

## Appendix 4 CPHP projects with relevance to Northern Province livelihoods

### *Management of insect pests, rodents, moulds (diseases), termites*

<i>Purpose</i>	<i>Ouputs</i>	<i>Potential relevance</i>	<i>Project lead institution</i>	<i>End date</i>	<i>DFID Project No</i>
<b><i>Improvement in the storage and marketing quality of Legumes (Phase II)</i></b>					
To contribute to development and promotion of environmentally sustainable and safe post-harvest pest control methods and procedures.	Validation and promotion of recommended methods for protecting pulses during on-farm storage in different socio-economic circumstances. Development of advisory materials, identifying and supporting appropriate uptake pathways. Guidelines for best practice for trader pest management will be produced.	Cowpeas are an important crop in Northern Province and farmers have repeatedly mentioned insect pests attacking them during storage. Some traditional control practices exist but the project may have other more appropriate methods.	Natural Resources Institute	30/06/02	R7442
<b><i>Understanding the mechanisms of bio-activity in botanically derived materials used to protect stored grain in farm level storage systems</i></b>					
To provide farmer with evidence that their locally available plant materials can be used effectively to prevent insect infestations of their stores.	Options for small-scale farm use of locally available plant materials against storage pests identified. The variation in plant materials and their bio-active constituents must be taken into account with respect to climate, geography, method of application, pest species and cultural practices	Depending on similarity of plant species, may be some very relevant information, or at least methodologies available in the Northern Province	Natural Resources Institute	31/03/02	R7373
<b><i>Impact of rodents on rural households in Mozambique and the development of sustainable control strategies</i></b>					
To develop sustainable control strategies that can be cost-effectively implemented and maintained by rural communities suffering from rodent pests.	Investigate the impact of rodent pests on rural livelihoods in Zambezia Province, Mozambique. Develop a sustainable community-run rodent control strategy.	Rodents have been highlighted as a huge storage problem by farmers in Northern Province. However, rodents are not typically eaten as in Mozambique. Thus trapping to increase protein availability in the diet may not be so appropriate for this area. Use of rodenticides is widespread.	Natural Resources Institute	31/03/02	R7372

<i>Purpose</i>	<i>Ouputs</i>	<i>Potential relevance</i>	<i>Project lead institution</i>	<i>End date</i>	<i>DFID Project No</i>
<b><i>Grain storage pest management using inert dusts</i></b>					
To develop environmentally sustainable and safe post-harvest pest control methods by working towards the replacement of conventional synthetic organophosphate insecticides with inert dusts for use in small- and medium-scale storage.	Methods for treating grain with inert dusts to provide protection against insect pests in storage developed. Methods for treating storage structures with liquid suspensions of inert dusts developed.	Diatomaceous earths if registered in South Africa would provide a safe, low cost method of treating maize, sorghum and cowpeas. NB the dust is not very effective in treating maize stored on the cob, so more appropriate for shelled maize.	Natural Resources Institute	31/07/00	R7034
<b><i>Risk warning to farmers of Larger Grain Borer infestation and reduced pesticide treatment in farm maize stores</i></b>					
To develop a method so that extension services can give an early warning to farmers when there is a high risk of LGB migration into stores	Relationship between LGB trap catch and likelihood of storage attack defined, and presented as a usable risk warning method. Develop limited pesticide treatment methods for maize grain stored in bulk. Develop risk analysis method for cassava. TN vs LGB.	Interpretation of LGB trap catch data, as regards risk of store infestation. Information about optimum pesticide treatment against storage pests.	Natural Resources Institute	31/10/02	R6684 & R7486
<b><i>Mud-based silos: farm stores for cereals</i></b>					
To address constraints to household food security and income generation in Ghana, relating to high storage losses and diminishing supplies of traditional materials for store construction. To make suggestions for dealing with the alarming trend in phosphine fumigation among small-scale farmers.	1) Anti-termite treatments have been identified and tested 2) Mud silos found not to be fit for fumigation and should be strongly discouraged	Termite control, fumigation not suitable for traditional structures	Natural Resources Institute	31/07/99	R6052
<b><i>Good storage management principles training (hygiene, drying, store maintenance, grain protection)</i></b>					
<b><i>Rapid screening of maize and sorghum for varietal resistance to post-harvest insect pests</i></b>					
To achieve a more rapid resistance screening method for maize and sorghum	To speed up development of improved maize and sorghum varieties.	This technique could be used by South African breeding institutes.	Natural Resources Institute	30/06/01	R7430

## ***Improved storage structures***

<b><i>Purpose</i></b>	<b><i>Ouputs</i></b>	<b><i>Potential relevance</i></b>	<b><i>Project lead institution</i></b>	<b><i>End date</i></b>	<b><i>DFID Project No</i></b>
<b><i>Improved design of indigenous grain stores - including minimizing the use of hardwood</i></b>					
To develop & promote effective & sustainable grain management systems	Demonstration stores built and farmer opinions surveyed in Buhera and Mutoko Districts, Zimbabwe. Video and manual training course for agricultural extension on improved store construction developed.	Store construction techniques with reduced use of wood. Plastic pipe legs filled with cement are termite-proof. Are these materials readily available in Northern Province? The cost? The life span?	Natural Resources Institute	30/09/99	R6685

## ***Knowledge/Information***

### ***Innovative uptake pathways for CPH programme outputs***

To investigate the potential for the CPHP to link into an existing indigenous organisation & learn about traditional information uptake pathways & discover whether they are suitable for promoting the uptake of CPH research outputs.	Independent knowledge about the operations of the Zunde ramambo system, and the feasibility of incorporating CPHP research outputs into this system.	Investigation of traditional social welfare systems in South Africa may reveal similar community-based organisations which might be suitable for promoting the uptake of CPH research outputs.	Natural Resources Institute	30/03/00	A0904
---	--	--	-----------------------------	----------	-------

### ***Sustainable retailing of post-harvest technology to the poor; alternative institutional mechanisms for developing and transferring technology***

Explore the potential of commercialising the process of technology development and delivery by building institutional linkages between user level and the technology/manufacturer/supplier level.	Knowledge about institutional mechanisms for developing and delivering the required technologies.	This information could be highly relevant to the delivery of CPHP outputs developed in other countries to Northern Province communities.	Intermediate Technology Consultants	31/12/02	R7551
---	---	--	-------------------------------------	----------	-------

## ***Processing***

<b><i>Purpose</i></b>	<b><i>Ouputs</i></b>	<b><i>Potential relevance</i></b>	<b><i>Project lead institution</i></b>	<b><i>End date</i></b>	<b><i>DFID Project No</i></b>
<b><i>Increasing the utilization of sorghum- and millet-based foods in Tanzania</i></b>					
To identify constraints to the increased utilization of sorghum and millets, and to investigate the potential for extending their use within the semi-arid and informal food sectors	Knowledge of sorghum processing operations, consumer preferences and trade links between rural producers and urban consumers in Tanzania. Understanding of possible interventions in the marketing chain to improve sorghum and millet quality. Strategy developed for wider implementation of food preparations using sorghum & millet.	Development of a low-cost, manually operated, small grains dehuller	Natural Resources Institute	31/08/99	R6640
<b><i>Raising rural family incomes through improved peanut butter processing</i></b>					
To increase the potential for improving income of rural groundnut farmers through sale of peanut butter of improved quality.	Optimal operational conditions of peanut butter processing technology, roasters and grinders determined and disseminated to users. Food safety studies will generate guidelines for rural groundnut entrepreneurs so that they can capture the lucrative formal markets.	Groundnut is an important and common crop in the Northern Province, used almost exclusively for home consumption. There may be potential for processing and market sales using similar techniques to those identified in Zimbabwe. May be able to exploit a niche market, organic, & small-scale produced in South Africa.	Development Technology Centre	30/09/02	R7419
<b><i>Marketing and processing of bambara groundnuts (W.Africa)</i></b>					
To develop and introduce appropriate technology, which will allow cooking times of bambara groundnuts to be significantly reduced.	Adaptation of appropriate technology for reducing bambara groundnut cooking times. Market surveys will be conducted to ascertain the potential market for bambara in Ghana, Africa in general and more globally.	Bambara (Njugo bean) is an important crop in the Northern Province, & any technologies which reduce cooking time and fuel use might have uptake. Currently very little is marketed.	Food Research Institute	30/03/02	R7581
<b><i>Facilitating the effective production and marketing of processed food products by small-scale producers in Zimbabwe.</i></b>					
To identify constraints that face small-scale producers and processors of horticultural products, and to suggest ways of overcoming these constraints.	Solutions to some of the constraints and uptake pathways reflecting the dual roles of the public and private sectors.	May have direct relevance to Northern Province farmers.	University of Reading	31/12/02	R7485

<i>Purpose</i>	<i>Ouputs</i>	<i>Potential relevance</i>	<i>Project lead institution</i>	<i>End date</i>	<i>DFID Project No</i>
<b><i>The use of oilseed cake from small-scale processing operations for inclusion in rations for peri-urban poultry and small-ruminant production</i></b>					
To enable peri-urban livestock producers to make best use of sunflower oilcake in feeds for poultry and small ruminants.	Knowledge about the nutritional value of the oilseed products and their potential as feeding stuffs determined by feeding trials at experimental station and small-farm level.	Poultry and small ruminants are kept by the majority of households in the Northern Province. However, oilseed crops were not mentioned as important by most households, so the outputs of this project may not be appropriate for this region.	Natural Resources Institute	30/11/01	R7524

## ***Horticultural issues***

### ***Drying methods for fruit and vegetables***

#### ***Pollution and health problems in horticultural production in Harare: the need for improved quality assurance systems.***

To improve food quality production consumer chain.	Pathways identified and guidelines proposed for an improved food quality production consumer chain, and reduced contamination of the resource base and produce. Enhanced access of small holder producers to markets and increased consumer confidence.	In the few areas where horticultural crops are being grown intensively in the Northern Province, the guidelines developed by the project might be relevant.	Wye College	28/02/03	R7519
--	---	---	-------------	----------	-------

#### ***Improving quality assurance systems for fresh fruits and vegetables produced by peri-urban resource-poor farmers in Zimbabwe***

To identify the nature and extent of food safety risks associated with horticultural production and marketing in peri-urban areas, to prioritise food safety constraints and develop strategies to minimise food safety risks.	Strategies developed to improve food safety, reduce health risks faced by consumers and develop market opportunities to improve incomes of resource-poor farmers.	Some farmers in Northern Province are growing chillies and other products for export markets. Improved quality assurance would help improve their market opportunities and incomes.	Natural Resources Institute	31/12/02	R7528
--	---	---	-----------------------------	----------	-------

<i>Purpose</i>	<i>Ouputs</i>	<i>Potential relevance</i>	<i>Project lead institution</i>	<i>End date</i>	<i>DFID Project No</i>
<b><i>Opportunities and constraints in the subsistence production of indigenous vegetables in East and Central Africa, Cameroon and Uganda. Improving the livelihoods of peri-urban vegetable growers through market promotion of fresh &amp; processed indigenous vegetables</i></b>					
To investigate how important vegetables are for subsistence and income generation and how they are marketed in and around major cities	To establish the socio-economic value of indigenous vegetables relative to exotic vegetables within farming systems. To identify current harvest and post-harvest techniques used by rural communities in Cameroon & Uganda. Knowledge of the importance of indigenous vegetables in and around cities. Address identified researchable constraints.	Similar vegetables are grown in Northern Province	Natural Resources Institute	15/11/02	R6964 & 7487

## ***Credit/ financial***

### ***Small holder credit: roles of farmers, government and private sector***

The development and promotion of efficient and effective marketing and credit systems	Analysis of the cotton sector credit programmes in Uganda and Zimbabwe. Analysis of potential application of similar input schemes to other sectors. Proposed ways in which small holder access to purchases inputs might be improved.	Lack of funds has been ranked as a high priority problem by farmers in Northern Province, lessons learnt from this project might help those developing proposals for small holder credit schemes.	Natural Resources Institute		R7197
---	--	---	-----------------------------	--	-------

### ***Maximising incomes from sweet potato production as a contribution to rural livelihoods***

To maximise economic returns for poor farmers through the development and validation of appropriate storage and handling innovations that enable farmers to have choice over how they manage their sweet potato harvest in order to optimise incomes.	Improved farmer income from sweet potato.	In the few areas where farmers do grow sweet potato in the Northern Province and use it for trade with maize, long-term storage practices may enable them to prolong this trading advantage.	Natural Resources Institute		R7498
---	---	--	-----------------------------	--	-------

## Marketing

<i>Purpose</i>	<i>Ouputs</i>	<i>Potential relevance</i>	<i>Project lead institution</i>	<i>End date</i>	<i>DFID Project No</i>
<i>Improving smallholder access to maize marketing opportunities in sub-Saharan Africa</i>					
To identify socio-economic interventions that improve market access for maize producers in remote areas of SSA by raising prices & reducing uncertainty through improved sales opportunities. To investigate assembly of marketed surpluses, more efficient transport utilisation, better co-ordination between traders & villagers, new market arrangements.	Maize market liberalisation has resulted in many farmers having to find new income strategies, to replace maize previously sold through secure state-supported markets. Information constraints, & lack of resources hinder this. Poorer households are finding it harder to adapt. Longer term benefits from strengthened farmer group activity in agricultural marketing and improved roads could be substantial. (In)appropriate trade policies can make a significant difference to the prospects for agricultural production in areas remote from national centres but which are close to national borders.	Findings regards appropriate trade polices for remote areas close to national boundaries might be very relevant.	Wye College	31/07/99	R7147
<i>Access to market opportunities in Ghana's off-road communities</i>					
To assess the scale & nature of community access problems for women & men in off-road areas, and to identify strategies for developing more effective market integration and market opportunities.	Restricted access is a serious underlying constraint to livelihood improvement, particularly for women. The project identified a selection of strategies which can be tested elsewhere in a variety of policy, institutional, cultural and environmental contexts.	Strategies identified may have potential for some of the more remote communities in Northern Province.	University of Durham	31/05/99	R7149

<i>Purpose</i>	<i>Ouputs</i>	<i>Potential relevance</i>	<i>Project lead institution</i>	<i>End date</i>	<i>DFID Project No</i>
<b><i>Overcoming informational constraints: improving horticultural marketing and technical information flows to small-holders</i></b>					
To develop mechanisms to increase market awareness and market orientation of targeted farmers and traders.	New knowledge about marketing systems and informational imperfections in Ghana, Tanzania and Zimbabwe, and recommendations concerning initiatives from within the public and private sectors, respectively, to overcome marketing imperfections.	The recommendations to address the problems may well be very relevant to South Africa. E.g. training to build human capital - business principles should be integrated into school curricula. Training should also embrace health, safety and sustainability concepts. Collection and processing of current price data in destination markets to be disseminated by radio. Further development of small-scale processing such as drying needed. Need for production advice as well as marketing advice. Building the confidence of extension officers in handling marketing issues is necessary.	Wye College	15/01/00	R7151

## ***Methodologies***

### ***Identifying characteristics which influence consumer acceptance of new sorghum varieties***

To identify measurable traits which influence consumer acceptance of sorghum in Zimbabwe, to feed into breeding programmes.	Sensory qualities of sorghum varieties identified and quantified. Rapid and simple physical and chemical methods for monitoring sorghum quality determined.	If similar traits were found to influence consumer acceptance of sorghum in South Africa, this information could be shared with sorghum breeders. The methodology used to identify (un) acceptable traits could be used for similar activities in South Africa.	Natural Resources Institute	13/12/99	R7523
---	---	---	-----------------------------	----------	-------

### ***Analysing Changing Gender Relations for Monitoring and Evaluation in the Renewable Natural Resources Sector***

To develop a general approach for analysing changing gender relations, and to develop a process by which this could be adapted for a specific situation.	Methods for analysing changing gender roles developed and tested.	Practical methods which could be adapted for specific situations.	Overseas Development Group	30/05/99	R7039
--	---	---	----------------------------	----------	-------



***Development of tools for ethical trading of horticulture exports by resource poor groups - Phase 1***

<b><i>Purpose</i></b>	<b><i>Ouputs</i></b>	<b><i>Potential relevance</i></b>	<b><i>Project lead institution</i></b>	<b><i>End date</i></b>	<b><i>DFID Project No</i></b>
To assess the need for replicable and appropriate ethical criteria, incorporating the needs of resource-poor groups for different commodities, production systems and locations. Analysis of the use of ethical criteria by primary stakeholders, potential uptake pathways. To develop, test and analyse a model institutional framework for implementing ethical trade.	Identification of poor peoples' social and environmental criteria through field research. Dissemination of fieldwork findings and analysis of opportunities and challenges for adopting ethical criteria with private companies, NGOs and trade unions.	Communities in the Northern Province provide labour on tea estates. There may be potential for using criteria developed in the project to address and enhance ethical performance.	Natural Resources Institute	01/06/98	R7168 & R7468