# ACT's Pilot Activities



## Background

The objective of the network is to enhance the dissemination of conservation tillage practices in smallholder farming. To achieve this objective, direct links to farming communities and support to on-farm activities are required. Farmers have to try different conservation tillage options and select suitable options for their specific ecological and socio-economic environments. For this purpose the network secretariat supports partner organisations in planning, implementing and assessing pilot activities. Besides participative testing of technical options different dissemination approaches are applied and refined. Focus is on strengthening of farmers associations through mutual learning.

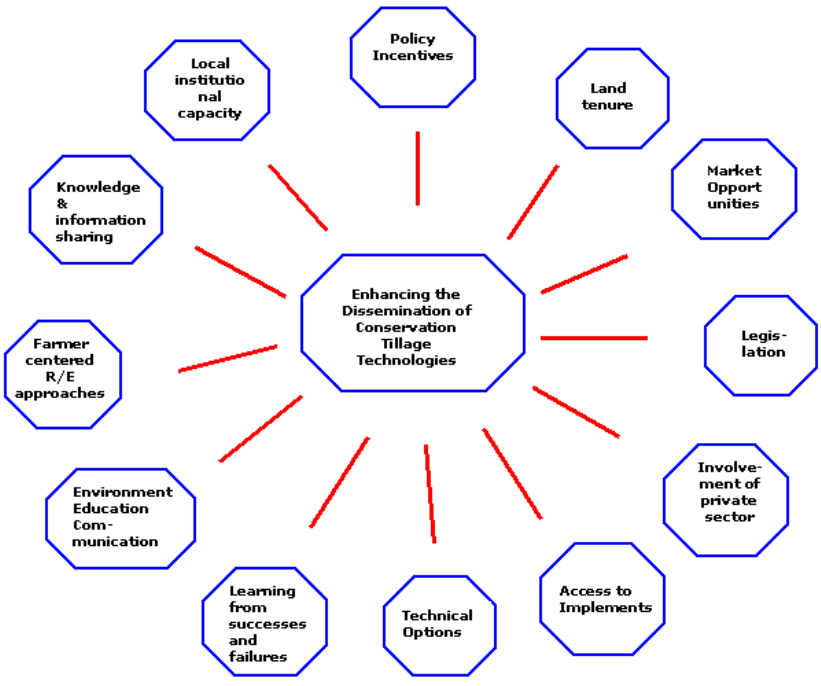
top

## Objectives

A range of factors influences farmers' decisions making. The performance of a new technology is just one of them. Based on the analysis of constraints and opportunities a draft conceptual framework for the dissemination of conservation tillage practices was developed (see figure below). This framework is tested and refined in the pilot activities.

spaec top

## Conceptual framework for the dissemination of conservation tillage technologies




top

## Major components of the pilot activities

In accordance with the conceptual framework the pilot activities will focus specially on the following issues:

### Basket of technological options

Dependant on the climatic zone and the prevailing cropping systems, conservation tillage practices will be tested using participatory technology development (PTD) approaches. Amongst these options figures use of rippers or direct planters, green manures/covercrops, weed control, crop residue management.

**Farmer centred R&E approaches**

Local knowledge of soil and water conservation should be discovered and integrated into the technology adaptation process.

Farmers should be encouraged to innovate, i.e. to apply the basic elements of conservation tillage according to their own requirements and experiences.

**Local institutional capacity building**

Farmers need to get organised in order to be heard, to strengthen their market position and to encourage each other when testing new farming practices or own innovations. The pilot activities should work primarily with existing farmer organisations or support the formation of groups, especially women groups. To assure transparency and accountability, preconditions of group sustainability, group leaders need to be trained in group management.

**Involvement of private sector**

Farmers need access to CT implements, and other farm inputs. The private sector, especially implement manufacturers and repair shops need to be involved in the process.

spaec top

**Ongoing pilot activities**

**Kenya:**

here ACT co-operates with the Kenya Conservation Tillage Initiative (KCTI). Pilot activities are carried out in the semi-arid and mountainous Machakos region. Executing agency is the Kenya Network for Draft Animal Technology (KENDAT). Focus of the ground activities is testing of CT technologies, mainly ripping; growing of high values crops, in this case grafted fruit trees; support to the formation of women groups. For more information please contact Dr. Pascal Kaumbutho (kendat@africaonline.co.ke)

**South Africa:**

here ACT co-operates with the "Broadening Agricultural Services and Extension Delivery Project" (BASED) in the Limpopo Province. The region is mainly semi-arid and mountainous. Focus of the activities is the development of conservation tillage implements (planters) for tractors and animal traction; the adaptation of CT practices and support to farmer innovations; group formation and training (predominantly women groups. For more information please contact Dr. Paolo Ficarelli (base.gtz@pixie.co.za) or Dr. Edward Chuma (chuma@africaonline.co.zw)

**Zimbabwe:**

here ACT co-operates with the Institute of Environmental Studies (IES) and the Agricultural Extension Service (AGRITEX). These institutions have worked already for years on the development of conservation tillage technologies and farmers centred extension approaches. Focus of the activities is therefore the development of an extension manual and other information material. Field activities are centred around Maswingo, southern Zimbabwe, a semi-arid area, with water conservation being one of the chief objectives. For further information contact Isaiah Nyagumbo (nyagumbo@africaonline.co.zw) or Dr. Edward Chuma (chuma@africaonline.co.zw)

**Tanzania:**

here ACT is linked to a private public partnership project, between GTZ and the Tanzania Farm Service Centre (TFSC). The activities are located in the Arusha region, northern Tanzania. Focus of the activities is subsoiling by tractor, with the objectives of breaking the wide-spread hardpan and thus improving water infiltration and reducing the risk of crop failure due to drought, and integration of green manures/covercrops in the cropping systems. For further information contact Manfred Lieke (tfsc@habari.co.tz) or Wilfred Mariki (sari@habari.co.tz).

**Ghana:**

here the network cooperates with the Sedentary Farming Systems Project in the Brong-Afaho Region, Southwest Ghana. The project is implemented by GTZ/Ministry of Food and Agriculture. Objective of the project is the development and promotion of sustainable farming systems, which could replace the traditional *slash and burn* agriculture. Focus of the pilot activities is on the development of direct planting systems for different mechanisation levels, manual systems in smallholding and tractor powered systems in commercial farms. Growing of cover crops, chemical weed control by use of *Roundup* and direct planting through a ground cover of crop residues and cover crops are tested in on-farm trials. For further information contact Dr. Heinz Loos or Asare Bafour (gtzsun@ncs.com.gh).

**Zambia:**

in the dry Kariba valley of the Southern Province, on-farm activities have been started in two communities in cooperation with the agricultural extension service and the GTZ supported ASSIP-Project. This region suffers from frequent droughts and famine. In addition soils are sandy, with a low water holding capacity and nutrient status. Conservation tillage technologies could help to make better use of scarce rainwater and stabilise yields. Selected options are ripping with draft animals, and pitting for farmers without access to draft power and controlled grazing of crops residues. For further information contact Dr. Dierk Hesselbach (dhebasia@zamnet.zm).