LABOUR SAVING TECHNOLOGIES AND PRACTICES FOR HOUSEHOLDS

Many aspects of rural living are labour intensive and time consuming, from fetching water and firewood, to preparing land, weeding and food processing. Agricultural engineers, extension staff and home economists can assist HIV/AIDS affected households by promoting technologies and practices which reduce or spread labour inputs.

IMPACT OF HIV/AIDS ON THE AVAILABILITY OF LABOUR AND FARM POWER:

- someone suffering from AIDS-related illnesses is unable to work during bouts of sickness, and requires care and support from another household member
- time for work is reduced by caring for the sick, attending funerals and mourning
- once households suffer from labour shortages they are unable to participate in labour groups which are often used to mobilise labour for key farming operations
- HIV/AIDS affected households have fewer financial resources to cover increasing non-farm expenditures: when someone is sick or dies the household loses their earnings but, at the same time, expenses are rising to buy medicines and food and they are not able to hire farm equipment to overcome labour shortages
- in extreme circumstances, households sell their productive assets to raise cash (including draught animals, tools and implements)
- farm implements and draught animals may be taken from widows and orphans by the relatives of deceased husbands
- draught animals are slaughtered during funerals
- widows and orphans may not have the knowledge and skills to use farm equipment

REDUCING THE BURDEN OF WORK IN THE HOME

- fuel efficient stoves: reduce the amount of fuel required
- woodlots, agro-forestry, trees and shrubs: plant on fallow land to improve access to fuelwood
- domestic roof water harvesting: improve water supplies for household consumption
- donkeys and carts: save time and energy transporting goods
- small-scale, simple food processing equipment: operate at either household or community level

REDUCING THE BURDEN OF WORK IN CROP PRODUCTION

Encourage farmers to plan for the season by preparing an area which is manageable within their own resources.

In hand tools:

- light weight high quality hand hoes: hoes should meet basic quality standards so that households do not waste money buying poor quality tools. Encourage and support local manufacturers and small artisans to meet local requirements in tool design.
- hand jab direct planter: this tool plants crops directly into unprepared land, removing the need to dig or plough.
- planting basins and raised planting beds: once formed they remain as permanent features, only requiring light work to replenish the mulch cover and minimal weeding.
- reciprocal exchange: pool limited labour with other households.

In draught animal power (DAP) farming systems:

- draught animals: make them more productive by using one animal instead of one or two pairs; using cows and donkeys; improving their nutrition and health; using the mouldboard plough for ridging.
- Magoye ripper: a special ripper tine is attached to the beam of a standard mouldboard plough to loosen the soil but not turn it. The ripper can be drawn by one strong or two small oxen, instead of up to four oxen required for ploughing. The ripper generates less soil erosion and improves the water retention capacity of soils, increasing yields and making them more stable.
- Magoye ripper with planter attachment: the land is opened and the seed planted in one pass.
- no-tillage direct planter: seeds are planted directly into unprepared land which may be covered by trash and crop residues. This saves time cleaning the fields and only requires one ox.
- knife rollers: cover crops and broad leaf weeds are chopped by a roller prior to planting in a no-tillage farming system.
- reciprocal exchange: pool limited labour, draught animals and implements with other households.

REDUCING THE BURDEN OF WORK IN CROP PRODUCTION (continue)

Reducing time and energy required specifically for weeding

- weed at the right time: before weeds become established and damage the crop.
- row planting and appropriate planting patterns: ease the task of weeding.
- crop rotation: to break support for dominant weed species.
- recommended seed varieties: some varieties are weed tolerant.
- crop residues: left between the planting rows to cut off sunlight and prevent weed seeds from germinating and suppressing their development.
- mulch cover: place additional cover on the field to suppress weed growth. The additional labour required initially is offset by the time spent weeding.
- intercrop leguminous crops: grow cover crops (such as dilochos lablab) between the rows of the main crop to enhance soil cover and suppress weeds.
- draught animals: train the animals in weeding with either the mouldboard plough or weeder.
- benevolent herbicides (eg glyphosphate): train farmers in their appropriate and safe use. Although this saves time, farmers need to be able to afford the chemicals and equipment.

Switching to less burdensome cropping systems

- less labour intensive crops: take care this does not compromise the nutritional value of the diet
- crops with different seasonal labour requirements
- high value crops on small area: maximise the value of labour input
- low cost irrigation distribution system

REDUCING THE BURDEN OF WORKING WITH LIVESTOCK

- tether or fence livestock, or cut and carry fodder: save time herding animals
- less labour intensive livestock: switch from cows to goats
- fodder: integrate fodder production with crops, on-farm conservation or agroforestry

INTRODUCING LABOUR SAVING TECHNOLOGIES AND PRACTICES

The most labour stressed households may require help with their immediate labour constraints:

- labour groups: maintain crop production during severe sickness and following bereavement
- monetary vouchers or micro-credit: for hiring farm power services and purchasing labour saving technologies at input trade fairs

Reaching other vulnerable households:

- food for work: to assist households in adopting new technologies, particularly those requiring an initial input of labour
- farmer groups: groups, such as farmer field schools, meet regularly to work on a group field and to learn about a specific topic. New equipment and practices are demonstrated and made available to the group, supported by technical assistance and training.
- farmer to farmer exchange: innovator farmers receive direct support from local extension officer and research stations in adopting and adapting practices and technologies.
- farmer field days: organised at key times in the cropping season to demonstrate the impact of labour saving technologies and practices on crop growth.
- farm power groups: to access new technologies and practices for use on their own land, or provide mutual insurance schemes for draught animal power (DAP) owners to protect against livestock accidents or death.
- farm power hire entrepreneurs: individuals or groups who provide services to others. They could acquire new equipment and repay in kind by preparing land for the most vulnerable households.

REMEMBER:

- technologies and practices are not gender neutral: make sure that the main labour constraints facing women and children are heard and addressed, as well as those facing men
- vulnerable households have limited capacity: they have no spare labour, no spare cash and no ability to take risks in crop production
- vulnerable households are keen to participate: ensure that households headed by women, the elderly and orphans have an opportunity to improve their livelihoods and are not excluded from participating due to stigma associated with HIV/AIDS or poverty

ABOVE ALL, HELP THE FARMERS AND THEIR FAMILIES TO LOOK AFTER THEMSELVES AND THEIR ASSETS:

- eat a healthy diet: see ‘AIDS and your food’ leaflet
- look after their health: see ‘HIV/AIDS and your daily life’ leaflet
- promote access to anti-retrovirals (ARVs) in order to prolong the life of AIDS patients
- succession planning: to ensure farm power assets are passed on to widows and children

SEE OTHER LEAFLETS IN THIS SERIES:

- HIV/AIDS in daily life
- Give support to AIDS-affected families: the role of field workers