ケニア共和国

第二国研修終了時評価報告書 ~ 農村女性のための農業生産性向上技術~

平成 11 年 3 月

国際協力事業団

研修事業部

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序 文

平成5年度より実施された新しいスキームである第二国研修は、既存の本邦研修および第三国 研修とは異なり、相手国内に展開されてきた技術協力の成果をもとに、当該技術の国内における いっそうの普及と定着を図るものであり、途上国の自助努力を支援する観点からも有効なもので す。

ケニアでは、国家計画として農産物の生産性向上を掲げています。しかしながら、ケニアの農 業分野の生産性向上のためには、国民の75%を占める貧しい小農の人々に技術を普及する必要が ありました。加えて小農の農業生産は伝統的に女性の労働によって成り立っているため、農村女 性を対象とした適切な農業生産技術の普及が急がれていました。

このような状況のもと、国際協力事業団は第二国研修として、女性に焦点を当てたケニア「農 村女性のための生産性向上技術」コースを採択し、平成6年から平成10年までの5年間の協力を 実施しました。

本報告書は、同研修の5年間の成果を総合的に評価するため、平成11年1月17日~1月31日ま での日程で国際協力事業団がケニアに派遣した評価調査団の調査結果を取りまとめたものです。 本報告書が関係各位に深いご理解をいただき、第二国研修のよりよい今後の展開に役立つことが できれば幸いです。

最後に、本調査の実施に際し、ご協力いただきましたジョモケニヤッタ農工大学プロジェクト 関係者、外務省、在ケニア日本国大使館、ケニア側政府関係者の皆様に対し深い感謝の意を表し ます。

平成11年3月

国際協力事業団

理事 諏訪 龍



第二国研修の研修の様子(ジョモケニヤッタ農工大学内講義室)



参加研修員とのインタ ビュー



ミニッツ署名式

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第1章 終了時評価調査団の派遣

1-1 終了時評価調査団派遣の経緯と目的

国家計画として農産物の生産性向上を掲げるケニアにおいて、国際協力事業団(JICA) は、ジョモケニヤッタ農工大学プロジェクトを実施し、ケニアの農業・工業分野の指導的立場に 立つ人材育成などの協力を行っている。現在では、同分野での人材が育成されると同時に適正技 術の研究も進み、ケニア国内に普及させる段階になった。

しかしながら、農業分野での生産性向上のためには、国民の75%を占める貧しい小農民層に技術を普及する必要がある。これら小農の農業生産は伝統的に女性の労働によって成り立っている ため、農村女性を対象とした適切な農業生産技術の普及が急がれていた。

上記のような理由からJICAは、第二国研修「女性のための農業生産性向上技術」を1994年 度から実施している。

本調査は、1998年で本研修が協力の最終年度となることから、効率性、目標達成度、コースの 効果(インパクト)、コース計画の妥当性、自立発展性という観点から、研修の評価を行うもの である。また、今後の本研修の取り扱いを検討するとともに、第二国研修を含む研修員受入事業 の改善に役立てるために、評価結果から教訓および提言を導き出すことを目的とする。

1-2 終了時評価調査の基本方針

- (1)研修の効率性、目標達成度、研修効果(インパクト)、コース設定の妥当性、コースの 自立発展性という観点からの評価を行う。
- (2)評価の実施にあたっては、実施機関担当者、研修講師、参加研修員、およびその家族・ 参加研修員が所属する農民・女性グループ関係者との協議やインタビューを通じて進め る。
- (3)研修実施機関であるジョモケニヤッタ農工大学の主体性を尊重しつつ、研修に参加した研修員のその後の活動状況の把握に努める。
- (4) 第二国研修やその他の研修員受入事業で留意すべき事項について教訓を導き出し、提 言を行う。
- (5)関係者との協議結果を議事録にまとめ、ジョモケニヤッタ農工大学との間で署名・合意する。

1-3 終了時評価の調査方法

本調査の事前準備として、本件第二国研修実施状況(研修員数・研修カリキュラム・研修期 間・定員など)を整理し、1994~1997年度の参加研修員(194名)に質問表(クエスチョネア) を配布した。

現地調査では、実施機関担当者・研修講師とのインタビューを行い、研修実施状況を視察した。回収した質問表(84名分)の結果を分析するとともに、一部の参加研修員の家庭を訪問して参加研修員の研修後の現地での活動状況を調査した。参加研修員の家族および参加研修員が所属する農民・女性グループ関係者とのインタビューも行った。

- 1-4 調査団の構成
 - 時田 邦浩 団長・総括 国際協力専門員
 - 榊 道彦 小規模灌漑 筑波国際センター研修指導員(JICE)
 - 小林 伸行 研修計画 筑波国際センター業務第二課

1-5 調査日程

- 1月18日 ロンドン ナイロビ
 - 10:00 JICAケニア事務所との打合せ(高橋所員、Ms.Frolence)
- 14:30 在ケニア日本大使館表敬(青木大使)
- 16:00 JICAケニア事務所との打合せ(宮川所員、辻下専門家、喜田専門家、野坂専門家)
- 1月19日 ジョモケニヤッタ農工大学
 - 9:00 ジョモケニヤッタ農工大学表敬 (Mr.Michieka:Vice Chancellor)
 - 10:00 評価内容・作業にかかる大学側との協議
 - 14:00 研修講師へのインタビュー
- 1月20日 資料整理と団内打合せ
- 1月21日 農業省
 - 8:30 農業省土地開発局表敬 第二国研修「小規模灌漑のための農民研修」にかかるジョモケニヤッタ農工大学お よび農業省との協議
 - 14:30 ジョモケニヤッタ農工大学
 第二国研修実施状況の視察
 第二国研修「農村女性のための農業生産性向上技術」にかかるジョモケニヤッタ農
 工大学関係者との協議
 - 16:00 在ケニアイスラエル大使館訪問(Mr.Meirav Eilion Shahar: Second Secretary)
 第二国研修「小規模灌漑のための農民研修」にかかるイスラエルとの協力連携についての協議

- 1月22日 ナイロビ エンブ(Embu)
 - 10:00 Kiriniyaga District, Ngomano Nyangati Scheme 訪問
 第二国研修「小規模灌漑のための農民研修」にかかる受益予定農民からの聴き取り
 と小規模灌漑施設の視察
 - 12:00 農業省東部州事務所表敬
 - 14:00 第二国研修「小規模灌漑のための農民研修」にかかる研修実施機関の適正度の調査 と研修実施体制の確認
- 1月23日
 - 9:00 帰国研修員の活動状況の視察とインタビュー
 - 12:00 帰国研修員へのインタビュー 第二国研修「農村女性のための農業生産性向上技術」にかかる帰国研修員の活動状 況の把握
- 1月24日 ミニッツ案の作成と団内打合せ
- 1月25日
- (時田団長および小林団員)
 - 9:00 ジョモケニヤッタ農工大学 第二国研修「農村女性のための農業生産性向上技術」評価調査にかかるミニッツ 案についての協議
 - 15:00 農業省
 第二国研修「小規模灌漑のための農民研修」にかかる研修実施体制および研修内
 容にかかる農業省との協議

(榊団員)

- 10:00 キブエジ Kibwezi Irrigation Project 訪問(Mr.Bezion Havkin:Professor J.P. Mbuti)
- 1月26日
 - 8:00 ジョモケニヤッタ農工大学 第二国研修「農村女性のための農業生産性向上技術」評価調査にかかるミニッツ 案についての協議
 - 11:30 第二国研修「農村女性のための農業生産性向上技術」評価調査にかかるミニッツ署名
 - 15:00 農業省
 第二国研修「小規模灌漑のための農民研修」事前調査にかかるミニッツ案につい
 ての協議

1月27日

9:00 農業省 第二国研修「小規模灌漑のための農民研修」事前調査にかかるミニッツ案につい ての協議とミニッツ案の作成

- 1月28日
- 10:30 農業省
 第二国研修「小規模灌漑のための農民研修」事前調査にかかるミニッツ署名(農業省およびジョモケニヤッタ農工大学関係者)
- 11:30 JICAケニア事務所への報告
- 23:00 帰国(ナイロビ ロンドン)

第2章 研修コースの概要

2-1 研修の目的(R/Dに記載のもの)

持続可能な農業生産性の向上に必要な知識と技術を習得する機会を、ケニア国内からの参加者 に与えることを目的とする。

2-2 研修の到達目標(研修コースGIに記載のもの)

参加研修員の研修終了時における到達目標は、下記のとおりである。

- (1) 農業生産性の向上のために農業方法を改善する。
- (2) 環境に穏やかな農業技術を導入する。
- (3) 各地域の状況に適した技術を開発する。

2-3 カリキュラム

参加者の実情に応じてカリキュラムは調整されてきている。各回のカリキュラムは別表1のと おり。

2-4 研修対象者(研修コースGIに記載のもの)

ジョモケニヤッタ農工大学農場内の研修企画委員会は、文化社会奉仕省に登録された農村女性 グループのなかから、以下の基準に沿って参加者を選出する。

- (1) District Social Development Officerからの推薦を得ていること。
- (2) 農村女性グループで指導的役割を担っていること。農業以外の職務に従事していない こと。
- (3) 21~50歳であること。
- (4) スワヒリ語または英語でコミュニケーションできること。
- (5)研修遂行のために健康であること。
- (6) 農業における実践的な知識や技術の取得に熱心であること。
- (7)他研修員と協力できること。

2-5 研修期間と定員

各回とも50名。

研修期間は40日(1994年度)~30日(1995~1998年度)間。

第3章 評価結果

3-1 効率性

(1)研修実施機関と運営管理体制

ジョモケニヤッタ農工大学の農場が、研修の計画・運営を行う機関となり、同農場内 の講義室や圃場においてカリキュラムの大部分を実施したほか、現場見学として、青果 市場、モデル農家、輸出用農産物検査部局などを訪問した。

実施機関であるジョモケニヤッタ農工大学は、コース開始前後に研修の講師も交えた 運営委員会を開催し、定期的にコースの計画と見直しを行っている。研修開始に先立っ て講師陣(外部機関からの講師含む)による事前調査も行われている。JICAから支 出された研修経費も適正に管理されており、研修運営の改善が進んでいることが認めら れた。

研修の円滑な運営のために1995年度から研修員に対する規則を導入するなど、参加研 修員のニーズを把握して適切なカリキュラムを策定する実施機関側の姿勢が認められた。

(2)研修実施経費

各年度の研修経費支出額(日本側負担額)は資料3のとおり。

本研修の実施経費のうち、JICA支出額は 2475万4919シリングであった。

ケニア側が、ジョモケニヤッタ農工大学内部の講師の手配、車両の提供、研修中の光 熱水費や農業実習のための農業機械の提供などのほか、同大学が独自に実施した内部評 価調査費用の負担した。

(3) 機材の整備状況

研修実施機関であるジョモケニヤッタ農工大学農場内の機材は、よく整備されていた。 当研修が農民を対象とする研修であり、圃場における栽培や家畜飼養の実習を中心と するカリキュラムであることから、同農場に既設の機材で研修を十分に遂行することが できたものと考える。

(4) 教材などの整備状況

各講師の講義内容を研修前に収集して製本した基本テキストと、各講師が講義時に用 意するハンドアウトは、実習部分を含む研修を通じて有効に活用されている。基本テキ ストは各研修員に2部ずつ配布され、各員が自らの農民グループで講義やセミナーを行 なう際の教材としても活用されている。 (5)講師

研修科目のうち、ジョモケニヤッタ農工大学の農場が担当した課目は68%で、同大学の他学部(農場以外)の講師が担当した課目は16%であった。コースカリキュラムの80% 以上がジョモケニヤッタ農工大学内の講師によって運営された。

すべての講師が英語およびスワヒリ語でコミュニケーションできることから、全研修 員が理解できるように英語とスワヒリ語の併用によって研修を実施した。

各回の講師リストは別表2のとおり。

なお、1996~1998年度の研修においては、カナダ国際開発庁(CIDA)からの推薦 により「開発と女性/ジェンダー」にかかる外国人講師を招いて講義を行った。同講義 は、研修員がケニア国外の事情を把握するのに役立った。

(6)研修宿泊施設

当研修の実施時期である1月~2月にはほとんどの講義が休講となることから、ジョ モケニヤッタ農工大学内にある学生用宿舎(ドミトリー)を活用した。同宿舎と大学農 場とは至近にあること、宿舎に隣接して食堂もあることから、生活にあたっての不満は 研修員から特になかった。

(7) 専門家派遣

研修中の講義や実習指導のために日本から派遣した専門家は特にないが、一部講義に ついては、ジョモケニヤッタ農工大学プロジェクトに派遣中の喜田清専門家からの協力 を受けた。

(8)研修員

参加研修員リスト、各年ごとの参加 Province の分布は別表3のとおりである。 当初計画時に設定した研修資格要件に沿って、ジョモケニヤッタ農工大学の企画委員 会が選出したすべての研修員は上記の要件を満たしていた。

3-2 目標達成度

当研修では、各年の研修において到達度試験や評価インタビューを設けていないことから、各回における各研修員の目標達成度を判断することは難しいと考えられるものの、本調査では以下のとおり推察した。

・ジョモケニヤッタ農工大学が各回の研修終了時に実施している評価表の結果においてほとんどの研修員が「すべての研修科目が有用であり、科目構成も適切で研修ニーズを満たしている」と回答していること、当調査団がインタビューした研修員(4名)すべてが「コースの受講を通じて多くのものを得た」と回答したことから、設定した研修到達目標の到達度も高いと判断される。

前記3-1で、研修コースの効率的な実施に影響を与える要因が特に見当たらないこととあわせ、コースの効率性も高いものと考えられる。

3-3 コースの効果(インパクト)

(1)望ましいインパクト

調査団が訪問した農村女性グループでは、セミナーなどの開催を通じて参加研修員が 得た知識や技術を導入していることが確認できた。研修で使用されたテキストは、農村 女性グループのみならず、地域の小中学校の農業指導においても有効活用されている。

研修からの質問表の回答結果によれば、研修員の30%程度が「収入が増加した」と回答している。調査団が訪問した参加研修員からの聴き取り結果でも、グループ全体における農業生産の増大によって参加研修員(およびその家族)だけでなく他のグループメンバーの収入も増加している。

また、研修員の半数以上が「研修後、仕事の内容が変化するとともに、業務の効率も あがった」と回答している。参加研修員は、新たな知識や技術を身につけたことで、家 庭内においてより責任のある仕事を任せられるようになり、家族からもより尊敬・信頼 されるようになった。

農村女性グループのメンバーの収入が向上したことで、地域における女性の役割がよ り重視されるようになった。女性の地位の向上が農村における生活水準の向上に寄与し ていると考えられる。

研修への参加を通じて、情報網が広がり、新技術や知識にアクセスできる機会が広がっ たことを研修に参加したメリットとしてあげた研修員もいた。

当研修への参加後、職務内容が変化した研修員もいる。コミュニティーへの貢献(グ ループ内の1メンバーからグループリーダーへの昇格、グループにおける導入新技術の 担当など)のほか、コミュニティーカウンセラーに任命された者もいた。こうした変化 が、研修後の技術移転の継続に寄与しているものと考えられる。

(2) 望ましくないインパクト

参加研修員のインタビューから、研修への参加を通じて外部からの援助に対する依存 心がより強まったのではないかと思われる例があった。第二国研修で研修員に日当を支 給したことも一因と考えられる。

また、研修を通じて得た知識を生かして、既存の農村女性グループ内で新たなグルー プを参加研修員が組織しようとしたが、グループ内の他のメンバーの反対により、グルー プ内での不和が生じた例がみられた。

なお、当研修実施による「望ましいインパクト」が生じている参加研修員の事例に比べて「望 ましくないインパクト」の生じている参加研修員の事例は少ないと考えられた。

3-4 コース計画(設定)の妥当性

(1)研修の目的と上位目標

当研修では、評価作業に必要な「研修の目的」や「上位目標」を明確に設定していない。当調査に際して「目的」および「上位目標」を以下のとおり設定したものの、その 適正は当調査では判断できなかった。

関係者間での共通認識を得るためには、コースの計画段階で「上位目標」や「目的」 を明記することが求められる。

1)研修の目的

参加研修員が、持続可能なやり方で農業生産性向上に寄与するだけの知識と技術を 身につける。

2) 上位目標

参加研修員が普及する知識や技術が農村地域における生計の向上に寄与する。

(2)研修の到達目標

各回を通じて到達目標の設定に変更はなかった。

各回終了時に研修員が記入する質問表において「コースのすべての科目が有益である」 と回答していることから、到達目標の設定は適切であろうと推察される。

(3) カリキュラムと研修期間

各回の参加者のニーズにあわせてカリキュラムの調整がなされてきた。研修対象であ

る農村女性が長期間家庭を離れて研修に専念するのは難しいとの判断から、1995年度に、 研修期間を40日間から30日間に短縮した。

参加研修員からの回答では、研修後に役に立った科目は多岐にわたり、研修でカバー した分野をほぼ含んでいる。削除すべき項目を挙げた研修員がいないこととあわせ、カ リキュラムの設定は適正であったと判断される。

すべての研修員が農民であることから、カリキュラムの作成にあたっては、講義の比 率を全体の20%程度に抑え、実習を主体とするカリキュラムとした。講義・実習・見学 の時間配分についての不満が研修員から特にないこと(講義が多すぎるという意見に比 べて実習が多すぎるという意見はきわめて少なかったこと)から考えて、実習中心のカ リキュラムは適切なものであった。

しかしながら、ほとんどすべての研修員が「研修期間が短い」と回答しているにもか かわらず1995年度に研修期間を短くしたこと、研修の到達目標を協力期間中変更しなかっ たことから、参加者にとってカリキュラムはややきつかったのではないかと考えられる。

なお、各農村女性グループにおける課題はグループによって大きく異なる。農村女性 を対象とした研修の場合、特定の農業技術を対象とするよりも農村における日常生活の 改善をテーマとするのが望ましい。農村女性グループは農業生産以外にも活動を目的に している場合がほとんどである。対象を広くし、ケニア国内外の開発経験を活用するに は日常生活の改善を内容にしたほうがよい。一方、農業技術とする場合には、地域特性 や技術的専門性に配慮したロケーションスペシフィックな内容にすることが望まれる。 この研修では、地域ごとの研修が計画されており、ある程度の絞り込みはできていた。 ただし、内容に農業全般を盛り込んでいるため、実技実習をするにあたり時間的な制約 があったと思われる。

(4)研修対象者

本研修では、研修対象とする州(プロビンス)を指定し、対象州のなかで文化社会奉 仕省婦人局に登録された農村女性グループから参加者を選出した。各グループからの候 補者の応募にあたっては、各県(ディストリクト)の District Socical Development Officer(DSDO)からの推薦を取りつけることとした。

農村女性グループメンバーとのインタビューによれば、グループ内での参加候補者の 選出にあたっては、グループ内でのリーダーシップ、本人の農業への意欲、研修後の(他 メンバーへの)技術移転の意欲、研修参加に必要な語学力などを勘案してメンバー間の 協議によって決定したとのことである。現地における研修後の技術移転の継続度(後記 3-5)を考慮すれば、本研修において農民(農村女性グループのメンバー)を対象と したことは適切であったと考える。

(5) 定員充足率とコースニーズ

各回のコース定員は50名である。5年間の定員250名のうち、天災(気候不順)により 研修直前に参加不能となった8名を除く242名が参加した。応募者数の総計は1199名で あった。

コース応募者数の多さや「ジョモケニヤッタ農工大学の技術的蓄積を活用した研修を より多くの人に提供したい」との同大学からの意見、ケニア国内の District 数(約50) が当研修の参加者数を大きく上回っていることを勘案すると、当研修に対するニーズは 依然として大きいものと推察される。

3-5 自立発展性

(1)技術の自立発展性

参加研修員へのインタビューでは、参加研修員による地域(コミュニティー)での技術移転は積極的に行われている。質問表の回答結果から、研修参加を通じて研修員が得た広範な知識や技術が応用に移されているものと判断される。

しかし、適切な技術移転のためには資金が不足しているとの問題も指摘された。イン タビューした研修員のなかには「研修で得た知識を活用して新たに圃場を開拓したが、 水資源省による規制の強化により従来の水源を使用できなくなった」と回答した者もい た。

資金面や慣習・規制面での制約はあるものの、研修員が農村での技術移転を継続できるかという点での当研修の自立発展性は、適切に確保されるものと考えられる。

(2) 組織上・財政上の自立発展性

ジョモケニヤッタ農工大学関係者との協議では、本研修分野に対する研修ニーズが高 いことから、こうした分野での研修を今後も継続したとの同大学側の意向が示された。

これまで5回の研修実施を通じて研修実施にかかる同大学の運営管理能力が向上した こと、農民を対象とする農業技術研修であれば大部分の講師を同大学で確保できること、 研修用施設・機材とも同大学農場所有のものでまかなえると考えられることから、組織 上の自立発展性は今後も継続するものと思われる。

しかしながら、当研修と同様のカリキュラムでの研修を同大学が独自で継続すること は、農民や農業関係者向けのケニア側の予算確保が非常に難しい現状を考慮すると、現 実的でない。ケニアの農村女性に対する研修ニーズは非常に大きいことから、プロジェ クト方式技術協力チームとも協力しながら、普及事業のひとつとして同大学が主体的に 研修を実施していくことを提言した。

第4章 評価の総括

- 第3章の各項目における評価結果を踏まえ、以下のとおり判断した。
 - (1)本研修は効率的に実施されるとともに、当初計画したとおりの目標をほぼ達成している。
 - (2)研修の効果(インパクト)は順調に発現している。負の効果(インパクト)もみられ るものの、望ましいインパクト(正の側面)をしのぐほどではない。
 - (3) コース計画の妥当性については、研修の評価を考慮した計画設定となっていなかった こと、到達目標達成のためにはややきつめのカリキュラムであった傾向はあるが、各回 のコース実施計画(研修の到達目標、カリキュラム、研修対象者など)は適切なもので あった。研修のニーズも引き続き高い。
 - (4) 自立発展性については、研修成果の波及や研修実施機関の実施能力の向上という点で 確保されているが、ケニア側による研修経費の継続的支出という面では問題がある。

なお、農村女性を対象とした研修コースを今後策定するにあたっては、カリキュラムの主体 を農業部分におくのか、農業以外の(女性グループとしての)活動におくのか、明確にする必要 がある。

別 表

- 1 第二国研修「農村女性のための農業生産性向上技術」カリキュラムの変遷
- 2 第二国研修「農村女性のための農業生産性向上技術」講師リスト
- 3 第二国研修「農村女性のための農業生産性向上技術」参加研修員リスト
- 4 第二国研修「農村女性のための農業生産性向上技術」参加研修員からの聴き取り結果
- 5 第二国研修「農村女性のための農業生産性向上技術」参加研修員からの質問表 の回答結果

1 第二国研修「農村女性のための農業生産性向上技術」カリキュラムの変遷

(1) 到速目端 A (1) (2) 資格要件 (2) 資格要件 (3) (3) (3) (4) (4) (5)	to provide the participants from all over Xenya with an oppotunity to impr sustainable agricultural productivity and better living standards At the end of the course, the participants are expected to have; 1) acquired knowledge and techniques to improve agricultural productivity 2) pained necessary knowledge for increase generation using their agricultural output, and 3) acquired hints to improve their noclo-economic status Applicants for the Course are; 1) to be nominated by the District Social Development Officer (DSDO), 2) to be wone Agricultural Group Leader who do not have any other occupation spart from farming. 3) to be between 21 years and 50 years of age, in principle, (i) to be shells to communicate with English or Kirwahilis, and 5) to be in good babih, both physicily and mentally, in order to complete the Course.	At the end of the course, the participante are expected to have; 1) improved faming methods to increase agricultural productivity 2) improved geatle farming techniques for the environment 3) developed appropriate techniques for their local conditions The training cognizing committee in the farm will invite autible personnel from the Wonen A spirultural Groups, which are registered to the Ministry of Celture and Social Services. The requirements for paticipation are as follows; 1) to be nominated by the District Social Development Officer 2) worren who are devoted and take leading robes in Wonen Agricultural Groups, and who do notiave any other eccupation apart from faming 3) the age should be between 21 to 50 years or threshout	techniquer for the environment. Upon completion, participation for the environment of the technique of the participation are as follows; The technique for participation are as follows;	pants ar: expected to acquire sufficient knowledge and skilts	agricultural techniques with special emphasis on improved pr in flis area.	conactivity and gestie farming
1) (2) 資格要件 (2)資格要件 (3) (2)資格要件 (3) (3) (4) (4) (5) (5)	 acquired knowledge and techniques to improve agricultural productivity planed accessary knowledge for income generation using their generation using their agricultural output, and spectrate output agricultural output, and spectrate output by acquired hists to improve their socio-economic status Applicants for the Course are; to be nonlinated by the District Social Development Officer (DSDO), by the Women Agricultural Group Leader who do not have any other scruptured in gart from familing, b) to be boween 21 years and 59 years of age, in principle, (i) to be shole to communicate with English or Kirwahilis, and (i) to be in good balls, both physicity and mentally, in order to complete 	1) improved faming methods to increase agricultaral productivity 2) improved geath farming technology suitable for their local conditions 3) developed appropriate technology suitable for their local conditions The training organizatiog consulter in the farm well invite asimble personnel from the Women Agricultural Groups, which are registered to the Ministry of Cultare and Social Services. The requirements for participation are as follows; i) to be nominated by the District Social Development Officer 2) women who are deveed and take loading roles in Women Agricultural Groups, and who do not have any other occupation apart from faming 3) the age should be between 21 to 50 years or thoreabout	1) to be nominated by the District Social Development Of	kor		
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4) 5)	 to be able to communicate with English or Kiswahili, and to be in good health, both physicily and mentally, in order to complete 			en Agricultural Groups, and who do not have any other occup	pation apart from farming	
5)	5) to be in good health, both physicily and mentally, in order to complete		3) the age should be between 21 to 50 years or thireabout			
u.	the Course	4) the person should be able to communicate in Kiswahili or English	4) the person should be able to communicate in Kiswahili (-		
		5) be healthy enough to participate in and complete the course 6) a person who is eager to obtain new knowledge and techniques in	5) be healthy enough to participate in and complete the cou			
		agricultural practices 7) a person who is ready and willing to cooperate with other participants	6) a person who is eager to obtain new knowledge and tech			
		during the training	a person who is ready and willing to cooperate with other			
		8) no political activities should be carried out during the course	8) no political activities should be carried out during the co	Aurse		
			9) the participants will be required to sign for the course re-	gulations on arrival	7	
3) 參加地域 (District)		Eastern and Central Provinces	Rift Valley Province	Western Province	Western Province	Nyanza Province
4)研修期間 ap	pproximately 45 days	95/01/08-95/02/16	96/01/08-96/02/06	97/01/06-97/02/04	98/01/05-98/02/03	99/01/04-99/02/02
5)カリキュラム 第	第1回のコースに同じ	Marketing	Marketing	Marketing	Marketing	Marketing
		Faim record keepig	Farm record keepig	Farm record keepig	Farm record keepig	Fam record keepig
		Vegetable growing	Vegetable growing		Vegetable growing	Vegetable growing
			Growing of indigenous vegetables	Growing of indigenous vegetables	Growing of indigenous vegetables	Growing of indigenous vegetables
				Clean seedlings	Clean seedings	Clean seedlings (banana)
					Cashewnut growing	· · · · ·
		Avocado growing	· · · · · · · · · · · · · · · · · · ·	· · · · ·		
		Macademia growing				
		Banana growing				
		Mushroom culture & production			-	
		Field management of vegetables				
		Nursery management and transplanting of vegetable seedlings				
		Post havest & food preservation	Post havest & food preservation	Post barvest & food preservation	Post harvest & food preservation	
		Post harvest treatment for marketing				
			Livestock production & Management	Livestock production	Livestock management	Livestock management
		Clean milk production		Clean milk production	Clean milk production	Clean milk production
		Dairy cattle management				·
		-		Zero grazing	Zero grazing	Zero grazing
		Goat rearing			Goat rearing	Goat rearing
		Pig husbandry				
			Pig rearing	Pig rearing	Pigreening	Pig rearing
		Poultry keeping	Poultry keeping	Poultry keeping	Poulty keeping	Poutuy keeping
		Animal health	Animal health		Animal health	Fish Production

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		第1回(1994年度)	第2回(1995年度)	第3回(1996年度)	第4回(1997年度)	第5回(1998年度)
(5) カリキュラム	· · ·				Artificial inserimation	
			Bee keeping	Bee keeping		
			Fruit growing	Fruit growing	Fruit growing	Fruit growing
			Ceresi & legume growing	Cereal & legume growing	Cereal growing	Cereal growing
				Sugarcane growing		
				Growing of Cotton & Groundnuts	Cotton growing	Cotton growing
	~		Pyrethrum & tea growing	Pyrothrum & tea growing		
		Firm machinery	Farm machinery	Simple farm machinery	Simpl: farm suchinery	Simple farm machinery
ł		Fodder crop growing	Fodder crop growing	Fodder crop growing	Fodder crop growing	Fodder crop & sunflower growing
		Irrigation & soil conservation	Irrigation & soil conservation	Irrigation & Soil Conservation Techniques	Irrigation	krigation
					Soil conservation techniques	Soil conservation techniques
		Eaergy conservation techniques	Energy conservation techniques	Energy conservation techniques *		
		Ferming systems in Kenya				
			Handling of farm agricultural chemical & envronmental pollution	Handling of fam agricultural chemical & envronmental pollution	Handling of from agricultural chemical & envronmental pollution	Handling of farm agricultural chemical & envronmental pollution
		Useful techniques for dairy life	Useful techniques for dairy life	Useful techniques for dairy life	Useful techniques for dairy life	Useful techniques for dairy life
		Balanced Diet Preparation	Balanced Diet Preparation	Balancel Diet Preparation	Balanced Diet Preparation	Balanced Diet Preparation
		Export Section at an International Airport	Export Section at an International Airport	- THE PERSON AND A DESCRIPTION OF A	Export Section at an International Airport	Export Section at an International Airport
		Advanced Farms	Advanced Farms	Advanced Farms	Advanced Farms	Rice Fields/Fish Farms
		Markets	Markets	Markets & Farms	Markets	Markets

e.

2 第二国研修「農村女性のための農業生産性向上技術」講師リスト

List of Instructors including Japanese Experts and their subjects - JFY 1994 - 1998

<u>JFY 1994</u>

- 1. Mr. S. G. Muchira
- Farming systems in Kenya
- Farm record keeping
- Avocado growing

2. Mr. K. Kita

- Review of fundamental agricultural techniques e.g. measuring, weighing of agricultural inputs etc.
- Marketing and marketing practice

3. Dr. F. K. Njonge

- Dairy cattle management
- Pig husbandry
- Review of livestock management

4. Mr. I. M. Kaibui

- Poultry keeping
- Fruit nursery and field management
- Passion fruit growing
- Handling of farm agricultural chemicals
- Environmental pollution

5. Mr. G. A. Andalia

- Observation tours
- Simple farm machinery operation and maintenance

6. Mr. C. W. Kinisu

- Observation tours
- Irrigation techniques
- Soil conservation

7. Mr. N. Gichia

- Animal health
- Goat rearing

8. Mr. B. M. Muriuki

- Nursery bed preparation (vegetables)
- Sowing and nursery management
- Harvesting of vegetables and postharvest treatment for marketing
- Banana growing

9. Mrs. N. N. Nduhiu

- Nursery management and transplanting of vegetable seedlings
- Field management of vegetables
- Growing of indigeneous vegetables
- Cereal growing beans

10. Mr. M. K. Muthua

- Observation tours
- Fodder crop growing
- Clean milk production
- Cereal growing maize

11. Mr. F. Koigi

- Marketing and marketing practice

12. Mr. D. M. Dio

- Useful techniques for daily life e.g. biogas, solar heater etc.
- Energy conservation

13. Prof. Oniang'o

- Balanced diet preparation

14. FSPHT Department

- Simple dairy products processing and food preservation

15. External lecturer from Women's bureau

- Gender lecture

16. External lecturer from Macadamia People

- Macadamia growing

17. External lecturer from KEFRI

- Agro-forestry

FY 1995

1. Dr. F. K. Njonge

- Livestock management
- Pig rearing
- Poultry keeping

2. Mr. K. Kita

- Review of fundamental agricultural techniques
- Marketing and marketing practice

5. Mr. J. K. Wamae

- Simple farm machinery and maintenance

6. Mr. C. W. Kinisu

- Observation tours
- Irrigation techniques
- Soil conservation

7. Mr. N. Gichia

- Animal health
- Bee keeping

8. Mr. B. M. Muriuki

- Vegetable growing

9. Mrs. N. N. Nduhiu

- Growing of indigeneous vegetables
- Cereal growing beans

10. Mr. M. K. Muthua

- Observation tours
- Cereal growing maize
- Fodder crop growing

11. Mr. F. Koigi

- Marketing and marketing practice

12. Mr. D. M. Dio

- Useful techniques for daily life e.g. biogas, solar heater etc.

13. Prof. Oniang'o

- Balanced diet preparation

14. Mr. Habib Mruttu

Fruit growing

15. Mr. Laban Rutto

- Farm record keeping
- Handling of farm agricultural chemicals and environmental pollution

16. FSPHT Department

Simple processing of dairy products and food preservation

17. External lecturer from Women's bureau

- Gender lecture

FY 1996

- 1. Dr. K. Kimani
- Livestock management
- Pig rearing
- Animal health

2. Mr. K. Kita

- Review of fundamental agricultural techniques
- Marketing and marketing practice

3. Mr. I. M. Kaibui

- Organic farming & handling of farm agricultural chemicals and environmental pollution
- Poultry keeping

4. Mr. J. K. Wamae

- Simple farm machinery and maintenance

5. Mr. C. W. Kinisu

- Observation tours
- Irrigation techniques
- Soil conservation

6. Mr. B. M. Muriuki

- Vegetable growing

7. Mrs. N. N. Nduhiu

- Growing of indigeneous vegetables
- Cereal growing beans

8. Mr. M. K. Muthua

- Observation tours
- Cereal growing maize
- Fodder crop growing
- Zero grazing

9. Mr. F. Koigi

- Marketing and marketing practice

10. Mr. D. M. Dio

- Useful techniques for daily life e.g. biogas, solar heater etc.

11. Mrs. F. Ochieng'

- Balanced diet preparation

12. Clean seedlings (banana)

- Prof. E. M. Kahangi

13. Mr. Habib Mruttu

- Fruit growing
- Cashewnut growing

14. Mrs. J. Mugambi

- Cotton and groundnut growing

15. External lecturer from KIOF

- Organic farming

16. **FSPHT** Department

- Simple processing of dairy products and food preservation

17. External lecturer from Women's bureau and CIDA

- Gender lecture

FY 1997

1. Dr. F. K. Njonge

Livestock management

2. Mr. I. M. Kaibui

- Handling of farm agricultural chemicals and environmental pollution
- Poultry keeping
- Farm record keeping

3. Mr. J. K. Wamae

- Simple farm machinery and maintenance

4. Mr. C. W. Kinisu

- Observation tours
- Irrigation techniques
- Soil conservation

5. Mr. B. M. Muriuki

- Vegetable growing

6. Mrs. N. N. Nduhiu

- Growing of indigeneous vegetables
- Cereal growing beans

7. Mr. M. K. Muthua

- Observation tours
- Cereal growing maize
- Fodder crop growing
- Review of fundamental agricultural techniques
- Marketing and marketing practice

8. Mr. F. Koigi

- Marketing and marketing practice

9. Mr. J. Odero

- Artificial insemination
- Animal health
- Pig rearing
- Goat rearing

10. Mr. D. M. Dio

- Useful techniques for daily life e.g. biogas, solar heater etc.

11. Mrs. F. Ochieng'

- Balanced diet preparation

12. Clean seedlings (banana)

- Prof. E. M. Kahangi

13. Mr. Habib Mruttu

Fruit growing

14. External lecturer from KIOF

- Organic farming

15. FSPHT Department

- Simple processing of dairy products and food preservation

16. External lecturer from Women's bureau

- Gender lecture

<u>JFY 1998</u>

1. Dr. F. K. Njonge

- Livestock management

2. Mr. I. M. Kaibui

- Handling of farm agricultural chemicals and environmental pollution
- Poultry keeping
- Farm record keeping

3. Mr. J. K. Wamae

- Simple farm machinery and maintenance

4. Mr. C. W. Kinisu

- Observation tours
- Irrigation techniques
- Soil conservation

5. Mr. B. M. Muriuki

- Vegetable growing

6. Mrs. N. N. Nduhiu

- Growing of indigeneous vegetables
- Cereal growing beans

7. Mr. M. K. Muthua

- Observation tours
- Cereal growing maize
- Fodder crop growing
- Review of fundamental agricultural techniques
- Marketing and marketing practice

8. Mr. F. Koigi

Marketing and marketing practice

9. Mr. J. Odero

- Artificial insemination
- Animal health
- Pig rearing
- Goat rearing

10. Dr. E. Mwachiro

- Fish production

11. Mr. D. M. Dio

- Useful techniques for daily life e.g. biogas, solar heater etc.

12. Mrs. F. Ochieng'

- Balanced diet preparation

13. Prof. E. M. Kahangi

- Clean seedlings (banana)

14. Mr. Habib Mruttu

- Fruit growing

15. External lecturer from Mwea

- Rice production

15. External lecturer from KIOF

- Organic farming

16. FSPHT Department

Simple processing of dairy products and food preservation

17. External lecturer from Women's bureau

- Gender lecture

18. CIDA Lecturer

Ms. Rose Muniu

FY 1994

LIST OF PARTICIPANTS FOR THE INCOUNTRY TRAINING EASTERN/CENTRAL PROVINCES

	NAME/ADDRESS	DISTRICT
1.	Philomena Ngendo Gicheru	KIAMBU
	P.O. BOX 979 - KIAMBU	
2.	ELIZABETH NYAMBURA KAGWIMA	KIAMBU
	ST. PAUL'S PRIMARY SCHOOL	
	PRIVATE BAG - LIMURU	
3.	Mary Wanjiku T. Njoroge	KIAMBU
	P.O. BOX 769 - KIAMBU	
4.	Jennifer Waithira Njuguna	Κιαμβυ
	C/O C.D.A.'S OFFICE	
	P. O. BOX 33 - GITHUNGURI	
5.	LUCY WAITHIRU	Kiambu
	Р.О. ВОХ 160 - NGECHA	
6.	NELLIE NJOKI NG'ANG'A	KIAMBU
	P.O. BOX 111 - RUIRU	
7.	Judy Gathoni Ngugi	Kiambu
	P.O. BOX 794 - LIMURU	
8.	Margaret Wairimu Karanja	Kiambu
	P.O. BOX 41507 - NAIROBI	
9.	ESTHER WANJIRU GICHERU	MURANG'A
	P.O. BOX 172 - SAGANA	
10.	LUCY WAITHERA KAGUU	MURANG'A
	P.O. BOX 775 - MURANG'A	
11.	MARGRET KABURA MWANGI	MURANG'A
	P.O. BOX 249 - MURANG'A	
12.	MARY NJOKI MUNGAI	MURANG'A
	P.O. BOX118 - MURANG'A	
13.	MARGRET WAMWERU MAINA	MURANG'A
	P.O. BOX 1027 - MURANG'A	
14.	ANNLEAH WANJIRU KIRAGU	MURANG'A
	P.O. BOX 62 - MARAGUA	
15.	FLORENCE WANJIKU CHEGE	MURANG'A
	P.O. BOX 901 - MURANG'A	

16.	JOYCE KIVINYA KIEMA	MURANG'A
	P.O. BOX 133 - MAKUYU, KAMBITI	
17.	HARRIET N. NJIRU	MURANG'A
	р.о. вох 528 - тніка	
18.	FLORENCE NJERI KINYUA	KIRINYAGA
	P.O. BOX 379 - KARATINA	
19.	EVANGELINE WANJIKU MARIRI	KIRINYAGA
	P.O. BOX 3 - KIANYAGA	
20.	ANNAPIARA WANGITHI RUBIRA	KIRINYAGA
	P.O. BOX 44 - KAGIO	
21.	JACINTA WANGECHI MUGO	KIRINYAGA
	P.O. BOX 652 - KERUGOYA	
22.	ROSE WANGU NDEGE	KIRINYAGA
	P.O. BOX 131 - EMBU	
23.	NANCY WANGECHI MWANGI	KIRINYAGA
	P.O. BOX 61 - KIANYAGA	
24.	TERESIAH WAMBUI MIGWI	KIRINYAGA
	P.O. BOX 5 - KERUGOYA	
25.	MONICA MBAI MUTUNGI	KIRINYAGA
	P.O. BOX 26 - WANG'URU	
26.	ROSE NYAWIRA WAHOME	NYERI
	P.O. BOX 675 - NYERI	
27.	ROSE MUMBI MURIUKI	NYERI
	P.O. BOX 241 - KIGANJO	
28.	GRACE WANGARI MAHIANYU	NYERI
	р.о. вох 334 - отнача	
29.	MOLLY WANJIKU MATHENGE	NYERI
	P.O. BOX 312 - NYERI	\$
30.	PRISCAH NJERI WANYINYI	NYERI
	P.O. BOX 1 - GAKINDU, NYERI	
31.	JANNET MUTHONI GAD	NYERI
	P.O. BOX 629 - NYERI	
32.	TERESIA MINOO MUIYA	THIKA
	P.O. BOX 905 - THIKA	9
33.	FLORENCE WANJIRU MUTAHI	NYERI
	P.O. BOX $202 - MWEIGA$	
34.	ANNA MARY KANYUA	MERU
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****	P.O. BOX 1533 - EMBU	
35.	SARAH MARIGU KARIGI	MERU
******	р.о. вох 2003 - емви	
36.	EUGENIA GICUKU KAREITHI	MERU
	P.O. BOX 821 - EMBU	
37.	CATHRINE K. GICUKU	MERU
	р.о. вох 140 - емви	
38.	GLADYS NGUNGI MUCUNGU	MERU
	Р.О. ВОХ 1280 - ЕМВU	
39.	FLORA NDINDA NDWIGA	MERU
	P.O. BOX 76 - ISHIARA	
40.	MARY IGANDU RURAA	MERU
	P.O. BOX 183 - RUNYENJES	
41.	BEATRICE WAMBUI NGARI	MERU
	Р.О. ВОХ 181 - ЕМВИ	
42.	TABITHA MUGUNA	MERU
	P.O. BOX 806 - MERU	
43.	STELLA KINANU NGAKU	MERU
	P.O. BOX 22 - KIBIRICHIA	
44.	JANE KARIMI TITUS	MERU
	P.O. BOX 49 - KIONYO, MERU	
45.	EVANGELINE KATHURE KIOME	MERU
	P.O. BOX 379 - MERU	
46.	LILLY N. M'IKUNYUA	MERU
	P.O. BOX 534 - MERU	
47,	PENINAH KOORU SIMBA	MERU
	р.о. вох 134 - Igoji	
48.	FLORENCE KINYA KABURU	MERU
	P.O. BOX 86 - KANYAKINE	
49.	MARGRET KATHAMBI MUREITHI	MERU
	$\mathbf{P.O.} \mathbf{BOX} 52 - \mathbf{GAITU}, \mathbf{MERU}$	· · · · · · · · · · · · · · · · · · ·
50.	JANE K. RIUNGU	MERU
	C/O KIANJOGU PRIMARY SCHOOL	
	P.O. BOX 73 - NKUBU	

FY 1995

	NAME/ADDRESS	DISTRICT
1.	ELIZABETH KHATSENZIA LOONIYO	TURKANA
	P.O. BOX 134 - LODWAR	
2.	MARY APITA LOPETET	TURKANA
	P.O. BOX 208 - LODWAR	
3.	LENAH ACHILLAH EPEYON	Turkana
	P.O. BOX 104 - LODWAR	
4.	NELLY NAIPANOI KENENE	Kajiado
	P. O. BOX 24 - KAJIADO	
5.	Janet Sinante Parori Mokinyo	Каладо
	P.O. BOX 237 - KAJIADO	
6.	Margaret Njeri Ngugi	Κλιαρο
	р.о. вох 81 - Lоітокток	
7.	TERESIAH K. NGEIYWO	WEST POKOT
	P.O. BOX 175 - KAPENGURIA	
8.	FLORENCE SELAH KHAUKHA	WEST POKOT
	P.O. BOX 175 - KAPENGURIA	
9.	Eliza P. Kang'sur	West Pokot
	P.O. BOX 6 - WEI WEI	
10.	Mary Wanjiru kung'u	Uasin Gishu
	P.O. BOX 7176 - ELDORET	
11.	JACQUELINE C. KIPRONO	UASIN GISHU
	р.о. вох 1501 - Eldoret	
12.	GLADYS JERUTO BETT	UASIN GISHU
	P.O. BOX 86 - BURNT FOREST	
13.	LEAH C. BIRIR	KERICHO
	P.O. BOX 25 - SOSIOT	
14.	SALLY CHEPTOO BETT	KERICHO
	P.O. BOX 21 - FORT TENAN	
15.	REBECCA CHEPTONUI MOLEL	KERICHO
	P.O. BOX 271 - LONDIANI	
16.	Rosemary Jeptanui Maiyo	Nandi
	P.O. BOX 62 - CHEPTERWAI	

LIST OF PARTICIPANTS FOR THE INCOUNTRY TRAINING RIFT VALLEY PROVINCE

17.	GRACE SENGE KETER	Nandi
·1 a	P.O. BOX 209 - NANDI HILLS	
18.	SALLY CHEMUTAI TANUI	NANDI
	р.о. вох 400 - Карѕавет	
19.	SALOME RURETO LERIMAN	Laikipia
	P.O. BOX DOL DOL VIA NANYUKI	
20.	EUGENIA WANGUI WAWERU	Laikipia
	P.O. BOX 805 - NANYUKI	
21.	Jennifer Wanjiru Kabugi	LAIKIPIA
	P.O. BOX 120 - NARO MORU	
22.	Selina Cheptonui Sang	BOMET
	P.O. BOX 181 - NDANAI	
23.	Rosaline Chepkurui Mutai	BOMET
**	P.O. BOX 3 - LITEIN	
24.	ALICE CHEPNGETICH TOO	BOMET
	Р.О. ВОХ 85 - ВОМЕТ	
25.	NANCY WANJIRU KURIA	NAKURU
	P.O. BOX 319 - MOLO	
26.	MARYLYN CHELANGAT RONO	NAKURU
	P.O. BOX 24 - RONGAI	
27.	JOSEPHINE TARURU	TRANS MARA
	P.O. BOX 31 - KILGORIS	
28.	Penaline Sapalan	TRANS MARA
	P.O. BOX 87 - KILGORIS	
29.	Agnes Jebichii Malakwen	Keiyo
	р.о. вох 163 - Аінавкоі	
30.	Magrina Jepkosgei Lamuran	KEIYO
	P.O. BOX 2760 - ELDORET	
31.	GRACE J. KIBET	Κεινο
	P.O. BOX 110 - ITEN	
32.	NAOMI LENGES	SAMBURU
	P.O. BOX 5 - SUGUTA MAR MAR	
33.	MIRIAM W. LETITOIYA	Samburu
	P.O. BOX 386 - MARALAL	
34.		Samburu
	P.O. BOX 42 - MARALAL	

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35.ESTHER JEPKORIR KOECH P.O. BOX 33 - KABARNETKOIBATEK36.ELIZABETH KABON KIPKWEKOIBATEK	
36.ELIZABETH KABON KIPKWEKOIBATEK	
р.о. вох 145 - Модотіо	
37. ESTHER SOTI CHEBELYENY KOIBATEK	
P.O. BOX 1097 - NAKURU	
38. JOAN JEMUTAI CHEPSAT BARINGO	
P.O. BOX 315 - KABARNET	
39. CHRISTINA JEPCHIRCHIR KIRUI BARINGO	
P.O. BOX 144 - KABARNET	
40. SUSAN MUKHWANA TRANS NZOIA	4
P.O. BOX 120 - K ITALE	4185644844444444
41. MILKER WAIRIMU KURIA TRANS NZOIA	4
P.O. BOX 1950 - KITALE	
42. MARY CHEBET RONO TRANS NZOLA	A
P.O. BOX 750 - KITALE	
43. MAGDALENA J. CHESANG MARAKWET	
P.O. BOX 100 - ITEN	
44. SELLY JERUTO WILSON MARAKWET	
P.O. BOX 59 - KAPSOWAR	
45. ROSALINE KIMOI CHERONYEI MARAKWET	
P.O. BOX 11 - KAPCHEROP	
46. MAGDALENA C. JEMUGE MARAKWET	
P.O. BOX CHEBORORWA	
47. JANE CHEPNGETICH NAROK	
P.O. BOX OLODMIRANI VIA MULOT	
48. JOYCE CHEBET TUEI NAROK	
P.O. BOX OLOOMIRANI VIA BOMET	
49. GLADYS SILANTOI SADERA NAROK	
Р.О. ВОХ 505 - NAROK	
50. NADUPOI N. SAITABAU NAROK	
P.O. BOX 128 - NAROK	

JFY 1996

	NAME/ADDRESS	DISTRICT
١.	Phanice M. Simotwo	MT. ELGON
	Р.О. ВОХ 20 - КАРТАМА	
2.	Violet Saina Muhindi	MT. ELGON
	P.O. BOX 43 - KAPSOKWONY	
3.	DINAH RAMNAI CHEBUS	MT. ELGON
	P.O. BOX 241 - CHEPTAIS	
4.	Beatrice Chelimo Saekwo	MT. ELGON
	P. O. BOX 85 - KAPSOKWONY	
5.	GRACE NGELY WO	MT. ELGON
	P.O. BOX 42 - C/O DSDO MT. ELGON	
6.	Rita Nakimicha Снетамві	MT. ELGON
	P.O. BOX 149 - CHWELE	
7.	Betra Keso Chenge	MT. ELGON
	P.O. BOX 119 - KAPSOKWONY	
8.	Selpher Chelimo Ndiwa	MT. ELGON
	Р. О. ВОХ 25 - КАРТАМА	
9.	STELLA KASHO BUYOYWA	BUNGOMA
	P.O. BOX 46, MALIKI	
10.	Mary Lusike Wabwoba	Bungoma
	P.O. BOX 700 - KIMILILI	
11.	CAROLINE LUKELESIA WAFULA	Bungoma
	P.O. BOX 394 - BUNGOMA	
12.	WINNIE SICHANGU WATILA	BUNGOMA
******	P.O. BOX 1786 - BUMGOMA	
13.	Janet Naliaka Mulongo	Bungoma
	P.O. BOX 65 - SIRISIA	
14.	Julia Mbishi Yamame	Bungoma
	P.O. BOX 119 - NDIVISI	
15.	Eddah nato Sitati	Bungoma
······	P.O. BOX 127 - BUNGOMA	
16.	Linet nalika Simiyu	Bungoma
	P.O. BOX 53 - TONGAREN	

LIST OF PARTICIPANTS FOR THE INCOUNTRY TRAINING WESTERN PROVINCE

17.	JANE MASIKA JEREMIAH	BUNGOMA
	P.O. BOX 1109 - WEBUYE	
18.	ZAITUNA SHABAN IPADETE	Teso
	P.O. BOX 98 - KAMURIAI	
19.	Sabensia Asikuku Ichan	TESO
	P.O. BOX 82 - AMUKURA	
20.	Mary Nasimiyu Anyapidi	Teso
	P.O. BOX 3 - AMUKURA	
21.	MARGARET ANYERA OFETE	TESO
	P.O. BOX 44 - AMAGORO	
22.	RISPA ANYANGO O. AKOLONG	TESO
	P.O. BOX 60 - AMAGORO	
23.	BETTY AKONGO OMANYALA	TESO
	P.O. BOX 9 - KAKEMER	
24.	Willimina A. Ikawa	TESO
	P.O. BOX 36 ADUNGOSI	
25.	Coleta Nasenya Imai	Teso
	P.O. BOX 91 - KAKEMER	
26.	Margaret N. Muyira	KAKAMEGA
	P.O. BOX 38 - LWANDETI	
27.	Judith Owano Omari	KAKAMEGA
	P.O. BOX 17 - KAKAMEGA	
28.	JANET AMBOGO IGANDWA	KAKAMEGA
	P.O. BOX 314 - TURBO	
29.	CLIMENTINA ALUSA ACHIYA	KAKAMEGA
	Р.О. ВОХ 170 - КАКАМЕ G A	
30.	Tessy Eshikumo	Kakamega
	P.O. BOX 127 - KHWISERO	
31.	BRIGITTE CHEBUKWA SHIVINA	Kakamega
	P.O. BOX 520 - TURBO	
32.	Khadijah Saum Ibrahim	KAKAMEGA
	P.O. BOX 160 - MUMIAS	
33.	Sabenzia A. Masinde	KAKAMEGA
	P.O. BOX 474 - MUMIAS	
34.	Thuhura L. Aziphu	Kakamega
	P.O. BOX 133 - KAKAMEGA	

35.	Mary N. Wandera	BUSIA
******	P.O. BOX 510 - BUSIA	
36.	Gertrude Rajulla	BUSIA
	P.O. BOX 93 - NAMBALE	
37.	Mary Okille semu	BUSIA
:	P.O. BOX 86 - BUSIA	
38.	Reginalda Juma N. Johns	BUSIA
	P.O. BOX 16 - PORT VICTORIA	
39.	Esther Mukani	BUSIA
	P.O. BOX 94 - FUNYULA	
40.	Patricia A. Makhokha	BUSIA
	P.O. BOX 180 - FUNYULA	
41.	Pamela Okwara Makhokha	BUSIA
	P.O. BOX 269 - NAMBALE	-
42.	Joy ce Musindalo Dindi	BUSIA
	P.O. BOX 47 - MUNAMI	с
43.	JANE KABALIKA KWAKHA	VIHIGA
	P.O. BOX 253 - KHUMUSALABA	
44.	ANNE OMOCHE EMUNYI	VIHIGA
	P.O. BOX 193 - BUNYORE	
45.	PAULINE ENGESIA AMWATA	VIHIGA
	P.O. BOX 151 - VIHIGA	
46.	BEATRICE K. IGANZA	VIHIGA
	P.O. BOX 370 - MARAGOLI	
47.	Jane Vuguzia Omumia	VIHIGA
	P.O. BOX 165 - MASENO	
48.	Edith Imali Mahasi	VIHIGA
	P.O. BOX 20 VIHIGA	
49.	Ezikah Musia Kegode	VIHIGA
	P.O. BOX 975 - MARAGOLI	
50.	GRACE MAKUNGU ADERO	VIHIGA
	P.O. BOX 88 - GAMBORI	

JFY 1997

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	NAME/ADDRESS	DISTRICT
1.	MARGARET KAZUNGU CHARO	Malindi
	P.O. BOX 5454 - MALINDI	
2.	JOYCE KITI MWATSUMA	Malindi
	P.O. BOX 287 - MALINDI	
3.	Elinah Stephen Ngubao	Malindi
	P.O. BOX 30 - GEDE	
4.	EUPHEMIA SOILA MUNDU	Malindi
	P. O. BOX 87 - GONGONI VIA MALINDI	
5.	Elizabeth Tsuma mahoro	Malindi
	P.O. BOX 24 - GONGONI VIA MALINDI	
6.	RAHEL SAMUEL KATOI	Malindi
	P.O. BOX 50 - MADINA	
7.	Agnes Nyevu Kombe	Malindi
	P.O. BOX 700 - MALINDI	
8.	Damaris Juma Rajab	KILIFI
	P. O. BOX 34 - GANZE	
9.	Mary Munyazi Katana	Kilifi
	P.O. BOX 532 - KILIFI	
10.	Christine Kadzo Shoka	KILIFI
	P.O. BOX 732 - KILIFI	
11.	Selina Josephine Kambi	Kilifi
	P.O. BOX 13 - KALOLENI, GIRIAMA	
12.	Margaret Chizi Kaulu	Kilifi
	P.O. BOX 80 - KALOLENI	
13.	Selina Salama Mashamba	KILIFI
	P.O. BOX 1 - KALOLENI	
14.	RACHAEL LUVUNO RUNYA	Kilifi
	P.O. BOX 74 - KILIFI	
15.	ELIZABETH SIDI KAZUNGU	Kilifi
	P.O. BOX 389 - KILIFI	
16.	Mumina Harun Manza	TANA RIVER
	P.O. BOX 1 - MADOGO	

# LIST OF PARTICIPANTS FOR THE INCOUNTRY TRAINING COAST PROVINCE

17.	GRACE HADIA MARO	TANA RIVER
*******	P.O. BOX 7 - HOLA	
18.	Emma Habwoya Galana Yako	TANA RIVER
	P.O. BOX 7 - HOLA	
19.	MARIAMU MOHAMMED SULEIMAN	TANA RIVER
	P.O. BOX 56 - BURA, TANA	
20.	Habiba Harufa Kuna	TANA RIVER
	P.O. BOX 7 - HOLA	
21.	CHARITY NKIROTE MAINA	LAMU
	P.O. BOX 282 - LAMU	
22.	EVELIN MALEMBA MASHENGU	Lamu
	P.O. BOX 35 - MPEKETONI	
23.	BEATRICE KWABOKA SAGWE	LAMU
	<b>Р.О. ВОХ 18 - МОКОWE</b>	
24.	Ada Hadula Manga	Lamu
	P.O. BOX 1 - WITU	4
25.	JOYCE RAI SHEHE	MOMBASA
,	P.O. BOX 92137 - MOMBASA	
26.	Mary Joseph Kakenga	MOMBASA
	P.O. BOX 98233 - MOMBASA	
27.	Mwanaisha H. Abdalla	Mombasa
	P.O. BOX 93245 - MOMBASA	
28.	Rose Kirui Ben	MOMBASA
	P.O. BOX 86630 - MOMBASA	
29.	Mariana Wawasi Muhonji	MOMBASA
	P.O. BOX 86842 - MOMBASA	
30.	Franscisca Tabu Mwaivu	Mombasa
	P.O. BOX 90439 - MOMBASA	
31.	Fenny Samba Mgendi	Ταιτά Τανέτα
	P.O. BOX 5 - IRIWA	<u></u>
32.	MARGARET NGELE THOMAS	ΤΑΙΤΑ ΤΑνΕΤΑ
	P.O. BOX 4 - KASINGAU	
33.	Rosalia W. Mwanyalo	ΤλΙΤΑ ΤΑνΕΤΑ
	P.O. BOX 1003 - WUNDANYI	
34.	Jane dali Mwambingu	Ταιτά Τανετά
	P.O. BOX 68 - SAGALLA	

35.	RACHAEL NDEKUBWA MUMU	ΤΑΙΤΑ ΤΑΥΕΤΑ
	Р.О. ВОХ 113 - ТАУЕТА	
36.	Victoria Lewela Mwaluda	ΤΑΙΤΑ ΤΑνΕΤΑ
ļ	P.O. BOX 207 - MGANGE	
37.	Margaret Gaindoki	ΤΑΙΤΑ ΤΑ ΥΕΤΑ
	P.O. BOX 59 - TAUSA	
38.	ELIZABETH M. MWALUMA	ΤΑΙΤΑ ΤΑΥΕΤΑ
	P.O. BOX 1003 - WUNDANYI	
39.	Patricia Mbingo	KWALE
*********	P.O. BOX 89 - KIKONENI	
40.	Agnes Kalondu Muli	KWALE
	C/O CHIEF'S OFFICE LUKORE	
41.	NINGUMAYE MWAZALAGWA KUYUGWA	KWALE
	р.о. вох 23 - Матида	
42.	Margaret Mbula Oira	KWALE
	P.O. BOX 7 - KIKONENI	
43.	Monica Mbula Mutiso	KWALE
	P.O. BOX 26 - KIKONENI	
44.	Mary Henry Sita	KWALE
	P.O. BOX 30 - MAZERAS	

# LIST OF PARTICIPANTS FOR THE INCOUNTRY TRAINING NYANZA PROVINCE

	NAME/ADDRESS	DISTRICI
1.	<b>R</b> UTH AUMA OKOTH	DAGUUGONUC
	BOX 41, RAKWARO, KENDU BAY	RACHUONYO
2.	LEAH ANY ANGO WERE	DAGUNGANNA
	SANDA PRIMARY SCH. BOX 29, KONJWANG'	RACHUONYO
3.	FLERIA ANYANGO RAWO	Dechucovica
	BOX 68, KADONGO	RACHUONYO
4.	LOYCE ADHIAMBO TULA	DAGUNGANA
	BOX 54 RAKWARO, KENDU BAY	RACHUONYO
5.	MARY KERUBO OMWEGA	
	BOX 3480, KISH	KISH
6.	ALICE KEMUNTO MOSE	Vicin
······	BOX 3148, KISH	KISH
7.	HELLEN KEMUNTO NYANG'AU	Kien
	BOX 203, KISH	KISH
3.	ELIZABETH MORAA NYAGWACHI	KICH
	BOX 1069, KISH	KISH
9.	ISABELLA ATIENO ODHIAMBO	MIGODI
	BOX 143, SUNA-MIGORI	MIGORI
10.	SALINE ODUNDO OTIENO	Micopi
	BOX 77, KARUNGU	MIGORI
11.	Helisa Mwajuma Akongo	MICODI
	BOX 51, RONGO	MIGORI
2.	HELEN ODIRA RADENY	MIGORI
	BOX 43, SUNA	MIGOKI
3.	MILKA AWUOR ABONGO	SUBA
	WAKIANGATA PRY. P.O. MFANGANO, SENA	SUDA
4.	Addah A. Omulo	SUBA
	BOX 82, OGONGO	DUDA
5.	MONICA ANYANGO OJUNGE	SUBA
	BOX 39, MAGUNGA	JUDA
6.	JANET ANYANGO OCHOLA	SUBA
	BOX 5, SINDO	JUDA

17.	ESTHER BOKE MOSABI	KURIA	
	BOX 121, KEHANCHA		
18.	MARIAM GATI WANG'ENG'I	KURIA	
	BOX 67, KEHANCHA		
19.	ESTHER NYANGWISI PAUL	KURIA	
	P.O. NTIMARU		
20.	MARY APONDI CHACHA	KURIA	
	BOX 123, KEHANCHA		
21.	JOYCE NY ABOKE OMBACHI	NYAMIRA	
	BOX 235, NYAMIRA		
22.	PAULINA NYABOKE ONGWAE	NYAMIRA	
	BOX 83, SOTIK		
23.	HELLEN MOKEIRA SAOSI	NYAMIRA	
	BOX 39, KEBIRIGO, NYAMIRA		
24.	ZIPPORAH MWANGO ONDIEKI	NYAMIRA	
	BOX 577, KISH		
25.	ESTHER NY AKERI	NYAMIRA	
	BOX 29, KEROKA		
26.	Rose M. Adhiambo Ogada	Нома Вау	
	BOX 159, NDHIWA	HOMA DAT	
27.	LORRINE ABDALLA OTIENO	ΗΟΜΑ ΒΑΥ	
	BOX 82, RODI-KOPANY	HOMA DA I	
28.	GERTRUDE ACHIENG' ONYANGO	Нома Вау	
	BOX 20, RODI-KOPANY		
29.	SERPHINE NYAKINDA OTIENO	Нома Вау	
	BOX 69, RODI-KOPANY		
30.	ANTONINA AWITI ONGARO	ΗΟΜΑ ΒΑΥ	
	BOX 59, RANGWE		
31.	GRACE AWUOR OCHUONYO	KISUMU	
	C/O DAN OCHILONYO BOX 1043, KISUMU	MISOMO	
32.	RUTH OKANG' NDELE	KISUMU	
	BOX 5355, OTONGLO	RISUWU	
33.	JACINTA ACHIENG' OGOLO	KISUMU	
	C/O WALTER ONG'ALA BOX 510, KISUMU	BISUMU	
34.	MILLICENT ATIENO OKELO	KISUMU	
~	BOX 30 KOMBEWA	RISUMU	

	HELLEN ATIENO WAKAYA	NYANDO
	BOX 32, SONGHOR	8
36.	EMILY AKOTH NYANGWARA	NYANDO
	BOX 71, AHERO	
37.	MARGARET ANYANGO OKWACH	NYANDO
	BOX 448, AHERO	5
38.	HERRIN ONGARO DULO	NYANDO
	вох 33, катіто	
39.	ROSE BOSIBORI OMWENCHA	SOUTHERN KISI
	BOX 24, ETAGO-S. KISH	
40.	OLPHA OMOKE OGENDO	SOUTHERN KISI
	BOX 1383, KISH	
41.	FLORENCE NYANCHOKA ATANDI	SOUTHERN KISI
	BOX 1584, KISH	
42.	GRACE NYANCHAMA MAGERIA	SOUTHERN KISI
	BOX 131 OGEMBO, KISH	
43.	RISPER AWUOR ONDIEGE	SIAYA
	BOX 450, YALA	
44.	MARY ATIENO SONGA	SIAYA
	BOX 59, MASANDA	
45.	FLORENCE ANY ANGO ONGURU	Bondo
	BOX 169, NDORI	
46.	LUCY ADHIAMBO OMONDI	BONDO
	BOX 394 BONDO	
47.	Roda Ayiti Andika	BONDO
	BOX 155, USENGE	
48.	VERONICA AKINYI OMITO	BONDO
	BOX 782, YALA	

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4 第二国研修「農村女性のための農業生産性向上技術」参加研修員からの聴き取り結果

参加研修員からの聴き取り結果

1998年1月23日実施

1. Ms. Sarah Marigu Karigi, ex-participant of the Course (JFY 1994)

(女性グループの概要)

・メンバー数は53名で、42名のアクティブメンバー。

(研修後の変化)

- ・息子と協力して、Record Keeping を始めた(企業経営のようなもの)。
- ・4つの近隣の女性グループに対し、会合や集会の場で講義や技術指導を行った。
- ・研修で使用したマニュアルは、近隣の小中学校の農業の授業で用いられるなど、非 常に有効活用されている。

(研修についてのコメント)

- ・今後は、農業省などの公的機関と農民(グループ)との間の連携を深めたい。
- ・研修の評価なども含めたフォローアッププログラムを実施してほしい。
- ・研修中は夫が家事を担うので(40日間程度の研修であれば)問題ない。
- ·Organic Farming についての研修を入れてほしい。
- ・参加者から参加料を徴収すると、(今回の第2国研修で対象とした)一般農民の参加が難しくなる(参加者グループが異なってくる)と考えられることから、導入しない方がよいのでは。

(調査団からのコメント)

・第2国研修への参加が、外部からの支援に対する依存性を強めたのではないか。

2. Ms. Eugenia Gicuku Kareithi, ex-participant of the Course (JFY 1994)

(女性グループの概要)

- ・メンバー数は30名だが、実際に会費(1か月50シリング)を払っているのは1
  8名である。
- ・今後、規模を拡大して(女性だけでなく)農民全体を対象としたグループとするに

は、グループによるインプットという点での制約がある

(研修後の変化)

- ・キッチンガーデンにおいて他の女性グループメンバーに教えている。
- ・キッチンガーデンから得られる副収入により、1か月あたり700シリングの増収 となった。キッチンガーデンからの作物のおかげで、市場から野菜等を買う必要が なくなった。
- ・(新規に導入した)野菜等の苗床からの収入もあり、収入は3倍になった。
- ・その後、水管理省の規制により、従来の農業水源が使えなくなり、近くの川から水 を汲んできている。
- 自己の限られた資源や土地でも(工夫しだいで)収入の向上は可能であるということがわかった。ゼログレージングやテラス耕作、ネピアグラスの導入などを実施した。
- ・(研修では)女性の労働でも収入を生み出せること学んだ(糞尿の利用など)。収

入の増加により、子供の教育費もらくに支出できるようになった。

- (研修を通じて)知識を得ることの重要性を、本人だけでなく夫も認識するようになった。研修等への(妻の)参加に夫も積極的な理解を示すようになった。
- ・家庭内における妻の収入源は農業収入のみであるが、研修後、その収入が2倍になった。
- (研修についてのコメント)
  - ・参加者から参加料を徴収するのであれば、1日20シリングくらいなら支出できる と思う。
  - ・女性グループのメンバー全体を対象とする研修を実施してほしい。←ジョモケニヤッタ農工大学や農民研修センターのスタッフが各グループを訪問して研修を行うことは可能である。
  - ・(ナイロビで行った第2国研修と同様の研修を)参加研修員のサイトでも実施して はしい。
- 3. Ms. Mary Igandu Ruraa, ex-participant of the Course (JFY 1994) (研修後の変化)
  - ・10人程度のメンバーからなるゼログレージングユニットを新たに組織した。
  - ・研修で得た知識を、他の農民グループに対してセミナー等の場で指導した。セミナ ーでは、研修で使用したテキストを活用している。
  - ・(本人が研修に参加したという情報を得て)近隣の農民が個人的に照会に訪れるようになった。多くの人が訊きにきたことで知名度も上がり、地域のカウンセラーにも選ばれた。
  - ・女性グループとして、新たなビジネスを市場で始めることができた。
  - (女性グループの概要)
  - ・24人のメンバーのうち、積極的に活動しているのは18名である。200シリン グの入会費と1か月600シリングの月会費にて運営している。月2回程度の定例 会を開いている
- 4. Mr. Alfred G. Kigoro, Husband of Ms. Catherine K. Gicuku, ex-participant of the Course (JFY 1994)

(農業経営と家庭の概要)

- ・3エーカーの土地を所有して、マカデミアナッツの栽培や牛の飼育を行っている。
- ・年間所得は約120000シリングで、うち75%が農業からの収入である。
- ・女性グループのメンバーは30名で、月2回程度の定例会を開いている。セミナー やデモンストレーションを行っている。
- ・3人の子供

(研修後の変化)

- ・農業生産量の増加により、自家消費分以上の余剰生産物を販売できるようになり、 収入が増加した。
- ・地域における農業コンテストで入賞することができた。

- ・(参加研修員の)夫として、妻を信頼できるようになった。妻(本人)も(新たな 知識を得たことで)夫のいうことを聴き入れるようになった。 (研修についてのコメント)
- ・研修中は子供の面倒を見る者がいないので、夫が世話しているが、小さな子供(おおむね1歳以下)のいる家庭では、研修への参加は難しいのではないか。
- ・しかし、研修内容の重要性を考慮すれば、40日間程度の研修も長くはなかろう。
- ・参加者から参加料を徴収するのであれば、1日10シリングくらいなら支出できる と思う。

		1994	1995	1996	1997	total
	total samle	29	23	13	19	84
applicability	all	4	2	0	3	9
	most	10	3	7	6	26
	some	11	13	5	8	37
	a little	4	5	1	1	11
	none	0	0	0	0	0
usefulness for participant	yes	25	23	12	18	78
	promotion	10	5	3	7	25
	salary increase	9	6	3	8	26
	contents of work	17	14	7	11	49
	job performance	18	15	9	13	55
	information network	18	11	3	13	45
	others	5	11	1	4	21
	no	2	0	1	0	3
usefulness for organization	yes	25	23	13	16	77
	no	1	0	0	0	1

Questionnaire for ex-participants of in-country training programme

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#### Questionnaire for ex-participants of in-country training programme

	A-4-1	1994	1995	1996	1997	total
	total sample	29	23	13	19	8
transfer of the job after the training		3	9	3	4	
no transfer of the job		23	14	9	15	
marked reasons of job tranfer	* c	hange of the status in the community from simple farmer to chairlady in the community		0 from vice-chairlady to chairlady of	1	1
		to be involved in the activities of local government	from member to committee member	womensgroup		D
			from community development assistant to nominated counsellor no job change, but secretary to trainer for farmers			
			from copy typist to chairlady from group secretary to chairperson for new registered group	1		
					from chairlady to secretary	1
		transfer to other women group	no job change, but secretary to treasurer and secretary from housewife to treasurer from secretary of womens group to spokesman of farmers group		from treasurer to counselor	
	* c	hange of the job type	· · · · · · · · · · · ·			
		from simple housewife to peesant to apply what she learned in JICA training 1	from unemployed to run a small scale farm		from simple farmer to good farmer from farmer to farm manager	1
	* in	troduction of new skill & techniology	Introduction of horticulture			
		no job change, but more responsibility	from simple farming to poultry keeping	promotion to enhance pig rearing in order to expand knowledge and skills in the 1	l c	
		(preparation of nursery bed) by JICA 1 no job change, but more responsibility by JICA training 1			1	

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	1994	1995	1996	1997	total
	rming managemment & techniques				
	farming management	1	tree nursery		}
	introduction of improved farming	2	improvement in yield & poultry		
	modern farming technique		improvement in home & in health	fishing	1
	**	increase productivity	2		1
		high yield 7	7]		
·		finanace is major problem		}	
* liv	estock farming & production				
	livestock farming	livestock management 2	2		
	livestock management	3			1
	Investock feeding				
	zero grazing	5		2	
	animal husbandry	increase crop yields? 4	4		
	pig farming	2	beans yield increase	higher adoption rate?	2
	improvement of poultry		maize yield increase	, , , ,	
	introduction of poultry keeping	3			
	pig management (rearing)				
	pig management (rearing)				-
		2 milking 1		high milk production	1
				The second s	ή
	cattle farming (cattle management)		cattle breeding		1
	cattele keeping		carrie preeding		
	interbreeding of goats	and the second			
		poultry keeping 2			1
				goets	
* fis	shery				
	L			fishing	1
	wironmental friendly aspect				
	agro-forestry				
	soil conservation (to prevent erosion)	5			
	water conservation				
	anting technique of various crops				
	planting method	tea seeding 1		-	
	banana planting (thinning & spacing)				1
	banana planting 2	2	1		
		improvement in growing of indigenous			
	vegetable planting	vegetables 1	1	vegetable growing	1
	fruits planting	3			
	tomate growing				
	maize planting	ł		1	1
	beans planting				
	avogado planting			1	
	ecific technniques for cultivation		·····		
	seed bed preparation & management	1		1	
		tree nursery management.			
	nursery bed preparation			·	
	use of manure	3			
	use of proper fertilizer	3			
	how to mix manure & fertilizer				
		crops planting	n ( 1977). 		
		crops cultivation			
	crop management	proper management of crops planting			1
	prinking 1	Provide the second seco			1
					1
1	prunning 1			improvement of use of fastilizer and	<b>†</b>
	asfe upp of equipatives shamiol		omonic forming	improvement of use of fertilizer and	J
	safe use of agricultural chemial 2	· · · · · · · · · · · · · · · · · · ·	organic farming 1	insecticide 1	
	rm management				
	record keeping (farm records) 6	۹ ²			
	rketing of agricultural products marketing of farm products		)		
			6 L	1	1

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	1994	1995	1996	1997	total
*te	chniques for the livlihood improvement				1
	solar cooker				
	smail kitchen garden	4			
	food preservation				
	rigation & drainage				
	irrigation technique				
*c	hange of style or attitude for life or living				1
	more discussion or meeting in the group	3	1	increase of members	1
	group meeting on farming & animal				
	husbandry				
	discussion and demonstrating with farmers				
	linkage with agricultural officer		: í		
	field visit.				
	public awarenwss (ex. in church, bazaar)				
	public relationships				
	TV & radio programme more productivity				
	better method of farming				
	farmers realized what they should do				
	Tarners realized what they should do	working relationship			
		working reaconship			
	· · · · · · · · · · · · · · · · · · ·	1		· · · · · · · · · · · · · · · · · · ·	

	1994	1995		1996	1997	tota
suggestions	need for capital or soft loan	11 organize seminars by provincial level	8 credit facility	1 speed of training was to ohig	n .	2
	visit of participant's site by lecturers	4 ex-participants can teach them	2	increase of training duration		7
		follow-up seminar at the site of ex-		frequent visit to learn how to	undergo	
	continuity of this kind of training	participants	2	farming plants		1
	short time seminar	2 increase of training duration	4	need books to keep the corre	ct mevement	1
	language problem	2 increase of number of participants	6	effective seminar		1
	intesification of age range	3 language problem	2	invite any members not only t	for leaders	z
	interest and a second second	·····		the courses should be held du		
	Increase of training duration	8 visit various women leaders or groups	1	4 vacation		1
	increase of number of participants	2 exchange programmes amongst district	2	1 men should be included		-
		Z exchange programmes amongst district	2	Then should be included		1
	follow-up seminar at the site of ex-					
	participants	6 teach about horticulture and flowers	1	more tours		1 .
		programme should be regulated for the				
		trained women	1 re-training of ex-participants	2 increase of number of particip		2
		assist some women leaders	1 provision of facilities	1 give priority to the ex-particip	pants	2
				the divisional social dev. Offic	ers should be	
	training on marketing	4 decrease of the training duration	1	1 given the chance of attending	g the training	1
	how to get quality seeds	give grants or loans	1 demonstration plots	1 how to rear local domestic po	ultry	1
	how to select good chemicals	aid for irrigation	1 mechanical ploughing	I how to plant fingermillet		1
	fruit seedling	loan with low interest	1	crop-rotation		1
	home management	superviser should be emptoyed	2	training once more		2
	in the management			held the seminars for women	workers in	
	gender issue	introduce seminars in rural areas	3	rural areas	110110110101	1
	family planning	2 pay for the participants	2	refresher courses		2
	ramay planning		<i>c</i> .	TENESINE COULSES		-
		introduce the programmes throuth the		practices be done in our share	-han	1
	networking & data collection	radio once a week at least		the covered officers visit field		2
	networking magazine for information	introduce solar fencing system		2 assistance from the NGO's	15	2
	follow-up activities & communication	4 introduce financial assistants				1
	training on flowers	soft loans	F	follow-up after the course		1
	training for health workers (ex.HIV)	supply seed	1	hire some useful equipment		1
	processing of agri. products	supply farm machinery	1	poultry keeping		1
	issue of land ownership or group owning					
	land	2 management	1	irrigation techniques		1
				techniques of handling agricu	itural	
	nursery of vegetable and tree	marketing skills	2	chemicals		1
	home economics	soil conservation	1	biogas		1
	input of some supply & demonstration			-		
	centre for farmers	2 how to get capetal	1	solar heater		1
	provision of training equipment	how to test soil sampling	1	organic farming		1
	adequate low level pamphiet or provision of					
	pamphlet for reference	2 heatth	1	follow-up in the field		1
		economy	1 training during holiday	1 provide basic farming equipm	ent	1
		housing	1 diseases control	1 small loans	c.r.c	1
		solar usage	1 inputs for demonstration	1 organize seminars by provinc	isl tava	2
		solar usage	Inputs for demonstration	in grass root seminars some f		-
		Contra to take			acuators	
		follow-up training		would come to learn		1
		assist materials	1	record keeping	_	!!
		depen the course in details	1	provide capital to small scale	farmers	1
		strengthen the subjects	3	educational tours		1
				freqient field stay and field de	emonstrations	1
				visit more women leaders		1
				NGO' assist		1
				organize frequent seminars a	nd	
				programmes		1
	1		1	free educational programme		1
			1	old methods to new one		

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# 資 料

第二国研修「農村女性のための農業生産性向上技術」討議議事録(ミニッツ)

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- Annex 3 研修科目一覧

### 第二国研修「農村女性のための農業生産性向上技術」討議議事録(ミニッツ)

# MINUTES OF MEETING BETWEEN THE JAPANESE EVALUATION TEAM AND JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY ON THE IN-COUNTRY TRAINING PROGRAMME ON IMPROVED AND SUSTAINABLE AGRICULTURAL PRODUCTIVITY FOR WOMEN FARMERS

The Japanese Evaluation Team (hereinafter referred to as "the Team") organized by the Japan International Cooperation Agency (hereinafter referred to as "JICA") and headed by Dr. Kunihiro Tokida visited the Republic of Kenya from 18th to 28th January, 1999 for the purpose of evaluating the In-Country Training Programme on Improved and Sustainable Agricultural Productivity for Women Farmers (hereinafter referred to as "the Course") which had been carried out since Japanese fiscal year (hereinafter referred to as "the JFY") of 1994 in the Republic of Kenya.

During its stay in the Republic of Kenya, the Team had a series of meetings with the representatives of Jomo Kenyatta University of Agriculture and Technology (hereinafter referred to as "JKUAT") and other authorities concerned with respect to the progress and achievement of the Course.

As a result of the Meetings, both parties shared the view that the Course had imparted to the participant and their groups knowledge, skill and experiences in the area of sustainable agricultural productivity in the Republic of Kenya.

A list of attendants to the meetings is attached as Appendix 1, and a summary report based on the meetings is attached as Appendix 2.

Nairobi, 26th January, 1999

Alida

Dr. Kunihiro TOKIDA Head of Japanese Evaluation Team, Japan International Cooperation Agency

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Prof. Ratemo W. MICHIEKA Vice-Chancellor, Jomo Kenyatta University of Agriculture and Technology

#### LIST OF ATTENDANTS

### 1. Interviewees

Ms. Sarah Marigu Karigi, ex-participant of the Course (JFY 1994)

Ms. Eugenia Gicuku Kareithi, ex-participant of the Course (JFY 1994)

Ms. Mary Igandu Ruraa, ex-participant of the Course (JFY 1994)

Mr. Alfred G. Kigoro, Husband of Ms. Catherine K. Gicuku, ex-participant of the Course (JFY 1994)

2. Jomo Kenyatta University of Agriculture and Technology

Prof. Ratemo W. Michieka, Vice Chancellor

Prof. R. W. Mutua, Deputy Vice Chancellor

Dr. Njonge F. K., Deputy Farm Manager

Mr. Mwikamba Kaibui, Assistant Farm Manager

Dr. P. Karanja, Acting Dean, Faculty of Science

Mr. Christopher Wambua, Public Relations Officer

Mr. J. Odero, Farm Department

Mr. J. K. Wamae, Farm Department

Mrs. N. N. Nduhiu, Farm Department

Mr. M. K. Muthua, Farm Department

### 3. JICA Expert

Mr. Tatsuo Hoshi, JKUAT Dr. Jiro Nozaka, JKUAT Mr. Jin Koki, JKUAT Mr. Kiyoshi Kita, Ministry of Agriculture

4. JICA Kenya Office

Mr. Minoru Tagami, Resident representative

Mr. Takahashi, Assistant Resident Representative

Mr. Miyagawa, Assistant Resident Representative

Ms. Florence Njenga, Senior Programme officer

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5. Evaluation Team

Dr. Kunihiro Tokida, Head of Japanese Evaluation Team

Mr. Michihiko Sakaki, Member of the Team (Small Scale Irrigation)

Mr. Nobuyuki Kobayashi, Member of the Team (Training Design)

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### Annex 2 研修経費支出額

#### SUMMARY REPORT

#### I. BACKGROUND

1. Agriculture continues to play a vital role in the economy of the Republic of Kenya and is likely to continue doing so in the foreseeable future. Its importance lies not only in its role of feeding the ever increasing rural and urban populations, but also in its substantial contribution to the Gross Domestic Product (GDP) and foreign exchange earnings. Therefore agriculture in general and food security in particular is directly related to economic stability of the Country. It is with this in mind therefore, that the development and sustenance of agriculture through modern technology cannot be over emphasized.

2. Over the years, it has been conspicuously clear that the women farmers who play a major role in agricultural production, are in most cases directly involved in agricultural practices either on an individual basis or in women's group. However, they have often been denied the control and utilization of the factors of production. Therefore, they have tended to carry out production with insufficient use of inputs and without the necessary skills needed for efficient and abundant agricultural production. There is need to support women folks in acquisition of modern agricultural skills and it is believed that they have the potential to revolutionize agricultural production in the country.

3. In view of the above, Farm Department in JKUAT (hereinafter referred to as "FARM-JKUAT") in recognition of the need to impart practical skills to women farmers to enable them to improve production in their farms organized the Course.

4. The Course was therefore aimed at helping women farmers to better their production skills through participation in the field practices which was to be conducted by staff who are competent in their areas of specialization. It is envisaged that by the end of the course the participants would have acquired the adequate knowledge, assimilated it and ready to disseminate the same to their colleagues in rural areas.

5. Two Hundred Forty-two (242) participants have successfully attended and completed the Course. The first course took place in JFY 1994 and covered Eastern and Central Provinces, the second covered Rift Valley Province, the third covered Western Province while the fourth and fifth covered covered Coast and Nyanza Province respectively.

6. For this occasion, the Japanese Evaluation Team visited the Republic of Kenya to review and evaluate the overall performance of the Course.

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### ${\rm I\!I}$ . ITEMS OF EVALUATION

The evaluation was made from the following aspects:

- 1. Efficiency
- 2. Effectiveness
- 3. Impact
- 4. Relevance of Course Plan
- 5. Sustainability

By acquiring information through the following:

1. Discussions with the authorities concerned.

2. Interviews with ex-participants.

The Team visited 3 ex-participants their homes and interviewed them, their families and the members of women's groups.

- 3. Interviews with lecturers.
- 4. Questionnaire to ex-participants conducted by JICA.

The Team distributed the questionnaire to all the ex-participants through JICA Kenya Office and studied their response.

- 5. Course Reports submitted to JICA by JKUAT.
- 6. Evaluation reports submitted to JICA by JKUAT.

JKUAT conducted the evaluation study from April 21 to 25, 1998 and from May 27 to June 6, 1998 as a follow up to see the activities being carried out by women groups of which the ex-participants of the Course belonged to.

### III. Evaluation

1. Efficiency

(1) Administration and Management

FARM-JKUAT was the implementing organization. Most of the cost for the Course was provided by JICA. The funds accounting was properly managed by FARM-JKUAT.

FARM-JKUAT formed internal committee for the implementation of the Course which had been held before and after the Course every year to plan and improve the Course curriculum. Resource persons were well involved and informed in the planning of the Course by the internal committee. Resource persons in JKUAT improved their skills in handling the Course from their experience acquired during the implementation process of the Course.

The regulations for the participants were introduced in the second training course for the smooth running of the training.

- (2) Course Conduct
- a. Training Participants

The participants of the Course were selected based on the qualification mentioned below.

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The applicant should;

1) be nominated by the District Social Development Officer (DSDO),

2) be a leader of women's group who does not have any other occupation apart from farming,

3) be between 21 and 50 years of age, in principle,

4) be able to communicate in English or Kiswahili, and

5) be in good health, physically and mentally, in order to complete the Course.

These are indicated in the Record of Discussions (hereinafter referred to as "R/D") signed on October 24, 1994. All the participants of the Course fulfilled the above-mentioned qualifications.

#### b. Curriculum

The curriculum of the Course has been modified to suit the needs of participants and to meet the objectives of the Course as suggested by the persons concerned with the Course. (Annex 3)

The curriculum mainly composed of practical sessions. It was found that this enhanced the training effect of the Course since all of the participants were farmers.

#### c. Resource Persons

Resource persons of FARM-JKUAT covered 67.8% of all the Course content and the other JKUAT resource persons covered 16.1%. Some other subject matter specialists were invited to cover the subjects which could not be covered by JKUAT.

All the lectures were given in both English and Kiswahili to ensure that all participants understood.

#### d. Training materials

Training materials of the Course such as textbooks and handouts were developed by JKUAT resource persons. The textbooks were frequently used in the lectures along with the practical sessions.

An extra set of the textbook was given to each participant for dissemination of the information contained thereof for the other women's group members in the community left behind by the participants. It has been found that the ex-participants has been making use of the textbook as their reference.

#### e. Training Facilities and Equipment

The Course was conducted at JKUAT, and most of the training facilities and equipment were provided by JKUAT. The Team found that there has been no complaint regarding training facilities and equipment from the ex-participants during and after the Course.

### f. Modification of the Course

In order to increase the effectiveness of the training and to meet the changing needs, the contents of the Course has been reviewed annually by the internal committee.

The training period of the Course was shortened from 40 days (JFY 1994) to 30 days (JFY

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1995-1998) because it was considered to be difficult for women to be away from home for a long period. The curriculum has been modified every year without changing the original objectives.

Preliminary study tours by resource persons were conducted to the areas where the participants would be selected prior to the commencement of the Course. This was to ensure that the contents meet the requirements of the participants. The information obtained through the study tours were passed on to the other resource persons who did not join the tour.

### (3) Budget and Cost for the Training

### a. JICA input

JICA provided JKUAT with the funds relevant to the participants such as transport, accommodation expenses and per-diem, as well as the expenditure for operating the Course such as honoraria for external lecturers, expenses for study tours, teaching aids, etc.

The total operational costs borne by JICA from JFY 1994 to 1998 summed up to approximately Ksh 24.8M. The statement of JICA expenditure is shown in Annex 2. It costs approximately Ksh 102,000 per participant.

#### b. JKUAT input

Besides the expenses financed by the Government of Japan, the Government of the Republic of Kenya, through JKUAT also undertook budgetary supplement in order to meet the total cost.

The budgetary supplement includes;

1) the provision of resource persons, vehicles for transport, land and animals of FARM-JKUAT, water, electricity, machinery for practical work and land preparation,

2) the expenses for study tours and internal evaluation by JKUAT,

3) the expenses for follow-up activities and constant communication with the ex-participants of the Course, and

4) the administrative costs for the Course by JKUAT.

#### 2. Effectiveness

(1) Objectives to be Attained

The objectives to be attained by the participants at the end of the training each year were as follows:

1) Improved farming methods to increase agricultural productivity,

2) Improved gentle farming techniques for the environment, and

3) Developed appropriate technology suitable for their local conditions.

The Course objectives were not changed throughout the Course implementation.

#### (2) Degree of Attainment

JKUAT distributed the course evaluation forms to the participants and collected them at the end of the Course each year. The results and analysis of the evaluation have been shown in the course reports of each year. Judging from the course reports, most of the participants has considerably

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accomplished the Course objectives as they expressed that all the topics in the Course were of great value, well organized and mostly covered their needs.

The Team, through JICA Kenya Office, distributed the questionnaire to all ex-participants in order to evaluate the Course, and about a half of them responded. The Team also found out that most of the participants has realized benefits from the subjects covered in the Course.

From the above-mentioned views, it is concluded that the degree of attainment by the participants is high enough to apply the acquired knowledge and skills in rural areas. The Course was conducted properly in terms of effectiveness.

#### 3. Impact

In order to establish the base for impact analysis, the Team and the persons concerned with the Course in JKUAT held discussions and set the overall goal and purpose as shown below.

1) Purpose

The participant acquire knowledge and techniques which will contribute to the improvement of agricultural productivity in a sustainable manner, and

2) Overall Goal

The knowledge and techniques disseminated by the ex-participants of the Course will contribute to better living standards in rural areas.

### 3.1. Positive Impact

(1) Dissemination of the applied knowledge and techniques gained through the Course

The members of the women groups which the Team visited have introduced the new knowledge and techniques from the ex-participants through the meetings or seminars where by the ex-participants took the role of lecturer and demonstrator to the other group members. The income from farms of the group members as well as that of the ex-participants have increased due to the increased agricultural production.

(2) Utilization of training materials

Training materials have been utilized in the community as a whole as well as the women groups of ex-participants. The Team observed that the materials issued to ex-participants are also been utilized in schools to teach agriculture in primary and secondary schools in their community.

(3) Enhancement of the status of the ex-participants in their family

Some ex-participants with improved management skills have shared more responsibility in the family and have been trusted and respected by family members.

(4) Improvement of status of women in the community

By increasing farm incomes of group members, the status of women has been regarded important in the community. It can be said that the change of the women's status contributed to better living standards in rural areas.

#### 3.2. Negative Impact

(1) Dependence of the ex-participants on the assistance from outside of their community

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Some ex-participants seemed more dependent on the assistance from outside, though this cannot establish whether such dependency arose from their participation in the Course or not. There might be some possibility of too much incentives to the participants by providing per-diem. (2) Split in one of the women's group

One women group split when one ex-participant felt there was a need to form a zero grazing unit in order to apply what she learned during the Course. Some members in the group opposed to her idea. On the other hand, this is a positive impact as she tried to start new activities with the application of what she learned in the Course with active members.

### 4. Relevance of Course Plan

### 4.1. Purpose and Overall Goal of the Course

There is a necessity that the purpose and overall goal of the Course be indicated at the planning stage to share a common understanding among concerned parties.

#### 4.2. Objectives of the Course

The objectives mentioned above can be said to be appropriate due to the fact that most of the ex-participants expressed that all the topics in the Course were valuable for them.

#### 4.3. Activities and Inputs for the Course

#### (1) Curriculum and Duration of the Course

The curriculum was modified according to the situations of participants' group. However, most of ex-participants expressed that the coverage of each topic was not enough, and the duration of the Course was too short. It was judged that the curriculum was slightly tight due to shortened duration from 40 days to 30 days.

# (2) Target Group and Contents of the Course

Activities of women group are diversified and there is a neccesity of incorporating more daily skills and techniques rather than specific agricultural technologies when women are targeted. On the other hand, technically specified training course may be more appropriate when representatives of farmer organization are targeted.

### (3)Number of Participants

The total accepted number of the Course from JFY 1994 to JFY 1998 is 242 against expected number of 250 while the number of applicants reached 1,199. The number of applicants and participants are listed as Annex 1. The number of application is quite high and this indicates high training demand for this training.

### 5. Sustainability

5.1. Technology Transfer by Ex-participants

The technique and knowledge gained by the participants are continuously transferred to other

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members of their respective group. Though there is some factors to restrict the full application of the technique such as lack of finance and local regulations, it is judged that the technology transfer continues in a manner appropriate for the situation of each women's group through regular meetings and field activities.

### 5.2. Sustainability of the Course

Through the interview with resource persons and other persons concerned with the Course in JKUAT, it is judged that both the resource persons and the facilities had enough capacity to implement and continue the Course. However, there is need for JKUAT to allocate funds to continue the Course.

### **W**. Conclusion

Based on the evaluation mentioned above, it can be concluded as follows;

1) The Course was effectively implemented with expected attainment of the objectives.

2) The cost effectiveness is high because the ex-participants are transferring the techniques and knowledge gained through the Course to the other group members after the training.

3) The positive impact by the Course is considerably high and the negative impact is insignificant.

4) When women farmers are targeted for the training course, it may be necessary to specify the focused area in the curriculum whether it is in agriculture or in the other women group activities.

5) The sustainability of the Course by JKUAT depends on whether it can arrange the source of funds to meet the expenses of implementing the training.

6) It is suggested that a modified training course be implemented by JKUAT as one of public services, because there is a strong demand of training for rural women in the country.

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# Annex3 研修科目一覧

Year (JFY)	Number of applicants	Number of participants
1994	137	50
1995	258	50
1996	220	50
1997	290	44
1998	288	48

The number of application and participants for the Course (JFY 1994-1998)

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The Expense born by JICA (JFY 1994-1998)

Year (JFY)	Expense (unit; Ksh)
1994	4,920,000
1995	4,582,630
1996	4,857,035
1997	5,091,348
1998	5,303,906
total	24,754,919

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### OUTLINE OF THE COURSE - JFY 1994 - 1998

### <u>JFY 1994</u>

### Introductory Farming Knowledge

Review of fundamental agricultural techniques e.g. measuring and weighing of plot, fertiliser, chemicals, seeds, agricultural produce and vield components.

### Marketing

Marketing system of agricultural products. Seasonal price fluctuation of products synchronized by the rainfall pattern and current commodity style.

### Farm record keeping

Fundamental record keeping.

### Vegetable growing

Seed treatment, sowing, nursery management, transplanting, field management, pest and disease control, harvesting and post harvest management on marketable vegetables.

# Livestock production

Fodder management, cattle, pigs, goats, and poultry management.

# Fruit growing

Cutting, grafting, nursery management, transplanting, field management, pest and disease control, harvesting and post harvest management on marketable fruits.

### Cereal and legume growing

Seed treatment, sowing, field management, pest and disease control, harvesting and post harvest management.

### Enviroment and farming

Handling of agricultural chemicals, bio-gas production, solar energy utilization, manure making and organic farming.

### Farm machinery

Basic fundamental operational skills and maintenance of farm machinery.

# Irrigation and soil conservation

Fundamental techniques and skills of irrigation and soil conservation.

### **Post-harvest**

Fundamental knowledge and techniques of post-harvest treatment on agricultural products.

#### JFY 1995

### Introductory Farming Knowledge

Review of fundamental agricultural techniques e.g. measuring and weighing of plot, fertiliser, chemicals, seeds, agricultural produce and yield components.

#### Marketing

Marketing system of agricultural products. Seasonal price fluctuation of products synchronized by the rainfall pattern and current commodity style.

### Farm record keeping

Fundamental record keeping.

### Vegetable growing

Seed treatment, sowing, nursery management, transplanting, field management, pest and disease control, harvesting and post harvest management on marketable vegetables.

### Livestock production

Fodder management, cattle, pigs, goats, bees, poultry husbandry and animal health.

## Fruit growing

Cutting, grafting, nursery management, transplanting, field management, pest and disease control, harvesting and post harvest management on marketable fruits.

### Cereal and legume growing

Seed treatment, sowing, field management, pest and disease control, harvesting and post harvest management.

# Cash crop growing

Cultural and agronomical practices of growing tea and pyrethrum.

## Enviroment and farming

Handling of agricultural chemicals, bio-gas production, solar energy utilization, manure making and organic farming.

# Farm machinery

Basic fundamental operational skills and maintenance of farm machinery.

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### Irrigation and soil conservation

Fundamental techniques and skills of irrigation and soil conservation.

### **Post-harvest**

Fundamental knowledge and techniques of post-harvest treatment on agricultural products.

### JFY 1996

### Introductory Farming Knowledge

Review of fundamental agricultural techniques e.g. measuring and weighing of plot, fertiliser, chemicals, seeds, agricultural produce and yield components.

#### Marketing

Marketing system of agricultural products. Seasonal price fluctuation of products synchronized by the rainfall pattern and current commodity style.

#### Farm record keeping

Fundamental record keeping.

### Vegetable growing

Seed treatment, sowing, nursery management, transplanting, field management, pest and disease control, harvesting and post harvest management on marketable vegetables including groundnuts. **Livestock production** 

Fodder management, cattle, pigs, goats, bees, poultry husbandry and animal health.

### Fruit growing

Cutting, grafting, nursery management, transplanting, field management, pest and disease control, harvesting and post harvest management on marketable fruits.

#### Cereal and legume growing/groundnuts

Seed treatment, sowing, field management, pest and disease control, harvesting and post harvest management.

### Cash crop growing

Cultural and agronomical practices of growing cotton and groundnuts.

### Enviroment and farming

Handling of agricultural chemicals, bio-gas production, solar energy utilization, manure making and organic farming.

### Farm machinery

Basic fundamental operational skills and maintenance of farm machinery.

#### Irrigation and soil conservation

Fundamental techniques and skills of irrigation and soil conservation.

### Post-harvest

Fundamental knowledge and techniques of post-harvest treatment on agricultural products.

#### JFY 1997

### Introductory Farming Knowledge

Review of fundamental agricultural techniques e.g. measuring and weighing of plot, fertiliser, chemicals, seeds, agricultural produce and yield components.

#### Marketing

Marketing system of agricultural products. Seasonal price fluctuation of products synchronized by the rainfall pattern and current commodity style.

### Farm record keeping

Fundamental record keeping.

# Vegetable growing

Seed treatment, sowing, nursery management, transplanting, field management, pest and disease control, harvesting and post harvest management on marketable vegetables including groundnuts. Livestock production

Fodder management, cattle, pigs, goats, bees, poultry husbandry and animal health.

### Fruit growing

Cutting, grafting, nursery management, transplanting, field management, pest and disease control, harvesting and post harvest management on marketable fruits.

### Cereal and legume growing

Seed treatment, sowing, field management, pest and disease control, harvesting and post harvest management.

### Cash crop growing

Cultural and agronomical practices of growing cashewnuts and coconut.

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### Enviroment and farming

Handling of agricultural chemicals, bio-gas production, solar energy utilization, manure making and organic farming.

### Farm machinery

Basic fundamental operational skills and maintenance of farm machinery.

### Irrigation and soil conservation

Fundamental techniques and skills of irrigation and soil conservation.

### Post-harvest

Fundamental knowledge and techniques of post-harvest treatment on agricultural products.

### JFY 1998

### Introductory Farming Knowledge

Review of fundamental agricultural techniques e.g. measuring and weighing of plot, fertiliser, chemicals, seeds, agricultural produce and yield components.

#### Marketing

Marketing system of agricultural products. Seasonal price fluctuation of products synchronized by the rainfall pattern and current commodity style.

# Farm record keeping

Fundamental record keeping.

# Vegetable growing

Seed treatment, sowing, nursery management, transplanting, field management, pest and disease control, harvesting and post harvest management on marketable vegetables including groundnuts. **Fish Farming** 

### Fish farming and harvesting.

Livestock production

Fodder management, cattle, pigs, goats, bees, poultry husbandry and animal health.

#### Fruit growing

Cutting, grafting, nursery management, transplanting, field management, pest and disease control, harvesting and post harvest management on marketable fruits.

### Cereal and legume growing/groundnuts

Seed treatment, sowing, field management, pest and disease control, harvesting and post harvest management.

### Cash crop growing

Cultural and agronomical practices of growing cotton and tobacco.

# Environment and farming

Handling of agricultural chemicals, bio-gas production, solar energy utilization, manure making and organic farming.

### Farm machinery

Basic fundamental operational skills and maintenance of farm machinery.

### Irrigation and soil conservation

Fundamental techniques and skills of irrigation and soil conservation.

### Post-harvest

Fundamental knowledge and techniques of post-harvest treatment on agricultural products.

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