Cultures Irriguées), Conseil Général, Ste Anne, Martinique (10) FAMV (Faculté d'Agronomie et de Médecine Vétérinaire), Port-au-Prince, Haiti

(11) OSU (Ohio State University), Colombus, USA

- Need to increase local production and reduce the negative impacts of agriculture
- Main target of the social demand to get access to safe, healthy and environmentally friendly products
- An important source of income for small farmers
- Still requiring highly intensive chemical inputs due to strong biotic (bacteria, viruses insects, weeds...) and abiotic constraints (heat, humidity).
- Necessity to consider a radical change in production methods by valorizing biological resources already present in these fragile but rich ecosystems

The objectives of the DEVAG project :

- > to develop scientific databases to accelerate the development of agro-ecological and organic horticultural productions
- > to create a regional network dedicated to the development of agroecology for fruits and vegetables in the Caribbean.

To do so, research activities are mainly focused on finding agroecological methods to manage pests, diseases and weeds which represent the main cause of loss of productivity and of pesticides use. These researches are conducted in permanent connection with farmers and agricultural development agents who will benefit directly by participating in field experiments and technical schools



Figure 1: Context, genesis and study cases running in the DEVAG project (oct 2009 - oct 2013) General Underdevelopment of agroecological and organic farms despite an increasing demand from consumers for safe and **DEVAG** context genesis environmentally friendly horticultural products. Weakness of links between research, Insufficient knowledge on Lack of recommended agroecological practices adapted and g extension and production to stimulate institutional, organizational and to local conditions and constraints the emergence of adoptable innovation socio-economical environment Main production brakes Main brakes at Identifying and Martinique Cuba valorizing existing institutional and Cuba of targeted crops: Haïti Haïti rganizational levels tomato, yam, orchards knowledge Yam Main brakes at Pests, diseases, Access and/or cost Martinique Tomato tomato viruses, weeds of imported inputs farm level Cuba orchards Selection of Management of Substitution of Traditional targets by Haïti genotypes for: chemical fertilizers knowledge from greenhouses experiments, -Resistance to introduction of: by organic local home gardens service plants resources biological products -Adaptation to low exchanges of know-how and input systems and animals composts and nimal residues for organic fertilization Targets Cuba solanacearum fo tomato Martinique **DEVAG** activities Cuba Guadeloupe knowledge Haïti Field and 3 Technical schools mixing farmers, Contributing to agroecological (AE) and extensionists and efficient cropping systems researchers at mid and long term impacts Improvement of plant health Improvement of soil health Better technical support at farmers level

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Improvement of AE farmers income









Conversion of conventional farmers to AE systems





