

Appendix 1

Report on a visit to India, 5-15 April 2000

Nigel D Poole

CROP POSTHARVEST RESEARCH PROGRAMME

Project Title: ***Food quality and livelihood security***

NRIL Number : ZB0221

DFID Number : R7530

Purpose of visit

The purpose of the visit was to initiate the project through discussions with collaborators in Delhi and Varanasi and in a workshop in Delhi.

Itinerary

05-04-0 arrive Delhi

09-04-00 to Varanasi

12-04-00 return to Delhi

14-04-00 leave Delhi for UK

Activities

- Visited local markets and production sites
- Consultations with the following collaborators:

Mr Ravi Agarwal, Shristi

Dr Bhupal, Dr PB Singh, Delhi School of Economics, University of Delhi

Dr Rana Singh, Dr Chandra Sen, Dr Madhoolika Agrawal, BHU

Dr MC Jain ICAR (plus 2 assistants)

Dr Neela Mukherjee

Ms Anumita Roychowdhury

Appendix 2

Workshop, Delhi, 14-04-00 (Powerpoint summary)

Ten participants

Enhancing food chain integrity

DFID R7530 Project workshop

14 April 2000

New Delhi

1 Programme

- ***Welcome and introductions***

- ***Research context***

 - previous project on air pollution

 - linkages with new project

- ***Food safety and quality assurance***

- ***How are we going to tackle the problem?***

- ***Workplans and outputs for Phase I***

- ***Workshop and Phase II***

- ***Administration and procedures***

2 Enhancing food chain integrity

- **QA mechanisms for air pollution impacts on fruit and vegetable systems**
- **food quality and livelihood security: poor people benefit from new knowledge...**
- **purpose: strategies leading to improved food security, increased availability and safety, and better market access**
- **assess air pollution impacts & implications**
- **recommend approaches to improve QA**

3 Food safety

- *driven by scares around the world*
- *does safety matter?*
- *'luxury' good, a hidden attribute*
- *testing is expensive; prices reflect quality?*
- *other signalling mechanisms: labelling, branding, reputation, contract specifications*
- *regulation? 'carrots and sticks'*
- *Hazard Analysis Critical Control Points...*

4 Safe vegetables?

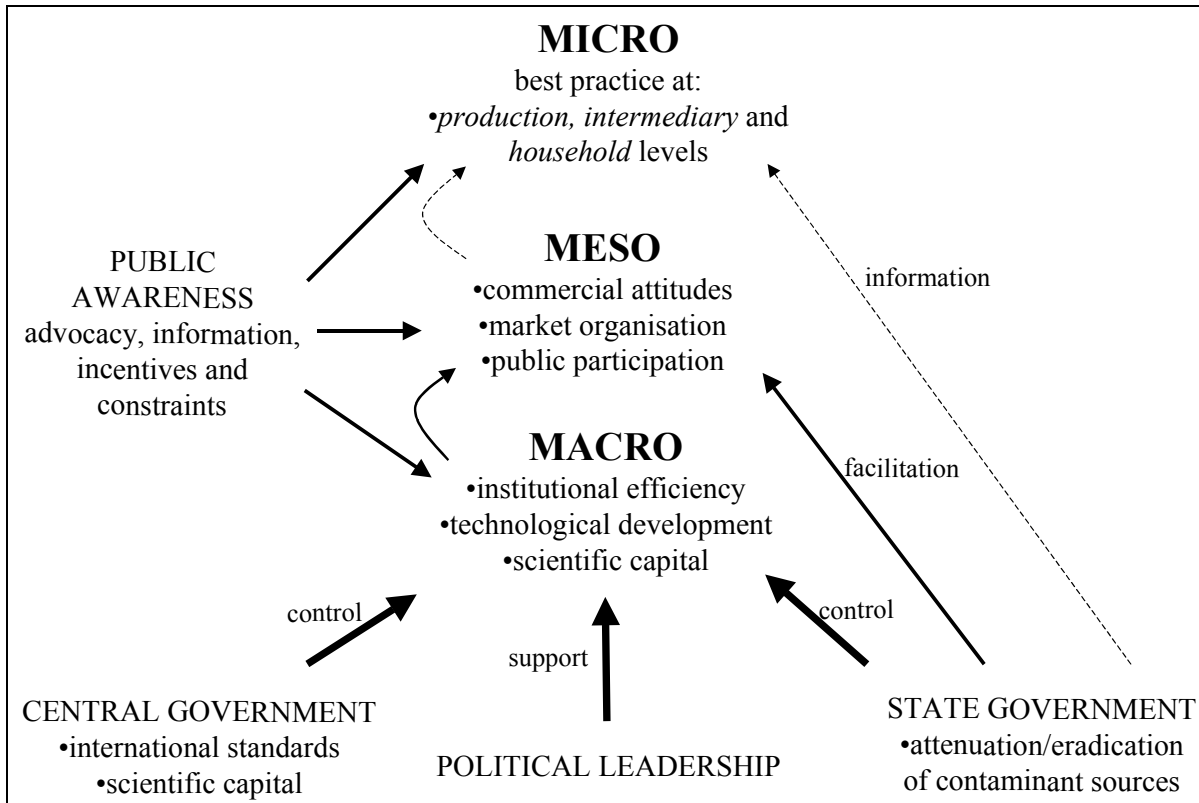
- *economically important for growers*
- *nutritionally important for (poor) consumers*
- *widespread contamination?*
- *air-borne pollutants at production sites?*
- *contamination post-harvest?*
- *loss of yield; loss of economic and nutritional quality due to gaseous contamination and heavy metals*

5 Turning the dream into reality...

- ***Review of relevant literature***
- ***Analysis of vegetable market systems***
- ***Analysis of livelihoods of poor***
- ***Assess heavy metal contamination***
- ***Assess impacts of air pollution***
- ***Assess awareness of safety hazards***
- ***Recommendations of limits and strategies to reduce contamination***
- ***Recommendations of approaches to food QA, and strategies to ameliorate pollution impacts***
- ***Estimate of impacts on livelihoods***

Appendix 3

Regulatory and incentive framework for UPU horticulture in India



Appendix 4

INTERNAL QUARTERLY REPORT

Authors:

Dr Nigel Poole (Wye College)

Dolf te Lintelo (Imperial College)

Travel:

The first project visit to Delhi and Varanasi by Nigel Poole (NP) and Dolf te Lintelo (DT) took place early April 2000, enabling a range of consultations with project collaborators. Work plans were discussed in detail and agreed upon with the individual research partners.

In addition to meetings with individual collaborators, a one-day project workshop was organised in Delhi on 14 April, which was attended by all local partners. The goal of the workshop was to familiarise the collaborators with each other, with the different research components of the project and in particular, to emphasise the linkages and subsequent interdependencies of research partners' inputs and individual and collective project outputs. The keen interest of collaborators was indicated by the active participation in the workshop: a number of interesting topics surfaced that will be taken into consideration while further shaping the research.

Furthermore, in this workshop, research targets were discussed and agreed upon for the short term, particularly aiming at November 2000, when a follow up workshop is scheduled to take place. Initial research findings are to be presented by the collaborators and directions for further research to be agreed upon in a participative manner.

Especially relevant with respect to the marketing economics component of the project, were the visits that NP & DT made to some major wholesale and retail markets in Delhi and Varanasi. Under guidance of Dr. DS Bhupal of the Agricultural Economics Research Centre, NP visited the Azadpur market in Delhi.

Whereas NP returned to England, DT has spent time in Delhi and Varanasi up till the end of June, facilitating the collection of local information through literature and stakeholder consultations and further fine-tuning of activities with the project collaborators.

Since mid-May, Dr. Fiona Marshall has taken up maternity leave for a period of six months.

Research activities:

The Imperial/Wye College team, consisting of Nigel and Ali Poole, Fiona Marshall, Nigel Bell and Dolf te Lintelo have finalised a first draft of the literature review which was submitted to DFID at the end of May. This review will be developed and supplemented and a second draft is planned to be finished around November, hence serving as a major research output to be discussed at the project partner workshop.

Local partners in India have been able to make research contributions in differing degrees. In May, Dr. RB Singh of the Delhi School of Economics has been granted official clearance by the University of Delhi for participation in the project and started the collection of data required for the mapping of polluting industries and agricultural areas in and around Delhi.

Mr. Ravi Agarwal (Srishti) has taken up work on the stakeholders involved in industrial siting policies and consumer protection policies that specifically link in with the issues of food safety and food quality.

Frequent discussions were held with Dr. Bhupal and the director of the Agricultural Economics Research Centre, Delhi School of Economics, whose governing body is due to clear the project. In anticipation of the clearance, a number of brainstorming sessions have been conducted and questionnaires for the initial market surveys have been drafted. This is being done in collaboration with the Varanasi counterpart responsible for the marketing survey, Dr. Chandra Sen. In anticipation of a speedy project clearance, Dr. Sen has started to collect secondary data on the volumes and prices in Varanasi markets.

The participatory research component of the study is in the process of planning and a number of meetings with Dr. Neela Mukherjee have taken place. Currently, the option of conducting a pilot survey in Faridabad area to the south of Delhi is considered, hence advancing PRA research activities to the second quarter.

The experimental component of the study has been successfully taken up in Varanasi by Dr. Madhoolika Agrawal (BHU Botany Dept.). In close cooperation with the local geographer, Dr. Rana PB Singh, the focus area has been divided into 40

grids of 1 square kilometre. In each of these, at least one outlet has been selected for produce sample collection. Accordingly, under guidance of Dr. Agrawal, the collection of samples of vegetable crops was started in April and subsequent monthly samples are collected for the 40 marketing outlets. These samples will be analysed for both their content of heavy metal contamination and nutritional quality parameters.

The experimental program in Delhi is due to begin shortly. The final project clearance from the Indian Council of Agricultural Research is expected to be granted any time now, after initially requests were made for some clarifications to be given by principal collaborator Dr. MC Jain. Discussions and preparations have taken place with Dr. MC Jain's team to develop the action plan, enhancing a speedy start of work once ICAR approval is received. In Delhi, 25 marketing outlets have been selected for collection of vegetable produce samples.

In addition, a draft questionnaire has been formulated, to be used during sampling at market outlets, to enhance an initial investigation of marketing systems, and locating the sites of production of samples.

Planned travel for next quarter:

Although no team visits are planned for this period, in July, Nigel Poole plans to make a stop-over in Delhi during a trip to Bangalore. This will enable possible required streamlining of work by collaborators, in the absence of DT, who will spend July-August in Ascot and is only planning a return to India around the end of the third quarter.