

tende Evaluierung der Auswirkungen des Informationsdienstes erlaubt und bei Fehlentwicklungen unverzüglich entsprechende Korrekturmaßnahmen veranlaßt.

Solche Maßnahmen dürfen nicht nach dem ersten Schwung der Aufbau-phase einschlafen. Beaufsichtigung und Förderung der Datenerheber ist eine ständige Aufgabe des Management, deren Bewältigung erfolgs-entscheidend ist.

7.3 Geschwindigkeit der Informationsverbreitung

Informationen sind umso relevanter, je schneller sie zur Verfügung stehen. Zwischen Datenerhebung und -veröffentlichung sollten nach Möglichkeit nur wenige Stunden vergehen. Schnelligkeit ist eine Frage der Organisation und der Kommunikationsmittel. Seit es Telefon, Telex, Teleprinter, Funk, Radio und Fernsehen in fast jedem Winkel der Erde gibt, können Informationen schneller fließen als Warenströme. Bevor die Lastwagen mit dem am frühen Morgen in den Produktionsgebieten gekauften Gemüse den städtischen Großmarkt erreichen, können Groß- und Einzelhändler längst über die Erzeugerpreise informiert sein. Bevor am Morgen Erzeuger und Aufkaufhändler zusammentreffen, können die Erzeuger längst über die städtischen Großmarktpreise des Vortages informiert sein. Und zwar ohne große zusätzliche Investitionen in kostspielige technische Spielereien, sondern durch konsequente Nutzung vorhandener Kommunikationssysteme.

Bei den meisten Marktinformationssystemen sind hier erhebliche Verbesserungen möglich. Dazu ist erforderlich, daß Dienstwege abgekürzt werden, daß auf den Postversand zugunsten schnellerer Kanäle weitgehend verzichtet wird, daß die Datenerheber, wo immer möglich, Zugang zu Telefonanschlüssen erhalten, daß entsprechende Mittel für laufende Kosten bereitgestellt werden und daß das für Datenübermittlung, Verarbeitung und Veröffentlichung zuständige Personal auch außerhalb der normalen Bürozeiten (Schichtdienst) arbeitet.

F VORGEHENSWEISE IM MANAGEMENTBEREICH

F 1 LEITFADEN ZUR PLANUNG VON TRAININGSPROGRAMMEN FÜR MANAGER LÄNDLICHER MÄRKTE

Die Arbeitsunterlage zeigt die Vorgehensweise bei der Planung und Durchführung von Trainingsprogrammen für die Zielgruppe der Manager ländlicher Märkte.

Die Arbeitsunterlage gliedert sich wie folgt:

1. Planning rural market managers' training programmes
2. General approach to market manager training
3. Market training manual
4. Outline training syllabus.

1. Planning Rural Market Managers' Training Programmes

The following points need consideration when planning courses.

(a) Identifying the target group

The course programmes should be related to the different levels of management skills required in the various kinds of rural markets. Where the extent and kind of responsibilities vary, it may be desirable to group the participants.

A broad classification of the groups to be trained could include:

- i) Primary target groups:
 - market managers/market masters of rural village markets
 - market managers of rural assembly markets

These could be subdivided into those in period markets and those in continuously held markets.

ii) Subsidiary target groups:

- marketing managers/supervisors of government or marketing board, assembly markets/procurement points
- other members of market committees and market controlling authorities

These may include market middlemen and producers who are elected to committees and also certain other market staff (chief grading officer) and government officials.

Other points to consider are:

- determining the total number to be trained and at what level of skill

- determining the numbers to be trained on each course; it will then be possible to estimate the total number of courses required. The maximum number on each course should be between 15 and 20.

(b) The availability of participants

- obtaining the support and cooperation of the participant employers - local authorities, provincial governments, municipal councils, cooperatives etc. It is essential that they are aware of the need for training programmes and of the assistance they can give in improving market performance
- the best time for courses to be held is during the off-peak season.

(c) The availability of teaching staff

- in order to reach the largest number of participants over a given period or time a cadre of marketing management trainers will need to be instructed. This will allow the training programme to be continuous and more than one course can be held at any one time
- the sources of teaching staff must be determined together with the number required. They may be sought among experienced market managers or those with considerable rural marketing experience
- besides taking them through the course topics it may also be necessary to give some training in teaching techniques.

(d) Course planning

- fixing the most appropriate length of course. This will be determined by such factors as the period of trainee availability, his level of education and experience, the extent of marketing operations in his place of work and the cost of financing his attendance
- determining the language in which the course is to be held. In some rural areas the use of local languages may be necessary but whenever possible it should be in the national language.
- determining the most convenient location for courses
- planning the best use of alternative training methods - workshops, seminars, lectures, roleplaying and practical work and demonstrations
- planning visits to markets.

(e) The preparation of training material and course content

The first requirement here is to determine the topics which should be covered. This will require research to find out what is and what should be done at the various levels and kinds of rural markets. Some orientation may be gained by identifying problems, complaints and bottlenecks. It is desirable that all groups using markets be contacted in order to establish felt needs.

The course content and balance between topics should be that which best meets the needs of the practical day to day duties and problems faced by the market manager.

The second requirement is that of constructing a training manual containing that information which will assist the market manager in his administration of the market place. It will reflect the course content.

(f) Methodology

- the general approach should be that of moving from the known to the unknown, that is from the participants own experience to the introduction of new ideas
- the use of discussions should be encouraged to obtain trainee participation and enable him to air his own problems and difficulties.

(g) Course evaluation and participant follow-up

- to ensure that courses meet known needs and are continuously improved where necessary, participants should take part in evaluating courses - both the content and the quality of presentation. Follow-up visits should be made to the participants places of work to see what improvements in the quality of market management have been possible and to bring to light any problems associated with the introduction of changes. These should then be taken into consideration in future course planning.

(h) Miscellaneous

- planning for participants accommodation when needed
- estimating the costs of training both for the trainees employers and for the course organizers, and obtaining budgets for these
- ensuring that adequate teaching supplies are available including audio-visual aids.

The market management should be seen as a resource point which can supply information, assistance and advice to producers,

market intermediaries and others who want to make use of its facilities. He needs to play a positive role in market development and not simply to enforce regulations.

In order to make the best practical use of trained market managers it may be desirable to involve market committee members in seminars, particularly where they are not paid market officials but are representatives of other groups. In some cases market committees comprise both traders and producers. They too may need encouragement and assistance in their work and be prepared to look at marketing as a development activity.

It is of interest to note that India arranges training courses for Market Secretaries. The course is orientated to equip personnel to administer the regulated markets more efficiently. The duration of the course is four months. Training is simultaneously given at two centres, each having a capacity for 30 candidates.

These are mostly sponsored by the State Governments and Market Committees. The syllabus includes an in depth study of the provisions of the Agricultural Markets Act, the rules and bye-laws of the different States and also the manner of their enforcement. A stipend of Rs. 80 per month is paid to the trainees.

2. General Approach to Market Manager Training

Step by step work programmes, bearing in mind the relevant points mentioned earlier in paragraph 2, should be set out for each country, allocating duties to those concerned.

A suggested timetable for course planning is set out below:

- i) approaching research authorities - ministries, local governments, market committees etc.
- ii) determining the training areas to be covered
- iii) start the development of training material
- iv) assessing the numbers to be trained in each group
- v) finding the necessary teaching/training staff and perhaps organize an orientation course
- vi) detailed programmes of courses - location of courses, timetables, date when planned to be held etc.

3. The Training Manual

(a) General introduction

In order to give substance to training courses training manuals need to be prepared. Firstly, these provide a detailed summary of the course content including all teaching material and secondly, act as reference material to help guide the trainee in his day to day work. Thus it can have a direct practical value.

Where there are set, common procedures already well established in markets following a pattern or sequence, than these should be given in the manual. Where this is not the case they need to be drawn up and so help establish an acceptable sequence of events which can be commonly applied. It is important to set down the steps through which farmers have to go in selling their produce. For instance, the payment of market dues on entry, movement of produce to selling point, grading and weighing produce, the preparation of quality, weight and value chits, and the collection of cash.

Because of its importance as a day guide, its form and contents should be acceptable to the local authority controlling markets. As far as possible a consensus of opinion must be obtained. This may be easier where market legislation exists.

(b) Preparation of the manual

The responsibility for its preparation should be given to a specifically well qualified person or group appointed by the most appropriate authority such as the Department of Marketing within the Ministry of Agriculture, or the Ministry of Local Government. In either case full consultation with all interested parties will be necessary, more particularly over the more detailed aspects of market administration in different markets. Different sections may be prepared by dif-

ferent persons and then considered and put together by the whole group of committee. The time for preparation would probably from three to six months.

(c) The contents

These must be designed to meet the requirements of the particular target group, in this instance market managers. Separate manuals may need to be made up for other market officials. For instance, a special manual may be needed for those dealing with price and quantity data and its analysis, or store management when this falls under the aegis of the market committee, or marketing planning and construction. The extent of the contents will be guided by the range of operations carried out in the markets and the areas of responsibilities of the market committee and its manager. Storage, transportation and grading are important functions at the assembly level market, they have less importance in village level markets whose functions are somewhat different.

Since the outline of the training manual will follow those of course syllabuses only a general summary is set out below.

(e) Other points

It may be beneficial and helpful if draft copies or outlines were prepared by each country and exchanged them through the FAO Regional Office in Bangkok.

4. Outline Training Syllabus

(a) The role of rural markets in rural development

To emphasize the importance of rural markets for small farmers and rural development. To stimulate the participants pride of managing and supervising a rural market.

- a review of the evolution of rural markets, the different kinds of markets - village, assembly, wholesale and their functions; the factors which determine market growth; marketing channels and how markets linked with

each other; the main problems which farmers have in marketing their surpluses

- the number and coverage of rural markets in the country together with products dealt in and estimated turnovers
- the share of rural markets in the sale of agricultural produce by small farmers and alternative marketing channels, e.g. direct marketing.

(b) The market users and market functionaries

- producers, cooperatives, contractors, itinerant traders and sellers; their functions in bringing goods to market
- commission agents, wholesalers, brokers, retailers; description of their functions; paying for their activities, levels of charges; their mark-ups and margins
- the buyers (wholesalers, processors, millers, retailers)
- consumers, the ultimate buyers.

(c) Rules and regulations and the administrative structure

- understanding the rules and regulations relating to market operations and why they are required; the extent to which these are upheld and the problems of gaining acceptance
- the administrative hierarchy for the supervision and administration of rural markets
- the roles and functions of other agencies related to rural market operations.

(d) Rural market physical facilities

- types of facilities and equipment required for efficient operation of rural markets and planning for the construction, procurement and installation of such facilities and equipment-office accommodation, stores, weighing, buying/selling platforms, traders stalls, market yards, scales, water supplies, accommodation for animals and vehicles, processing or crop cleaning sheds, rading equipment etc.
- the proper management and maintenance of such facilities and equipment
- market layout, planning for improvements including budgeting, cost-benefit calculations.

(e) Trading practices

- the movement of produce through different stages of buying and selling in the market

- price-setting practices such as tenders, auctions, private negotiation, contracts; an examination of these alternatives
- factors determining and affecting market prices over different periods of time.

(f) Supporting services

- market and price/quantity information collection and dissemination—from whom, to whom, what forms, frequency, compiling and analysing and representing data; calculating margins
- the simple grading procedures for major commodities; knowledge of the different grades, grading equipment
- crop preparation - cleaning and drying
- packing and containers
- storage of major commodities
- weighing and measuring procedures
- financial institutions such as banking services, cooperative credit organizations and others
- the availability and integration of various extension services : agricultural and marketing extension, cooperative and farmer marketing training.

(g) The management of rural markets

The level of management training will depend on the type of market, its size and the extent of the services it offers.

- the delegation of authority and responsibilities to market managers/supervisors
- types of market fees, their assessment criteria, method of assessment, collection procedure, accounting for and the use of the funds collected
- relationship between the market committee or other authority and the market manager
- the other kinds of market staff such as graders, weighmen, auctioneers etc. their roles and functions and their supervision by the market manager
- budgeting, record keeping, the collection of statistics: the preparation of periodic market reports - contents, lay-out
- market place maintenance, cleanliness and hygiene
- control of traffic and persons within the market area

- dealing with the complaints of market users
- promotion of innovations.

(h) Identifying and discussing the main problems of marketing and market management and making suggestions for improvement

(i) Visits

Visits should be made to appropriate markets so that market practices and facilities, good and bad, can be observed.

Quelle: FAO: Rural Markets, A Critical Link for Small Farmer Development. Report on the FAO/DSE joint planning meeting on rural market centre development in Asia, Bangkok 1978

F 2 BEISPIEL EINES MONITORING- UND EVALUIERUNGSPLANES

In der Arbeitsunterlage wird der Monitoring- und Evaluierungsplan eines ländlichen Entwicklungsprojektes in Sierra Leone vorgestellt (→ D3). Entsprechend der in Sierra Leone geläufigen Terminologie besteht ein Projekt aus mehreren Programmen. Die Arbeitsunterlage wurde dem Operationsplan für ein Projekt der ländlichen Regionalentwicklung entnommen, das u.a. aus den Programmen Landwirtschaft, Fischerei sowie Gesundheit und Ernährung besteht. Das Beispiel zeigt den Monitoring- und Evaluierungsplan für das Programm Landwirtschaft. Darüber hinaus verfügen die anderen Programme als auch das "Planning and Coordination Office" (PCO) über Monitoring- und Evaluierungskomponenten.

M&E-Activities in Previous Programme Phases (Pre- and Pilot Investment Phase)

M&E-activities have been carried out up to date mainly within the agricultural programme as this was the programme which started from the beginning of the project's lifetime.

Monitoring activities within other programmes have been limited to the conduction of a baseline survey within the health programme and a small sample survey in fisheries on the fishing potential in the area. Financial monitoring, however, is done within all programmes from the beginning with the assistance of the financial controller, Planning and Coordination Office (PCO). M&E-activities in agriculture have been concentrating on

- the agricultural baseline surveys
- the assessment of introduced innovations
- price information series, and
- special surveys.

The agricultural baseline surveys were started with basic data collection in 1981 and 82. Data processing and analysis on the project-owned Apple II computer was finished in 1983 and the draft version of the final report has been available since September 1983.

The assessment of introduced innovations consequently concentrated on those innovations, namely:

- distribution and diffusion of upland rice varieties
- establishment of tree crop nurseries for coffee and cocoa and provision of improved planting material for coffee and cocoa, and
- distribution of improved swamp rice varieties and provision of tools for swamp development.

The upland rice component was evaluated in two upland rice surveys (81 and 82) and two diffusion surveys (82 and 83). The results show considerable yield increases of improved rice varieties compared to traditional varieties (even without fertilizer) but a low rate of farm to farm diffusion the following year.

Data on tree crop establishment have been collected during an evaluation survey on the nursery programme 81/82 mainly on issues like survival rates and number of nursed plants; a tree crop establishment survey is going on during 1983.

Data collection on labour inputs and yields of the swamp development programme is presently done; there have been no M&E-activities on the cassava programme except some minor yield assessments by the agronomy department.

Price information was collected from September 82 to September 83 on farm gate prices for cassava on a monthly basis and wholesale and retail prices for rice and cassava at daily and weekly markets.

Special surveys have been carried out on management request on chiefdom stores for the assessment of chiefdom stores' capacity on input storage and on garri processing for assessing additional income generation possibilities.

Planned M&E-activities for the Next Phase (Main Investment Phase)

The PCO will continue to support the M&E-units of the programmes on the design of their M&E-subprogrammes and evaluation surveys as well as on data processing, analysis and reporting. Focus will be on the provision of user oriented information to the programmes as a basis for planning and replanning exercises on project and programme level. Assistance will be given also during planning exercise to programme managers.

M&E-Activities of the Agricultural Programme

M&E-activities in the agricultural programme will during the planning period be focussing on the following aspects:

- finalization of baseline data analysis
- tracing of programme activities (programme monitoring)
- environmental monitoring
- assessment of innovations introduced by the programme
- monitoring of the on-farm research programme.

As mentioned above, the draft version of the baseline report has been available since 9.83. Further analysis, however, has to be done on the baseline data as the present draft version limits its utility for planning purposes and the document still contains contradictions and doubtful conclusions. Major concern will be on further analysis of:

- prevalent farming systems in the area and their major constraints and limitations (conducting a farming system survey)
- on-farm data like farm size, cropping pattern as basis for planning farm related extension packages, and
- total cropped area for different crops.

The final version of the baseline data document will also include a basic set of maps on administration (EA boundaries, chiefdom boundaries), infrastructure (roads, water supply, markets, health facilities, schools, other public facilities), population (densities per EA and village wise, migration pattern), agriculture (landforms, crop suitability, landuse, availability of arable land, availability of

swamp areas, agricultural sections) and basic maps of all other agencies working in the area (VSO, Peace Corps, Cuso, etc.). Part of this mapping exercise is already done; most of the information for completion is available from various sources and only has to be compiled and presented in the form of maps.

Programme monitoring and evaluating

The newly introduced internal reporting system in the agricultural programme will hopefully be operating satisfactorily throughout the area from 6.84 onwards so that part of the past and present monitoring tasks of the M&E-unit can be fulfilled through analyzing information from regular reporting presented by the extension services through their reporting system.

Additional activities by the M&E-unit will be the conduction of monitoring surveys on upland rice and its diffusion, swamp rice development, tree crop establishment and the cassava programme.

Environmental monitoring and evaluation

Environmental monitoring and evaluation will include the tracing of environmental conditions on:

- marketing (regular assessment of prices and amounts of products/inputs for all major crops/inputs)
- climatic data (regular assessment of amount of rainfall and distribution over the season), and
- unexpected pests and disease occurrence (army worm and others).

Data on environmental monitoring and evaluation will mainly be used for permanent testing of the important assumptions and their revision, if necessary.

Assessment of innovations introduced by the programme

This will include the interpretation of project monitoring results within the frame of the environmental conditions. Major concern will be on upland rice and its diffusion, swamp rice development, cassava programme and tree crop establishment. Table 1 shows the preliminary

workplan for the M&E department of agriculture vor 84/85 (excluding baseline completion).

Those ongoing M&E activities will be supplemented by further investigation in specific subjects on short term notice if the need arises.

Updating of Plan of Operation (Planop)

regular updating

The planop is usually completed 6 months before the planning period starts.

The first regular updating will be done during the half-yearly progress reporting at the beginning of the planning period. All elements (especially the important assumptions) in the logframes will be checked carefully against changed environmental conditions and additional information from M&E or external sources. Progress reporting and updating of planop go together as targets for the next reporting period have to be stated in the progress report anyway.

The second regular updating of the planop will actually be the write up of the planop for the next planning period. Updating will be done in a small workshop with implementing officers from all programmes in October/November each year and the objective will be to carefully examine the problem tree analysis and the analysis of objectives, elaborated one year before, and include additional problems/objectives or cut off problems which obviously have been proven not to be of importance. All elements of the logframes have, of course, to be checked again.

The updated planop will already provide part of the information necessary for progress reporting.

irregular updating

Updating of planop will not be limited to certain timesequences as important events influencing project success can happen at any time. Firstly, any serious change in environmental conditions which is

likely to be influencing project success will lead to checking the validity of assumptions and eventually to changing the targets. This will be done irrespective of whether the change has positive or negative influence on project success.

Secondly, any feedback from M&E activities will be examined as to whether it has an impact on assumptions/targets or not.

The tentative long term operational planning at present includes the 3 years following the one year's detailed planning period. During elaboration of the yearly planop it would be useful for long term planning to keep a consecutive 3 years tentative planning period irrespective of whether the period would extend the funding phase or not. If an extension of the funding phase is not expected, long term tentative planning should be done on the basis of the expected resources which can be made available locally. This procedure would avoid a sudden cut after phasing out of the project and would ensure a certain continuity.

Quelle: Ministry of Development and Economic Planning: Government of Sierra Leone: Bo-Pujehun Rural Development Project. Plan of Operation, Freetown 1983.

F 3 LEITFADEN ZUR PRÜFUNG MÖGLICHER TRÄGERORGANISATIONEN

DETERMINANTE DER TRÄGER- (PROJEKT) ORGANISATION	ERFORDERLICHE INFORMATION	DATENBESCHAFFUNG/DARSTELLUNG
Zielsystem der Organisation	<ul style="list-style-type: none"> - Koalitionspartner der Organisation - Ziele (Erwartungen) der Koalitionspartner - Zielbildungsprozess - Zielbeziehungen (spez. Zielkonflikte) 	<ul style="list-style-type: none"> - Befragung von Organisationsmitgliedern auf allen Ebenen - teilnehmende Beobachtung - Zielbeziehungsmatrix
Differenzierung nach Aufgaben	<ul style="list-style-type: none"> - vorliegendes Gliederungsprinzip 	<ul style="list-style-type: none"> - Analyse vorhandener Organigramme - Analyse vorhandener Stellenbeschreibungen - Funktionendiagramme - Teilnehmende Beobachtung (z.B. in Komitees) - Analyse vorhandener Programme, Manuale, Verfahrensrichtlinien - Befragung von Mitgliedern des Managements - Analyse von Gesetzestexten - Ableitung des Standardisierungsgrades einzelner Maßnahmen
Koordination	<ul style="list-style-type: none"> - Personenorientierte Koordinationsinstrumente - Selbststimmliche Weisungen - Aufgaben/Zusammensetzung bestehender Komitees - Abstimmungsprozesse in Nutzergemeinschaften - Personenunabhängige Koordinationsinstrumente - Programmierung - Standardisierung von - Ausführungprozessen - Rollen - Ausbildung/Training - Planung, Kontrolle - Konfliktmanagement 	<ul style="list-style-type: none"> - Analyse vorhandener Organigramme - Funktionendiagramme - Aufgabekataloge - Stellenbeschreibungen - Befragung und teilnehmende Beobachtung - Gliederungstiefe, Leitungsspanne, Stellenrelation - Ableitung Delegationsgrad
Delegation von Kompetenzen	<ul style="list-style-type: none"> - Vertikale Kompetenzaufteilung - Weisungsrechte - Verteilung der Verantwortlichkeiten zwischen Subsystemen/Gruppen/Personen - Verteilung von Beratungsfunktionen - Tragweite der einzelnen Entscheidungen 	<ul style="list-style-type: none"> - Analyse vorhandener Organigramme - Funktionendiagramme - Aufgabekataloge - Stellenbeschreibungen - Befragung und teilnehmende Beobachtung - Gliederungstiefe, Leitungsspanne, Stellenrelation - Ableitung Delegationsgrad
Partizipation und Führung	<ul style="list-style-type: none"> - Partizipation der Organisationsmitglieder - Leadeurrolle - Anwesenheit - Management (in Bezug auf übergeordnete Ebene) - Einstellung von Mitgliedern zur Partizipation - Vorliegend Gruppen- und Führungssituation (Leadership/Leadership!) - Auswahl, Entlohnung, Sanktionierung des Führers - durch die Gruppe - Verantwortlichkeit des Führers 	<ul style="list-style-type: none"> - Befragung der Organisationsmitglieder auf allen Ebenen - teilnehmende Beobachtung - Analyse von Stellenbeschreibungen - Analyse der vorliegenden Partizipationsläufe - Ableitung des Partizipationsgrades - Analyse der Rolle des 'Agenten'

DETERMINANTE DER TRÄGER- (PROJEKT) ORGANISATION	ERFORDERLICHE INFORMATION	DATENBESCHAFFUNG/DARSTELLUNG
Personensystem	<ul style="list-style-type: none"> - Sozio-kultureller Kontext - Charakteristika der Organisationsmitglieder in Bezug auf konkrete Aufgabenstellung - Einstellungen, Wertesystem - Leistungsfähigkeit - Bindungscharakteristika - Rekrutierungsstrategie - Ausbildungs-/Trainingsstrategie 	<ul style="list-style-type: none"> - Befragung - Auswertung von Dokumenten - Personalstatistiken - Arbeitsverträge, Bonusssystem - Analyse vorliegender Ausbildungs-/Trainingsprogramme - Gesetzestexte (national, projektspezifisch)
Eigenums- und Nutzungssituation	<ul style="list-style-type: none"> - Eigentums- und Nutzungsrechte in Bezug auf relevante Faktoren - Einstellung von Mitgliedern zu Eigentums- und Nutzungssituation 	<ul style="list-style-type: none"> - Analyse vorliegender Gesetzestexte, Vorschriften, Regelungen - Befragung - teilnehmende Beobachtung (spez. Nutzungssituation)
Technologie und Beratungsinhalte	<ul style="list-style-type: none"> - Elemente/Charakteristika der Sachmittel - Einstellung der Mitglieder zu Technologie - Ausbildungsstand der Nutzer - Wartung/Pflege/Ersatzteilbeschaffung - alternative Technologien 	<ul style="list-style-type: none"> - Auswertung von Dokumenten - Lieferkonditionen - Manuelle (Wartung, Pflege) - Trainingsprogramme für Nutzer - Befragung von Nutzern
Größe der Organisation	<ul style="list-style-type: none"> - Genutzte Fläche - Mitgliederzahl - gesamt - spezifische Gruppen - Ausstattung mit Sachmitteln (inkl. Kapital) 	<ul style="list-style-type: none"> - Befragung - Auswertung von Projektunterlagen
Folgekosten	<ul style="list-style-type: none"> - Personalkosten - Betriebskosten - Rohstoffe - Energie - Instandhaltungskosten - Ersatzteile - Schmierstoffe - Vertriebskosten - Vertriebs- und Transportkosten 	<ul style="list-style-type: none"> - Befragung - Auswertung von Projektunterlagen*

* Bei der Auswertung von Unterlagen, die in der Organisation erstellt wurden (wie Organigramme, Stellenbeschreibungen, Funktionsdiagramme etc.) muß geprüft werden, inwieweit die vorliegenden Darstellungen den tatsächlichen Gegebenheiten in den untersuchten Organisationen entsprechen

G VERFAHRENSANLEITUNGEN ZUR BEWERTUNG

G 1 LEITFÄDEN ZUR VORBEREITUNG VON KOSTEN-NUTZEN-ANALYSEN VERSCHIEDENER PROJEKTTYPEN

Am Beispiel von drei verschiedenen Projekttypen sollen Leitfäden (Check-Lists) für die Vorbereitung von Kosten-Nutzen-Analysen vorgestellt werden, die sich wie folgt gliedern:

1 Notwendiger Datenkranz

- 1.1 Erfassung des Angebotes
- 1.2 Erfassung der Nachfrage
- 1.3 Preise und Kosten
- 1.4 Beurteilung des gegenwärtigen Vermarktungssystems

2 Darstellung des Projektes

- 2.1 Projektbegründung
- 2.2 Projektbeschreibung
- 2.3 Kosten und Nutzen

I Projekte zur Errichtung von Verpackungsanlagen für Obst und Gemüse

1 Notwendiger Datenkranz

- 1.1 Erfassung des Angebotes
 - 1.1.1 Produktionsstruktur, Produktionsmengen, Saisonalität
 - 1.1.2 Produktionstrend und limitierende Faktoren für Produktions-erweiterungen und/oder Diversifizierung
 - 1.1.3 Absatzmengen, gegenwärtiger Umfang an Be- und Verarbeitung, Anteile des lokalen, nationalen und Exportabsatzes
- 1.2 Erfassung der Nachfrage
 - 1.2.1 Gegenwärtige Nachfrage und absehbare Nachfrageentwicklung (Frisch- und Verarbeitungsprodukte)
 - 1.2.2 Anteile des Konsums an importiertem Obst und Gemüse
 - 1.2.3 Konsumentenpräferenzen, Qualitätsbewußtsein
- 1.3 Preise und Kosten
 - 1.3.1 Vorherrschende Preise und Preisentwicklung auf verschiedenen Stufen des Vermarktungssystems
 - 1.3.2 Zusammenhänge zwischen Preisen und Qualitäten (Erzielen bessere Qualitäten höhere Preise?)
 - 1.3.3 Produktionskosten

- 1.4 Beurteilung des gegenwärtigen Vermarktungssystems
 - 1.4.1 Erfassung der Marktkanäle und Kanalproportionen
 - 1.4.2 Gegenwärtige Sortier- und Verpackungsmethoden, ihre Kapazitäten, technische und ökonomische Effizienz
 - 1.4.3 Gegenwärtiger Status der Standardisierung (Handelsklassen)
 - 1.4.4 Vermarktungskosten und Spannen
 - 1.4.5 Gegenwärtige technische und wirtschaftliche Probleme beim Sortieren und Verpacken (physische und monetäre Verluste).

2 Darstellung des Projektes

2.1 Projektbegründung

- 2.1.1 Warum sollen Verpackungsanlagen erstellt werden?
- 2.1.2 Welche Marktteilnehmer bzw. Gruppen werden vom Projekt Vorteile haben?
- 2.1.3 Warum sind bislang keine Verpackungsanlagen errichtet oder warum sind bestehende Anlagen nicht weiter ausgebaut worden?

2.2 Projektbeschreibung

- 2.2.1 Vorgesehene Kapazität der Anlage
- 2.2.2 Technische Beschreibung der geplanten Anlage
- 2.2.3 Geplanter Standort
- 2.2.4 Organisation der Beschaffung und Anlieferung von Obst und/oder Gemüse
- 2.2.5 Welche Märkte sollen mit dem Output beliefert werden?
- 2.2.6 Betriebswirtschaftliche Organisation der Anlage einschl. Trägerschaft
- 2.2.7 Erwartete Preise für den Output der Anlage im Vergleich zu traditionell sortierten und verpackten Produkten
- 2.2.8 Welche Anreize können gegeben werden (Preis-, Kreditincentives), um regelmäßige Anlieferung sicherzustellen?
- 2.2.9 Wieviele Monate im Jahr kann die Anlage (voll) genutzt werden?
- 2.2.10 Verwertung von minderwertigen Qualitäten und Abfall.

2.3 Kosten und Nutzen

- 2.3.1 Investitionskosten der Anlage
- 2.3.2 Betriebs- und Unterhaltungskosten
- 2.3.3 Einnahmen des Eigentümers bzw. Trägers der Anlage
- 2.3.4 Wie werden Packmaterialien beschafft und zu welchen Preisen?
- 2.3.5 Quantitative Abschätzung der Nutzen der Anlage aufgrund erwarteter Produktions- und Preiswirkungen
- 2.3.6 Wie ändern sich die Vermarktungskosten durch die Einführung der Anlage?
- 2.3.7 Quantitative Abschätzung der Einkommens- und Beschäftigungswirkungen (so weit wie möglich).

3 Durchführung der Kosten-Nutzen-Analyse

Ermittlung des internen Zinsfußes

II Projekte zur Verbesserung der Vermarktungsinfrastruktur, insbesondere Errichtung von ländlichen und/oder städtischen Märkten

1 Notwendiger Datenkranz

1.1 Erfassung der Angebotssituation

- 1.1.1 Beschreibung des Produktionsgebietes, das durch den geplanten Markt bedient werden soll (Strukturen, Output)
- 1.1.2 Gegenwärtige Produktionsmengen, Saisonalität der Produktion, Bedeutung der Produkte für den lokalen, regionalen Konsum
- 1.1.3 Gegenwärtiger Anteil der Marktproduktion an der Gesamtproduktion, gegenwärtige Organisation der bäuerlichen Vermarktung
- 1.1.4 Welche physischen und ökonomischen Faktoren haben bislang die Vermarktung aus dem Produktionsgebiet behindert?

1.2 Erfassung der Nachfrage

- 1.2.1 Mengenmäßige Nachfrage und Nachfragestruktur im Einzugsgebiet des geplanten Marktes, einschl. der zu erwartenden Änderungen
- 1.2.2 Interlokale bzw. interregionale Verflechtung des geplanten Marktes
- 1.2.3 Sozio-ökonomische Charakteristika der Nachfrager, die den geplanten Markt nutzen werden.

1.3 Preise und Kosten

- 1.3.1 Gegenwärtige Preise und absehbare Preisentwicklungen für wichtige, marktfähige Produkte
- 1.3.2 Gegenwärtige Produktionskosten im Produktionsgebiet für wichtige marktfähige Produkte.

1.4 Beurteilung des gegenwärtigen Vermarktungssystems

- 1.4.1 Beschreibung der gegenwärtigen Vermarktungsorganisation, einschl. vorhandener Infrastruktur
- 1.4.2 Zahl, Kapazität und Funktion der bestehenden Märkte im Einzugsgebiet des geplanten Marktes
- 1.4.3 Analyse der bestehenden Marktstruktur, insbesondere Zusammensetzung des Angebotes, Höhe der Umsätze, Zahl der Händler, Transport, Verpackung und Qualitäten
- 1.4.4 Organisation bestehender Märkte, einschl. Trägerschaft, Verwaltung, Kosten, Marktzeiten
- 1.4.5 Bestehende gesetzliche Regelungen, Marktpolitik der zuständigen Institutionen und Körperschaften
- 1.4.6 Schwächen und Engpässe des gegenwärtigen Marktsystems, Beurteilung der technischen und ökonomischen Effizienz.

2 Darstellung des Projektes

2.1 Projektbegründung

- 2.1.1 Warum ist die Errichtung eines neuen Marktes notwendig? Warum können bestehende Märkte nicht verbessert bzw. ausgebaut werden?
- 2.1.2 Welcher Markttypus soll errichtet werden, z.B. Bauernmarkt, Aufkaufmarkt, Großmarkt?
- 2.1.3 Zukünftig zu erwartende Nachfrage, die vom Marktsystem bewältigt werden muß
- 2.1.4 Anteil des erwarteten Marktumsatzes, der in anderen Gebieten weiterveräußert wird (Anteil des Transithandels).

2.2 Projektbeschreibung

- 2.2.1 Beschreibung der notwendigen Maßnahmen, z.B. Ausbau, Umbau, Neubau, Reorganisation, Modernisierung
- 2.2.2 Standort der geplanten Maßnahme
- 2.2.3 Umfang, Struktur des Warenangebotes, das vom geplanten Markt umgesetzt werden soll
- 2.2.4 Erwartete Zahl der Anbieter und Nachfrage, einschl. der erwarteten Umsatzmengen
- 2.2.5 Technische Beschreibung des Projektes
- 2.2.6 Vorgesehene Organisation, Trägerschaft.

2.3 Kosten und Nutzen

- 2.3.1 Investitionskosten
- 2.3.2 Betriebs- und Unterhaltungskosten
- 2.3.3 Einnahmen des Trägers bzw. Eigentümer des Marktes
- 2.3.4 Wirtschaftlicher Nutzen des Marktes durch verbesserten Marktzugang, geringe Vermarktungskosten, Beschaffungskosten der Nachfrager, Lagerhaltung und Transport
- 2.3.5 Indirekte Nutzen durch Beschäftigungseffekte, Anreize für die Produzenten, Einkommenswirkungen
- 2.3.6 Indirekte nicht-ökonomische Nutzen, wie bessere hygienische Bedingungen, intensivere soziale Interaktion, höhere Qualitätsstandards, Demonstrationseffekt für andere Gebiete.

3 Durchführung der Kosten-Nutzen-Analyse

Ermittlung des internen Zinsfußes

III Projekte zur Verbesserung der Lagerhaltung bei Getreide

1 Notwendiger Datenkranz

1.1 Erfassung des Angebotes

- 1.1.1 Produktionsstruktur, Produktionsmengen, Produktionstrend bei Getreide
- 1.1.2 Regionale, saisonale und jährliche Angebotsveränderungen während der letzten zehn Jahre
- 1.1.3 Identifikation der Überschuß- und Defizitregionen

- 1.1.4 Feststellung der vermarkteten Mengen und der Importe
- 1.1.5 Bestimmung der handelsüblichen Qualitäten, die auf den Märkten angeboten werden

1.2 Erfassung der Nachfrage

- 1.2.1 Nachfrage- und Konsumstruktur für verschiedene Getreide
- 1.2.2 Substitutionsbeziehungen zwischen Getreide und anderen Grundnahrungsmitteln, z.B. Kassava, Süßkartoffeln, Bananen
- 1.2.3 Abschätzung der Nachfrageentwicklung für die nächsten drei bis fünf Jahre

1.3 Preise und Kosten

- 1.3.1 Saisonale und regionale Preisentwicklung während der letzten fünf Jahre
- 1.3.2 Zusammenhänge zwischen Preisen und Qualitäten
- 1.3.3 Produktionskosten und Kosten der bäuerlichen Lagerung

1.4 Beurteilung des gegenwärtigen Vermarktungssystems

- 1.4.1 Marktkanäle und Kanalproportionen
- 1.4.2 Institutionen, die gegenwärtig in der Getreidevermarktung aktiv sind, z.B. Privathandel, Genossenschaften, Regierung, parastaatliche Organisationen wie Marketing-Boards
- 1.4.3 Gegenwärtig bestehende Lagermöglichkeiten (Zahl, Typus, Kapazität, zeitliche Nutzung, Standort) einschl. Trägerschaft und Kontrolle
- 1.4.4 Abschätzung der Lagerverluste bei verschiedenen Lagerhaltungsformen und Lagerdauer
- 1.4.5 Abschätzung der Verluste durch Transporte und physische Transaktion
- 1.4.6 Stellung und Geschäftspraktiken der Mühlenindustrie (Aufkauf, Lagerhaltung)
- 1.4.7 Agrarmarktpolitik der Regierung, insbesondere Preispolitik (regionale, saisonale Preise, Preise und Qualitäten, Standards)
- 1.4.8 Analyse der Regierungsprogramme zur Verbesserung der Lagerhaltung
- 1.4.9 Analyse der Effizienz staatlicher und parastaatlicher Vermarktungsorganisationen, die aktiv an der Getreidevermarktung beteiligt sind
- 1.4.10 Import-Export-Politik bei Getreide und Substituten
- 1.4.11 Analyse der Vermarktungskosten und Spannen für verschiedene Kanäle und Handelsstufen

Beschreibung des Projektes

2.1 Projektbegründung

- 2.1.1 Warum sollen neue Lager errichtet werden? Können bestehende Lagerhaltungssysteme verbessert bzw. erweitert werden?
- 2.1.2 Auf welcher Stufe des Vermarktungssystems soll gelagert werden und wer wird durch das Projekt begünstigt?
- 2.1.3 Grundsätzliche Abwägung zwischen staatlicher und privater Lagerhaltung

2.2 Projektbeschreibung

- 2.2.1 Beschreibung der geplanten Maßnahmen, z.B. Ausbau, Umbau, Neubau, einschl. ergänzender Anlagen wie Trockner etc.
- 2.2.2 Geplante Kapazität aufgrund des erwarteten Durchsatzes je Produkt und Jahr
- 2.2.3 Skizzierung der Lagerhaltungszyklen aufgrund der Angebots- und Preisschwankungen
- 2.2.4 Standorte für die geplanten Lager
- 2.2.5 Infrastrukturelle Situation, insbesondere Anknüpfung geplanter Lager an bestehende Absatz- und Verarbeitungsstrukturen
- 2.2.6 Vorgesehene Organisation, Trägerschaft
- 2.2.7 Rolle staatlicher und/oder parastaatlicher Institutionen bei der Durchführung des Projektes

2.3 Kosten und Nutzen

- 2.3.1 Investitionskosten der geplanten Lager
- 2.3.2 Höhe des erforderlichen Umlaufvermögens (working capital)
- 2.3.4 Einnahmen des Trägers bzw. Eigentümers
- 2.3.5 Direkte Nutzen durch höhere Erzeugerpreise, geringere Preisschwankungen, geringere physische Verluste, niedrigere Konsumentenpreise, verringerte Spannen
- 2.3.6 Indirekte Nutzen durch höhere Versorgungssicherheit, geringere Risiken für Produzenten und Händler

2.4 Durchführung der Kosten-Nutzen-Analyse

Ermittlung des internen Zinsfußes

G 2 BEISPIEL EINER KOSTEN-NUTZEN-ANALYSE

Die Arbeitsunterlage zeigt das Beispiel einer Kosten-Nutzen-Analyse anhand eines Projektes zur Apfelverarbeitung und Vermarktung in Indien.

Himachal Pradesh (HP) Apple Processing and Marketing Project

1 Objectives

In designing the project, five factors were taken into consideration:

- HP is a mountainous state with steep and rugged terrain, resulting in serious transportation difficulties; in some areas apples remain unmarketed due to the lack of any transportation. Improvement of the transportation network was thus given major emphasis
- apple cultivation is the major source of income for 80 % of HP's population. No modern grading and packing facilities exist, resulting in lower price for growers
- due to the lack of modern cold storages, HP's total apple production is marketed between mid-July and mid-September, resulting in a seasonal glut and lower prices for growers
- no processing facilities exist in the State to provide a profitable market outlet for culis (damaged and deformed) apples
- complete reliance by small-scale growers (up to 1 ha) on pre-harvest contractors and commission agents for sale of their production, again resulting in lower price for growers.

To resolve some of these problems and introduce a commercially oriented marketing infrastructure in the four major apple producing districts (Simla, Kulu, Mandi and Sirmur), the project provides finance over 4 years for:

- construction of new roads and improvement of existing roads to provide adequate allweather communications
- procurement of road maintenance equipment

- construction of aerial cableways in selected production areas where the steep terrain precludes road construction
- establishment of grading and packing centers, three collection stations and one trans-shipment center
- construction in major urban markets of four cold storages
- establishment of a juice concentrate plant to utilize culls
- introduction of modern training programs, technical assistance and a project evaluation study.

2 Organization and Operation

Horticultural Produce and Processing and Marketing Corporation (HPMC) would own the new marketing facilities, and grade, pack and market apples on behalf of growers and pre-harvest contractors. HPMC would be staffed with qualified management and operational personnel, assisted by three expatriate consultants (for grading and packing, post-harvest and marketing). Some of its staff members would receive training abroad. A Central Project Committee would assist HPMC in project coordination. An Evaluation Study would determine the project's impact in achieving its stated objectives.

The procurement and marketing system proposed for HPMC is mainly tailored towards the group of farmers which at present sell their crops through the pre-harvest contractor. Like a pre-harvest contractor, HPMC would purchase the crop on the trees and bear the risk of hail, etc. However, in order to avoid problems of management, HPMC would not carry out any on-farm operations, but would collect the ungraded fruit from the nearest roadhead in field boxes it had provided. Allowing for 20 % culls, farmers would receive 25 % of the agreed farmgate price for consumption apples as an advance. This would be given in February-March to provide farmers with working capital to pay for watch and ward, sicking and transport of the ungraded fruit to the roadhead.

In addition to the payment for consumption apples, farmers would receive a fixed rate of Rs 500 per ton for culls. The cull percentage would be calculated for each season after sorting operations had been completed. However, the next season's advance payment on marketable fruit would be based on a 20:80 percentage, or similar "rule of thumb".

The possibility of bonus payments to farmers should also be considered. They would only be feasible if the wholesale price achieved by HPMC was higher than the estimated wholesale price on which the agreed farm-gate price has been based. However, the agreed farm-gate price would have to be highly competitive to attract growers, and HPMC would be well advised to maintain a reserve fund to overcome shortfalls in years where the expected wholesale prices were overestimated.

3 Economic Evaluation

The economic evaluation is based on the assumption that HPMC's entire intake through grading and packing centres would be procured as outlined in Chapter 2. Only culls purchased directly from growers would be procured at roadhead and/or factory gate.

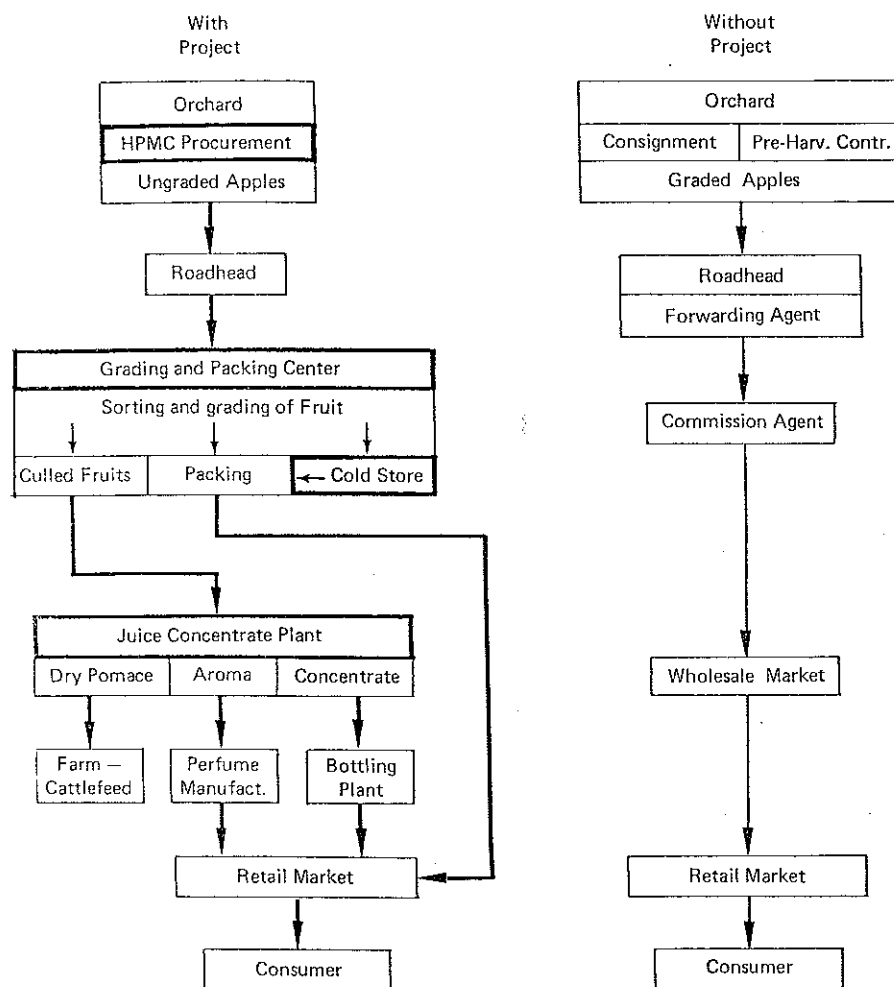
Costs

Economic costs of the project, subject to adjustments indicated, would include:

- (a) all investment and replacements costs (for road works, road maintenance equipment, cableways, processing and marketing facilities, technical assistance, training, the project evaluation study and the development program)
- (b) "permanent" working capital requirements of HPMC (equity) of Rs 20 million, which would be acquired as capital subscriptions over the first four years
- (c) operation costs of HPMC and road maintenance costs of Public Works Department (PWD) and
- (d) on-farm costs of growers participating in the project.

Investment and replacement costs include physical contingencies but have been adjusted for the 10 % local sales tax, the 40 % import tax

Table 1:
COMPARISON IN PRODUCE FLOWS BETWEEN WITH AND WITHOUT PROJECT



and an estimated opportunity cost of Rs 11 per US \$ 1 of foreign exchange. Labor does not appear to be in excess supply at existing wages, therefore no shadow pricing has been attempted.

Benefits

The project's benefits would result from the following:

- (a) more efficient grading, packing and marketing
- (b) more even temporal and regional spread of marketing
- (c) utilization of otherwise wasted cull apples for juice concentrate and
- (d) improved transportation links to the apple growing areas.

Economics benefits include:

- (a) revenue from HPMC operations
- (b) losses avoided by providing an improved transport network within the project area (at full development 5 % of the project area's 1978 crop) and
- (c) development benefits from 4,000 ha additional land under various crops yielding an estimated annual net profit of Rs 410 per ha.

No transport savings have been included in the analysis.

Net Benefits

Net benefits (economic benefits less economic costs) have been adjusted for "Net benefits without project". The latter includes all benefits which, under the present pre-harvest contract system, are accruing to farmers, pre-harvest contractors and commission agents.

Income Transfers

There would be income transfers to farmers participating in HPMC from two wealthier segments of the population: apple middlemen and urban apple consumers. Moreover, as a result of competition from HPMC, the middlemen would probably have to reduce the commissions they charge to growers remaining outside the project.

The consumer-to-producer income transfer would be due to the increase in the price of all apples during the peak season which would result

from the diversion by HPMC of apples into off-season markets. This transfer would be partially offset by the concomitant off-season price reductions, but as the off-season apple trade is much smaller, the net transfer probably is to the producers.

Financial Rate of Return and Sensitivity

The project's financial rate of return is calculated to be 12 %. A shortfall of benefits and an increase of costs would lower the rate of return. A relatively high sensitivity to even a small shortfall of benefits or cost increase means that the management of HPMC, which would incur approximately 70 % of the project costs after the initial investment, must be highly competent and cost-conscious.

Table 2:

Income Projections for HPMC (in million Rupees)

Item	Year	1 1974/75	2 1975/76	3 1976/77	4 1977/78	5	6	7	8	9 on- wards
I. REVENUES <u>1</u> (1)										
Grading & Packing Centres/ Cold Storage		-	-	14.6	36.7	56.2	56.2	56.2	56.2	56.2
Juice Concentrate Plant		-	-	-	7.4	11.1	11.1	18.4	18.4	18.4
Farmers' Grading & Packing Centres		-	-	0.2	0.5	0.5	0.5	0.5	0.5	0.5
Rentals from Cableways		-	-	-	1.0	1.9	1.9	1.9	1.9	1.9
TOTAL REVENUE		-	-	14.8	45.6	69.7	69.7	77.0	77.0	77.0
II. RAW MATERIAL (2)										
Intake Grading & Packing Centres		-	-	8.5	21.0	32.1	32.1	32.1	32.1	32.1
Intake Processing Plant		-	-	-	2.6	3.9	3.9	6.5	6.5	6.5
TOTAL RAW MATERIAL		-	-	8.5	23.6	36.0	36.0	38.6	38.6	38.6
III. OPERATING COSTS <u>2</u> (3)										
Grading & Packing Centres		-	-	4.9	12.1	18.5	18.5	18.5	18.5	18.5
Cold Storage Units		-	-	0.1	0.3	0.4	0.4	0.4	0.4	0.4
Juice Concentrate Plant		-	-	-	1.9	2.3	2.3	3.1	3.1	2.0
Development Program		-	-	0.2	0.5	0.5	0.5	0.5	0.5	0.5
HPMC Central Administra- tion		0.3	0.8	1.4	1.6	1.6	1.6	1.6	1.6	1.6
Interest on Short-Term- Debts <u>3</u>		-	-	0.1	0.3	0.4	0.4	0.5	0.5	0.5
TOTAL OPERATING COSTS		0.3	0.8	6.6	16.5	23.7	23.7	24.6	24.6	23.5
IV. OPERATING PROFIT (4) (1)-(2)-(3)		(0.3)	(0.8)	(0.3)	5.5	10.0	10.0	13.8	13.8	14.9
V. DEPRECIATION <u>4</u> (5)		-	-	0.4	3.4	4.0	4.0	4.0	4.0	4.0
VI. INTEREST ON LONG- TERM DEBTS <u>5</u> (6)		-	0.7	3.6	5.2	5.2	5.2	5.2	5.2	5.2
VII. PROFIT BEFORE TAX <u>6</u>		(0.3)	(1.5)	(4.3)	(3.1)	0.8	0.8	4.6	4.6	5.7
VIII. PROFIT AFTER TAX		(0.3)	(1.5)	(4.3)	(3.1)	0.4	0.4	2.1	2.1	2.6

1. Revenues from Farmers' Grading and Packing Centres includes their operating costs, depreciation, and interest on long-term debts.
2. Interest on short-term debts (working capital) has been deducted and is shown a separate item.
3. It has been assumed that the processing plant requires working capital only to finance culls purchased directly from farmers (4,000 tons).
4. Includes Grading and Packing Centres, Cold Storage Units, Processing Plant, and Development Program except for Shiitake component.
5. At 9.5 % p.a. based on investment costs of Cableways, Grading and Packing Centres, Cold Storage Units, Processing Plant, Technical Assistance/Training/Project Evaluation Study, and the Development Program.
6. Tax accounts for 55 % of profit before tax.

Table 3:

HPMC's Cash Flow Projections and Financial Rate of Return (in million Rupees)

Item	Year																			
	1 1974/ 1975	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1. CASH FLOW PROJECTIONS																				
Cash Outflow																				
Investment Costs 1 (1)	0.3	6.0	30.8	16.4	0.6	0.7	0.9	0.6	0.7	0.9	0.6	1.8	4.8	25.4	0.7	0.9	0.6	0.7	0.9	0.6
Operating Costs 2 (2)	0.3	0.6	6.6	16.5	23.7	24.6	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5
Cost of Raw Material 3 (3)	-	-	8.5	23.6	36.0	36.0	36.6	36.6	36.6	36.6	36.6	36.6	36.6	36.6	36.6	36.6	36.6	36.6	36.6	36.6
Debt Service (Long-Term Loans) 4 (4)	-	0.7	3.6	5.2	5.4	6.4	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Tax 5 (5)	-	-	-	-	0.4	0.4	2.5	2.5	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
Dividend 6 (6)	-	-	-	-	-	-	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
TOTAL Outflow	0.6	8.4	57.9	61.7	66.1	67.2	75.5	75.2	74.8	75.0	74.7	76.9	78.9	99.5	74.8	75.0	74.7	74.8	75.0	73.8
Cash Inflow																				
Revenues 7 (7)	-	-	14.8	45.6	69.7	69.7	77.0	77.0	77.0	77.0	77.0	77.0	77.0	77.0	77.0	77.0	77.0	77.0	77.0	77.0
Long-Term Loans 8 (8)	0.3	6.9	30.8	16.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Equity 9 (9)	5.0	5.0	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL Inflow	5.3	17.9	50.6	67.0	69.7	69.7	77.0	77.0	77.0	77.0	77.0	77.0	77.0	77.0	77.0	77.0	77.0	77.0	77.0	77.0
Net Cash Flow	4.7	3.5	(7.3)	5.3	3.6	2.5	1.5	1.8	2.2	2.0	2.3	1.1	(1.9)	(22.5)	2.2	2.0	2.3	2.2	2.0	3.2
2. FINANCIAL RATE OF RETURN																				
Net Benefits (best estimate) 10 (10)	(5.6)	(12.7)	(36.1)	(15.9)	9.4	9.3	12.9	13.2	14.2	14.0	14.3	13.1	10.1	(10.5)	14.2	14.0	14.3	14.2	14.0	44.3
(4)-(1)-(2)-(3)-(6) (11)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Physical Contingencies 12 (12)	-	0.5	3.2	1.8	-	-	-	-	-	-	-	0.2	0.5	2.5	-	-	-	-	-	-
Net Benefits (incl. physical contingencies) 13 (13)	(5.6)	(13.2)	(39.3)	(17.7)	9.4	9.3	12.9	13.2	14.2	14.0	14.3	12.9	9.6	(13.0)	14.2	14.0	14.3	14.2	14.0	44.3
Financial Rate of Return = 12 %																				

1. See Table 2, Footnote 5.
 2. See Table 2 (2) and (3).
 3. Difference between Profit Before and After Tax, see Table 2.
 4. At the rate of 10 % on the face value of the equity shares of Rs 20.0 million.
 5. See Table 2 value of physical assets is estimated at Rs 10.0 million, in addition the working capital (equity) of Rs 20 million which is included in the cost stream will be salvaged in its entirety.

QUELLE: RUEHNER, A. V.: Re-Appraisal of Himachal Pradesh Apple Processing and Marketing Project Case Study. In: Economic Development Institute of the World Bank: Agricultural Project Analysis. Case Studies and Exercises, Washington, D.C. 1979.