

アンケート項目

(教官の部)

I 教官の基礎データ

1. 氏名
2. 年齢
3. 学歴
4. 職歴
5. 訓練、ロカカリヤ、セミナー等の参加状況

II 教官の職務

1. 授業科目
2. 授業以外、その他の役割、責任
3. 訓練報告書の作成
テーマ、訓練コース、年次、枚数等
4. LPM/LPKの作成状況
授業科目、LPM、LPK
5. 教材の作成状況
教材の種類(平面教材、録音教材、スライドフィルムビデオ、模型、標本等)数量及び使用した訓練コース等について
6. 1982/1983年度にフィールドラボを実施しましたか?
実施した場合、次表(略)に実施部門、その成果を記入して下さい。
7. 1982/1983年度にトライアルを実施しましたか?
実施した場合、次表(略)にトライアルのテーマ及びその成果を記入して下さい。
8. 昨年度(1982/1983年度)の活動実績から貴方の職務と日々の平均的な活動内容割合を次表(略)に従って記入して下さい。

III 教官の能力

1. BLPP 所長に対するアンケートⅣ-1と同じ。
2. 貴方の担当授業科目と貴方の受けた教育、又は訓練との関連性の割合について各授業科目毎に次表に(略)に従って記入して下さい。
3. 貴方の担当授業科目と貴方がBLPPの教官として勤務する以前の経験との関連性の割合について、各授業科目毎に次表(略)に従って記入して下さい。
4. 貴方の担当授業科目と自分の得意科目(興味を含む)との関連性の割合について、授業科目毎に次表(略)に従って記入して下さい。

5. 貴方は教官としての自分の能力を向上するために、次の活動（ a 自己学習 b 上司の指導を仰ぐ c 教官同志の話し合い d フィールドラボヤトリアルを行う）の実行頻度及び問題解決への有効度合（ a 多い b 十分 c 少い d 無し e 機会がない）を次表（略）に従って記入して下さい。
6. BLPP 所長に対するアンケートⅣ-2 と同じ
7. 昨年度（1982/1983年）実施したマンタン訓練コース及び普及員総合コースにおいて貴方の担当した授業科目及び授業時間（講義、討議、実習、デモンストレーション、見学等）を次表（略）に従って記入して下さい。
8. 昨年度（1982/1983年）実施したマンタン訓練コース及び普及員総合コースにおいて貴方の担当した授業科目の中で使用したAVA（チャート類、スライド、TPC、フィルム、模型/標本、現物教材等）とその使用頻度（ a 多い b 十分 c 少い d 無）を次表（略）に従って記入して下さい。
9. 昨年度（1982/1983年）実施したマンタン訓練及び普及員総合訓練において、貴方の担当した授業科目に対する訓練生の成績（最高、最均、最低）を次表（略）に従って記入して下さい。
10. 昨年度（1982/1983年）実施したBLPPにおける訓練において貴方の担当した授業時間の総合計は何時間になりますか？ 1週間当りの実績授業時間を記入して下さい。
11. 貴方の経験にもとづいて効果的、効率的に授業を行うためには、1週間当りの授業時間は何時間ぐらいが良いと思いますか？
12. 貴方の経験及び現在の能力から考慮して、次の実習指導（水田、畑、池、畜舎、ワークショップ、実験室、農家実習）を行うに届って有効に指導できる訓練生の人数は何人ですか？
13. 貴方の教官としての能力開発を行うに当たっての問題点があれば箇条書にして下さい。またその問題解決のために必要な処置を述べて下さい。

ア ン ケ ー ト 項 目

（普及所々長の部）

A. 普及所々長の基礎データ

1. 普及所名；
2. 住 所；
3. 氏 名；
4. 性別
5. 年令
6. 学 歴
7. 職 歴
8. 訓練受講状況

B 評価対象普及員

1. 普及員総合訓練を終了した普及員を1人選んで下さい。
 - a 普及員氏名
 - b 部下としての勤務期間
2. 普及員総合訓練を受けていない普及員で上記普及員と経歴の類似する普及員を1人選んで下さい。
 - a 普及員氏名
 - b 部下としての勤務期間

C 普及員の訓練状況

1. 普及員の総数
2. BLPPにおける訓練終了者数を記入して下さい。
 - a 普及員オリエンテーション訓練
 - b 普及員総合訓練
 - c 普及員栄養訓練
 - d 病害虫防除訓練
 - e かんがい訓練
 - f その他

I. BLPPにおける訓練を終了した普及員で次の各項目における変化が見受けられましたか？

その変化の程度（a 少い b 十分 c 多い）を記入して下さい。

1. 知識が向上した
2. 実技力が改善された
3. 昇級の機会が大きくなった
4. 農民からの信用が大きくなった
5. 活動成果が改善された
6. 普及員間の信用が増大した

II 普及員総合訓練を終了した普及員（B 1に述べた普及員）と、まだこの訓練を受けていない普及員（B 2に述べた普及員）の活動状況を比較して質的な違いが見受けられますか？
次の各項目に従って、その程度を記入して下さい。

（質的な相違とは、普及員としての職務を遂行するために必要な能力のことである。）

1. 各普及員の「農業普及活動実施計画」作成に関して、まだどのくらいの割合で修正する必要がありますか？

次表（略）に従って、その割合を記入して下さい。

2. 各普及員の「農業普及活動実施計画」の遂行は時期的に正しく行われていますか？ またどのくらい遅れがちですか？ 次表(略)に従ってその期間を記入して下さい。
3. 各普及員によって作成された報告書の内容は、どのくらいの割合で「農業普及活動実施計画」にそって作成されていますか？ 次表(略)に従ってその割合を記入して下さい。
4. 各普及員によって作成された普及活動の報告書は、まだどのくらいの割合で訂正を必要としますか？ 次表(略)に従ってその割合を記入して下さい。
5. 各普及員によって組織された農民グループ数を1982/1983年度と1981/1982年度と比較して、次表(略)に記入して下さい。
6. 各普及員の農民グループ組織状況は、州農業局の規準に合っていますか？ 次表(略)に従ってその適合の割合を記入して下さい。
7. 各普及員の指導によって、年間いくつぐらいのグループ活動が行われましたか？ 次表(略)に従ってグループ活動の数を記入して下さい。
8. 各普及員による農民グループ組織づくりをまだ支援する必要がありますか？ 次表(略)に従って支援する必要のある割合を記入して下さい。
9. 各普及員による農民グループ指導会開催の頻度は、週に何回ですか？ 次表(略)に従ってその頻度を記入して下さい。
10. 各普及員による農民グループ指導会に、平均何人ぐらい農民が出席しましたか？ 次表(略)に従って、全グループメンバーに対する出席者の割合を記入して下さい。
11. 各普及員によって指導された最近のデモンストレーションプロットの管理について、次の質問にお答え下さい。
 - (1) 何人の農民がデモンストレーションプロットを見学、または注目しましたか？
 - (2) デモンストレーションプロットを使って何回普及活動をしましたか？
 - (3) 何割ぐらいの農民がデモンストレーションプロットに採用された技術を自分のほ場で応用しましたか？
12. 各普及員によって選択された指導項目はどのくらいインパクトポイントに合っていますか？ 次表(略)に従ってその適合の割合を記入して下さい。
13. 各普及員の高収量品種の選択に関する技術指導の熟達程度はどのくらいですか？ 次表(略)に従ってその熟達程度を記入して下さい。
14. 各普及員の水稲施肥に関する技術指導の熟達程度を次表(略)に従って記入して下さい。
15. 各普及員の水稲管理に関する技術指導の熟達程度を次表(略)に従って記入して下さい。
16. 各普及員の土壌保全及び水管理に関する技術指導の熟達程度を次表(略)に従って記入して下さい。
17. 各普及員の広域病害虫防除に関する技術指導の熟達程度を次表(略)に従って記入して下さい。
18. 各普及員の農産物加工に関する技術指導の熟達程度を次表(略)に従って記入して下さい。

19. 各普及員の市場の需要に応じる作付指導の熟達程度を次表(略)に従って記入して下さい。
20. 各普及員の普及材料の系統的な準備に関する熟達程度を次表(略)に従って記入して下さい。
21. 各普及員の農民及び地域の現状に即する普及方法の選択に関する熟達程度を次表(略)に従って記入して下さい。
22. 各普及員の普及活動内容に適合する教材の選択に関する熟達程度を次表(略)に従って記入して下さい。
23. 各普及員がデモンストレーションによる農民指導を行ってから、どのくらいして農民がその新しい技術を受け入れましたか？ 次表(略)に従ってその期間を記入して下さい。
24. 各普及員に対する農民の信頼度について、次表(略)に従ってその程度を記入して下さい。
25. 各普及員のキーファーマーとの協力度について次表(略)に従ってその程度を記入して下さい。
26. 各普及員は淡水養魚に関して普及活動を行っていますか？ また淡水養魚に関する技術指導の熟達程度を次表(略)に従って記入して下さい。
27. 各普及員は畜産に関して普及活動を行っていますか？ また畜産に関する技術指導の熟達程度を次表(略)に従って記入して下さい。
28. 各普及員は飼料作物に関して普及活動を行っていますか？ また飼料作物に関する技術指導の熟達程度を次表(略)に従って記入して下さい。

Ⅲ 普及員総合訓練のインパクト

1. 普及員総合訓練から帰って、どのくらいして農民に農業技術の改善を奨励することができましたか？ 次表(略)に従ってその期間を記入して下さい。
2. 普及員総合訓練を終了した普及員に対して、訓練を受けた技術のうちまだ普及所々長が指導をしなければいけない技術はどのくらいありますか？ 次表(略)に従ってその程度を記入して下さい。また指導しなければいけない技術について記入して下さい。
3. 普及員総合訓練以前と訓練終了後とを比較して普及員の職務遂行能力はどの程度改善されましたか？ 次表(略)に従ってその程度を記入して下さい。
4. 普及員総合訓練以前の指導によって「水稻栽培の5つの努力」を実行していた農民の割合はいくらでしたか？ また訓練終了後の指導によってその割合はどのくらい改善されましたか？
5. 普及員総合訓練以前の指導によって「農業簿記」をつけていた農民の割合はいくらでしたか？ また訓練終了後の指導によってその割合はどのように改善されましたか？
6. 普及員総合訓練以前の指導によって「Mixed Farming」を行っていた農民の割合はいくらでしたか？ また訓練終了後の指導によってその割合はどのように改善されましたか？

Ⅳ 普及員の訓練ニーズ

1. 地域の状況に合った普及活動及び農業開発の問題把握及び問題解決等に対する普及員の活動

を効果的、効率的に行うためには現在の普及員の能力を向上するために如何なる科目がBLPPの普及員訓練に必要であるか a)生産技術 b)社会経済 c)農業普及 d)事務、管理等について次表(略)に従って必要訓練科目と知識及び技能に関して必要訓練の程度(B多く必要 C必要 T不必要)を記入して下さい。

V 普及所とBLPPとの協力

1. 貴方は年間何回訓練所々長又は教官と接触しましたか?
2. 貴方は訓練所との連繫を密にする必要があると思いますか? またどのような方法で連繫をもったらよいと思いますか?
3. 貴方は訓練所の教官による訓練後のアフターケアが必要だと思いますか? また必要な場合どのような方法アフターケアの方法が良いと思いますか?
4. その他訓練の質の改善のためにBLPPに対する意見があれば述べて下さい。

VI 普及員総合訓練を終了して訓練所から帰ってきた普及員の態度の変化について、次の各項目について、変化の度合(a大変よくなった b少しよくなった c変化が見られない d逆効果であった)を記入して下さい。

1. よろこんで農民と共に働く
2. 他組織の職員と協力する
3. 他の普及員と協力する
4. 上司に対する従順性
5. 職務遂行上の責任感
6. 常に技術をみがく努力
7. 自分の能力に対する自信
8. 自己開発意欲
9. 職務実施の正確さ
10. 普及者としての誇り

アンケート項目

(普及員の部)

A 普及員の基礎データ

1. 普及所名
2. 住 所
3. 氏 名
4. 性別
5. 年齢
6. 学 歴
7. 職 歴
8. 訓練受講状況
9. 貴方の職務の割合
 - a 普及活動の準備
 - b 農民指導会
 - c 訓練参加
 - d 自己学習
 - e 会 議
 - f 事 務

B 活動地域のデータ

1. 村数及び面積
2. キーファーマー数
3. 農民グループ数及びメンバー数
4. 婦人グループ数及びメンバー数
5. 青年グループ数及びメンバー数
6. 農家数
 - a 自 作
 - b 小 作
 - c 労働者
7. 水 田
 - a かんがい田
 - b 簡易かんがい田
 - c 天 水 田
8. 畑 地

I, II, III, IV, V

普及員に対する質問は普及所々長に対する質問(のうち I, II 1~II 28, III 1~III 6, IV 1)と同じである。(V 1, V 2, VIの項目は普及員には質問しない)

VII 普及員の資格について貴方のアイデアを述べて下さい。

1. 学 歴
2. 普及員になるまでの経験年数
3. 年齢 最低 最高
4. 親の職業
5. 出身地 (村, 町, 都会)
6. 独身又は家族
7. 性 別
8. 特に必要な知識
9. 特に必要な技能
10. 特に必要な態度

アンケート項目

(キーファーマーの部)

A キーファーマーの基礎資料

1. 氏 名
2. 性 別
3. 年令
4. 住 所
5. 営農経験年数
6. 営農状況
 - a 水 田 自作、小作
 - b 畑 自作、小作
 - c 庭園地
 - d 家 畜 大家畜、小家畜、鶏類 他
7. 講習会、訓練等の受講状況

B 農民グループ

1. グループ名
2. グループ設立年度
3. グループメンバー数(設立時、現在)

C 普及員

1. 普及員名
2. 指導を受けた期間

I 次の各項目に対する約半年前の貴方の状況にくらべて、現在の貴方の状況は普及員の活動によって、どのように変化しましたか？ その変化の程度を(a 少し b 大分 c 多い)次表(略)に従って記入して下さい。

1. 農業経営改善方法についての知識が深くなった。
2. 農業経営改善のための技能が身についた。
3. 収入をふやす助けとなった。
4. 家族の繁栄をはかる助けとなった。
5. 普及員に対する信用が増した。
6. 自分に自信がついた。

II 普及員による貴方への情報提供や技術指導について次の質問にお答え下さい。

次の各項目に対して (1)普及員はどんな情報、リコメンデーションをくれましたか？

(2)また普及員は何をやって見せてくれましたか？ (3)貴方は普及員リコメンデーションを実際に

採用してみましたか？ (4)まだ採用していない場合、その原因は何ですか？

- Ⅱ 1 高収量品種および種子の利用
- Ⅱ 2 施肥量、施肥時期および施肥方法
- Ⅱ 3 広域害虫防除（共同害虫防除）
- Ⅱ 4 整然とした水利用
- Ⅱ 5 栽培方法
- Ⅱ 6 収穫調整
- Ⅱ 7 農業簿記の記入
- Ⅱ 8 Mixed Farming

Ⅲ 貴方の所属する農民グループの次の各項目に対する活動成果について (1)半年前の状況、何人のメンバーが実施したか？ (2)現在の状況、何人に増加したか？ (3)またグループメンバーによる活動成果が何人の周辺農民によって採用されたか？ 等について記入して下さい。

- Ⅲ 1 水稻の「5つの努力」を完全に実行した農家数
- Ⅲ 2 農業簿記をつけている農家数
- Ⅲ 3 「Mixed Farming」を行っている農家数

Ⅳ 普及員以外で貴方のグループ及び貴方が指導を受けた職員別にその情報又は指導の内容およびその頻度を次表（略）に従って記入して下さい。

Ⅴ 普及員に対する貴方の理想像を述べて下さい。次の各項目に対する普及員について、貴方の受信の程度（a 受容しない b 受容する c 大いに歓迎する）を記入して下さい。

1. やるよりしゃべる方が多い普及員
2. しゃべるよりやる方が多い普及員
3. しゃべることもやることもできる普及員
4. 普通は事務所において、貴方の要求に答えてリコメンデーションをする普及員
5. 普通はは場において農民に会っている普及員
6. 1つの事について熟達しているが、他の事についてはあまり多く知らない普及員
7. 村における一番よく知っている農民よりも、あらゆる分野の農業経営についてよく知っている普及員
8. 農民の問題に耳を傾け、農民の意見を聞く普及員
9. 大学教育を受け、科学的に話すことができる普及員
10. 農民に会う為には、裸足でも水田地帯に入っていくことを かね普及員
11. 女性普及員

12. 独身普及員
13. 若い普及員 (20～25才)
14. 中堅の普及員(26～40才)
15. 中年の普及員(41～50才)
16. 年寄の普及員(51～56才)
17. 町の出身普及員
18. 村の出身普及員
19. 農家の出身
20. 公務員の家庭

Ⅶ 貴方が当面している問題に対して普及員が十分な技術指導やリコメンデーションができなかったり、貴方の質問等について満足する解答が得られない場合があると思われる。

BLPPにおける普及員訓練では、あなた方の現場のニーズにそって技術指導や、リコメンデーションができるように普及員の能力開発を行っています。

次の各項目に対して貴方の地域を担当する普及員について知識、又は技能の訓練が必要と思われる項目を次表(略)に従って記入して下さい。

1. 社会、文化

- a 一般大衆の前で話をする
- b 村の風俗習慣
- c 人間関係
- d リーダーシップ
- e 心理学

2. 農業技術

- a 水稻、パラビジャ、園芸作物の種子
- b 水稻、パラビジャ、園芸作物の苗づくり
- c 水稻、パラビジャ、園芸作物の施肥
- d 水稻、パラビジャ、園芸作物の病害虫防除
- e かんがい
- f 水稻、パラビジャ、園芸作物の栽培方法
- g 水稻、パラビジャ、園芸作物の収獲調整

3. 畜産

- | | |
|-------|----------|
| a 大家畜 | c 鶏類 |
| b 小家畜 | d その他の家畜 |

4. 淡水魚養殖
5. 飼料作物
6. 農業經營
 - a. 簿記
 - b. 經營分析
- 7.
- 8.

Summary Report on
Fact-Finding Survey of Training Activities

Submitted by

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Middle-level Agricultural Technician Training Project

(ATA- 237)

Agency of Agricultural Education, Training and Extension,
Department of Agriculture, Government of the Republic of
Indonesia and
Japan International Cooperation Agency (JICA)

Summary of Survey Report through
Observation and Hearing.

I) Observing Training Activities(lecture & practical training)

1. Lecture

There is considerable difference in method of lecturing in accordance with difference in experience among instructors.

- 1) It is found that there are instructors to conduct characteristic training by use of various training techniques such as motivation, method of speech, utilization of actual examples, reporting of study, use of TPC, etc..
- 2) There are some instructors giving lecture by reading text in straight manner and also by writing on board in small and insufficient letters.
- 3) Instructors are generally not active in making of hanging pictures, chart, use of actual example and are also lack of experience in applying them.
- 4) Instructors have following opinions .
 1. Instructor is required to be strong enough in professional skill.
 2. It is important to formulate training plan(L.P.M.).
 3. It is necessary to make sufficient preparation for training.
 4. It is necessary to devise use of training equipments and materials such as T.P.C.etc.
 5. It is effective and useful to observe senior instructors' training. It is of opinion that his way of training must be inspected by senior instructor and be better to be criticized.

2. Practical Training

A) Method of Practical Training

- 1) No case is found that practice is carried out according to plan of practical training(L.P.M.).
- 2) It is found that there is big gap in skill among trainees of Mantan Training Course ,who are mixed group of participants.
- 3) L.P.K.which is work procedure, is well-prepared, but it is necessary to devise the timing to hand it to trainees.
- 4) It seems that there is short of devise in making effective use of skillful trainee as assistant.
- 5) In case that trainee is in trouble in the practice, instructor and his assistant tend to assist and solve the problem. For the trainee, there is no time to think over the solution by himself. It is suggested to let trainee do himself and think.

6) It is also recommended that practical training must be not only given to working skills such as skill of injection, disassembling/assembling of machine, but also must be devised to give the training on what is termed ability of problem solving.

7) Practice in the laboratory could not be observed.

B) Instructors have the following views

- 1) Practical training must be strengthened. Learning by Doing.
- 2) Budget for materials development of practical training is small.
- 3) Why instructors tend to avoid practical training is that he is not confident. Junior instructor had better to cultivate his ability of doing by himself by working with trainees as much as he can.
- 4) To do trial by himself is of great use for strengthening ability of skill and practice.
- 5) Many a instructors admit that inexperienced instructor is less skillful and apt to give more lecture than practice.

3. Problems and Countermeasures

Instructors are demanding necessity of self-training and of mutual study

- 1) It is needed for measure as a whole system to further strengthen professional ability and skill of instructor (agricultural techniques and skill, and training technics and skill). For instance, measures such as sending to short-term training at research institutes, training-in-charge system that senior instructor takes care of training of junior one or implementation of trial.
- 2) Is it necessary that practical training must not only be given to improve working skill itself, but also be carried out to develop ability of problem solving, that is, ability to decide and implement concrete measures by identifying problem and analyzing cause and background of problem. For example, trouble-shooting of machine, farm management diagnosis, food-crop and animal husbandary diagnosis, present condition of farmers and problem solution, etc..
- 3) Preparation and implementation of lecture and practice are activities of creative device being done by respective instructors. The more training device is, the more outcome will be produced. A feeling of fullness of instructor may be great. Because of these, is it needed to make device and means to let instructor experience and realize the fact that if he would make full device once or twice, then he could become full confident in training.
- 4) Does it appear effective to organize study meeting among instructors or activities of training centers such as study meeting on actual demonstration of lecture, of practical training and of production and utilization of training materials.

II) Management of Training

1. Management of training activities (lecture and practice)

(1) Control/Management of curriculum and implementation

Each instructor is entrusted with management of curriculum and carries out training with his own ability.

- 1) Choice of syllabus and time allocation respective to each syllabus are subject to instructor. There is no need to get permission from head of center even if he tries to consult with head.
- 2) Instructors having finished P.G.P. Training Course have become skillful in preparing L.P.M. and L.P.K.. They pointed out that this skill would be one of differences from part-time instructors. There is a case that those who do not yet finish P.G.P. try to learn from senior ones and to make L.P.M.
- 3) The compulsory items, contents and method are not instructed or specified in the curriculum. Some instructors attempt to adopt or reject syllabus based upon level of trainees, regional characteristics of the areas from where they come, needs of trainees, etc..
- 4) There is no obligation to report implementation of training. No record on selection and time allocation of syllabus are kept at the center or by instructor himself. Guideline or framework concerning time allocation for lecture and practice respective to each subject are indicated, but it may not imply compulsory or designated allocation.
- 5) Arrangement of part-time instructors has fixed according to experience in the past. In accordance with kinds of training course proportion of part-time instructors has roughly been determined. In case of absence of part-time instructor, full-time instructors at the center often take the place of him.
- 6) Setting up of training courses are made based upon annual requirements from each Directorate-General and each Project so that every year they are always fluid and curriculum also is formulated whenever necessary. There are a few courses which are established as fundamentally necessary course.
- 7) In the course, for example Mantan Course, that is designed to succeed in qualification examination in which practical skill and ability of problem solving are not tested, practical training on skill is not always needed. There is such a judgement that lecture must be given better suited to graduation test of agricultural high school.

(2) Management of implementation of L.P.M. and preparation of training

Similarly, preparation of L.P.M. and training is subject to instructor's individual responsibility. It has not been controlled as a function of the center.

- 1) Presentation of L.P.M. is not duty. It is said that "instructor can not know how other instructor carries out training or plans to do."
- 2) Of course, training contents of part-time instructors are not known.
- 3) L.P.M. in showing whole frame of training about one subject being charged by one instructor (or plural instructors) could not be observed. L.P.M. is owned by respective instructor. No record of implementation such as how to implement it, why it could not be carried out as it was planned, why it has been intentionally changed, etc. could not be seen and also individual record by instructor could not be observed.
- 4) It is admitted that preparation of L.P.M. requires its own time consuming and presentation of L.P.M. for every lecture and every unit of work makes burdens.
- 5) It is said that training materials should be prepared by each instructor. Major materials being used by instructors are ones developed by agricultural information centers (B.I.P.) with the purpose of extension rather than ones made by experimental and research institutes. Many cases have been seen that materials being distributed to trainees are ones extracted from magazines, leaflets for key-farmers.
- 6) Individual-made T.P.C. accounts for major training materials. It is hard to say that budget for training materials development is sufficient. There is no plan to develop training materials as a function of center.
- 7) There is a case that instructor has prepared a lot of slides on individual base and training center takes responsibility for preparation of L.P.M., reference materials and textbooks, etc..
- 8) There were several cases that instructors who have not yet finished P.G.P. Course have made efforts to prepare L.P.M..

(3) Practical Training

It has been recognized that instructors have been conscious of importance of practical training. However, actual conditions of implementing practice could not be grasped as a whole.

- 1) It is heard that practical training is given by means of demonstration, but training materials as much as all trainees can practise are hardly prepared.
- 2) It is said that practice is not only to let trainees work, but also is important as content and method of training for them to practise on report-writing, on discussion and also to take part in study tour.

- 3) In the training center, there are some courses which have been carried out without plant cultivation and cattle-raising. Some of the training centers have no paddy for practice. On the other hand, training field is located at remote area. It is appeared that implementing practical training under these conditions may encounter somewhat difficulties.
- 4) It is hard to say that training field in the center is fully utilized and managed. It is found that some of training field have been non-use.
- 5) It can not be seen the case that coordination between implementation of plan of training and cropping plan or growth stage of crop in the training field has been made.

(4) Composition of Instructors

Sufficient allocation and composition of instructors have been in progress at present.

- 1) Composition of specialized field for instructors in the center is not always determined by certain standard. Each training center has its own composition. For instance, instructor in charge of food crop such as rice, etc. is not necessarily assigned to each training center.
- 2) Training course comprises of a number of field, subjects and syllabus. Each instructor is deviced to give training by charging partial portion of subjects including part-time instructors. System is not functioned as such that each instructor in charge of training course being established respective to special field in charge, is taking responsibility as a whole. He is a instructor being nothing but in charge of his own part and syllabus of the subject.
Recently, there was the center which tried to adopt coordinator-system in respect of training course.
- 3) Young instructors(just graduated from universities) account for large portion.
- 4) Professional consciousness as a instructor is generally high. In view of motivation of instructor that he has come to training center, he is content with profession as a instructor. Young instructors are instantly responding to our inquiry that they have no objection to transfer to other training center and to reduction of training allowance/ honorarium . Concerning social status of instructors, there are varied ideas that they are regarded as equal to PPS at provincial level.

(5) Problems and Countermeasures

- 1) For the purpose of levelling-up of quality of training and increase of training outcomes, may it be necessary to make gradually uniform

- 3) It is controllable quality and quantity of training conducted by instructors by designating and instructing content and method of training to certain theme in the framework of each training course, field, subject and syllabus.
For instance, it may be needed to designate compulsory theme and item for practical training and also compulsory training skill, and to instruct concrete guideline of training method, etc..
- 2) Similarly, it may be necessary for the center to manage intentionally and concretely planning of training (L.P.M.) and development of training materials, for example, management is not imposed on daily training works, but on once or twice time every six months, that is, presentation of draft of plan, examination and decision, implementation, evaluation and review had better to be controlled.
- 3) Since outcome of training is greatly affected by capability of instructor, it may be needed for the center as a organization to establish the system in order to grasp how training is carried out. Training report made by instructor is not only important for curriculum management, but also is very useful to instructor himself in order to change training content tailoring to need of trainee.
- 4) Concerning certain fundamental training content or compulsory training field and subject, these must be established as basic training course which will be determined beforehand based upon long-term consideration such as training needs for working places and needs for type of jobs, numbers of personnel in need of training, their names, their schedules, etc..
If these fundamentals would be changed every year, it would be hard for instructors and also for trainees to make preparation according to schedule.
- 5) It would be improper to set up training course without training field and facility. Training course in certain subject had better to establish in the center where sufficient training materials for practice in that subject have been provided. May it be necessary to reexamine minimal quantity of facilities and equipments necessary for practical training. For instance, kinds of training and number of cattle or space of cropping plots necessary for these practical trainings, etc..
- 6) It is thought that budget for training materials, etc. is small, but amount of budget being demanded from the center is also small, isn't it? Is there need to prepare "material costs for practice" as independent budgetary item.
- 7) There is a case when cost for making training materials exceeds instructor's individual burden so that training center had better to establish management system for making training materials.

Though depending upon problem-consciousness of instructor, training materials can be found everywhere so that these materials must be actively utilized. For example, observation data, sampling and survey of production cost concerning crops and animal husbandary in the process of on-campus-trials. Report being submitted by trainees concerning field laboratory, various records and surveys, case-studies of extension activities conducted by trainees, recording on crop and animal growth in practical field, etc. will become useful reference to practical training.

2. Organization of Training Center and What is to motivate instructors

(1) What is to motivate and to stimulate instructors

1) Instructors are saying that when they are highly valued by trainees concerning depth and strength of specialized technical field, they are very pleased and proud as instructor in his profession. There are some instructors who are replying in a manner that he is the happiest when his creative idea is admitted by his fellow instructors.

2) A number of young instructors point out that they want to deepen their specialized technique by attending short-term training, at least twice a year, being conducted at experimental and research institutes. And also say that they try to study by reading more technical books. Every instructor points out shortage of technical reference books at the center.

Most of experienced instructors said that participation in P.G.P. professional technical course and also taking part in LOKAKARIA, etc. are stimulus for them.

Some instructors stated that it was of great use to conduct on-campus-trials in collaboration with research institutes in order to improve their technical ability. On the other hand, some instructors said that opportunity of conducting training must be increased and it would be better to go to research institutes rather than doing on-campus-trials.

3) It is appeared that there is not yet sufficient place to improve his own technical field.

That is to say, instructor want to supplement his shortcoming and deficiency on agricultural technique and training method/technics within the training center. And also he is willing to come into being his depth and strength of his own professional technique, in other word, desire to make contribution to regional agricultural development and to realization of higher outputs and higher incomes.

4) It is not felt any desire of instructors concerning increase of agricultural production and raising of return in the center. Crop and cattle being produced within training field in the center appear generally poorer than those in the outside farmers. It is also felt that making management record on crop production and cattle raising are insufficient except some cases.

- 5) We could not come to know the system that how low-high situation of performance as instructor exerts its influence on his own future career.
- 6) At present, there are still minor number of instructors who are desirous of voluntary and autonomous means as method of self-enlightenment such as mutual evaluation of content and method among instructors in comparison with those seeking heteronomous means.

(2) What is to provide organization of training center with vitality and to unite instructors together

- 1) Achievement of training center being explained as a comparison with other training center is nothing but "passing rate of agricultural highschool graduate examination" for Mantan.
It seems to us that there would be no competition of achievement among training centers with regard to content of other achievement.
- 2) It is observed that management system of training center for the purpose of strengthening outcome of training is not always sufficient. That is to say, the system to manage and implement curriculum properly, the system to raise up the quality of training (the system to make efficient planning, examination, decision, evaluation with respect to training plan of each instructor, training materials, management plan of training field utilization and cattle raising.)
- 3) It is also observed that management system to increase productivity in utilization of training field and facility is not sufficient, too. It is pointed out that, however, increase of production and income in the center has nothing to do with increase of budgets such as various expense of management cost of center and purchasing cost of materials and equipments. As a result, it is heard that, even objective of increasing production is intended to produce seeds, baby cattles, fish, etc. making direct contribution to regional agricultural development, primarily for home model-desa of field laboratory or to provide canteen of the center with cheap food, is hard to be publicly recognized.
- 4) We are impressed that such a management system or structure of the center have not yet been completed that system is to activate plan and idea of instructors, to mobilize their energy, at the same time to make active their mutual interaction for the purpose of promotion of business activities of the center.
- 5) In parallel with implementation of field laboratory, it is recognized that instructors' consciousness on how training center should play a part and make higher evaluation in the regional agricultural society, is getting to swell.

(2) PROBLEMS AND THEIR RESULTS

- 1) It is recommended that it is necessary to found management system of organization of training centers soon as possible so as to raise training effect and to strengthen ability of professional skill of instructors spontaneously without their knowledge if they were earnestly work in the system.
- 2) It is primary desire of human being to insist his own existence and to let other recognize him among fellow members and in any organization. If BPLPP and BLPPs try to institute system or place to actualize instructors' social existence in the agricultural technicians society, training center's instructor society or regional agricultural society where chance is given to him to fulfill his original desire or to advance further his desire instructor would be strongly motivated for self-development and elevation.
- 3) Since instructors are concerned with strengthening their own professional skills such as agricultural technique and training skills, they will accept some degree of organizational control for this purpose.
- 4) It is found that at any training centers there are one or two experience-rich and excellent instructors. The question is that how these excellent instructors device to guide young instructor and technician as a organization.
- 5) It is thought necessary to materialize the system designed to compete each other with outcome of activities for which instructors have in mind identical purpose or objective, and to evaluate and exchange creativeness, device, ability, knowhow, etc. of their own.
It is good, for example, to be competition on cleaning and keeping order of the training center or on open study meeting of training.
Presentation of outcomes of designated subject on-campus-trial, study meeting on sectoral agricultural technique, annual evaluation meeting of slide training films, etc. are also good examples.
It will be effective to hold study meeting on L.P.M. being prepared by each instructor every month.
- 6) Is it possible to device the system that can provide the training center with better rewards or income, that is, more operation budget, equipments, trial & experimental cost, etc., the more people concerned in the center try to work hard to increase outputs and revenue.
For a time being, it is recommended to hold "increasing production contest of principal crops" with an aim to comparison of outcome per center, or other contest of training materials development, etc. Human feelings is that people don't want to lose out to other people and other center.
These activities will exert immeasurable good influence, as results of these activities, on strengthening of instructors' ability and enhancement of regional farmers' trust, etc..

- 7) Is it needed to device even how to set up training course. For example, at present comprehensive training course including many fields and subjects such as " PPL Polyvalent Training Course" has been organized. We recommend to study that short-term specialized technical courses such as "poultry farming ,small-cattle raising, fresh water fish culture, vegetable crop production"(if necessary division between sophisticated and basic one can be made.) are set up and participants can choose and combine the subject for their own training.

III) Meeting with Key-farmers and PPL

(1) Key-farmers

- 1) It is observed that there are key-farmers who are very high standard of skill. These farmers have owned deep experience on skill of vegetable, poultry, fresh-water fish culture, etc.. It is also admitted that there are a number of progressive farmers successful in higher output of paddy than key-farmers.
- 2) There were two opinions equal in number concerning measures of raising income that " one measure is to increase output of food crop by implementing Panca Usaha(five efforts of improving cultivation) and the other is to adopt mixed farm management." No further reply was not given on the more concrete plan of management improvement.
- 3) Among key-farmers, there are some farmers applying fertilizer more than BIMAS standard. Some cases showed that output has been raised by compost and by adding fertilizer after heading.
- 4) A number of farmers have practiced not only rice and palawija(other food crops), but also try to raise cattle, to plant vegetable and to cultivate fish in the pond by making better use of front yard "pukalagan". They felt that "the most important question is how to obtain chicks and baby fish " and KUD is further strengthened.
- 5) Field with which farmers are concerned is " cattle raising and fish culture" Technical guidance from other Directorate-General except DG Food Crops is extremely small in comparison with one extended by BIMAS extension workers. Consequently, farmers expect that BIMAS extension workers can extend any kinds of technical guidance.
- 6) What is expected of BIMAS extension workers is technical guidance concerning " distribution of high-yielding variety, plant protection, survey of soil, marketing, post harvesting, etc..
- 7) Opinions with regard to field laboratory are that " they want to get assistance about various crops and every kinds of techniques." and " Of course, any seeds given to us are multiplied and will be redistributed to other farmers". "They also came to know high efficiency of tractor. They like to make use of tractor for more occasions."

(2) Extension Workers (PPL and PPM)

- 1) Under the present system, what BIMAS extension workers can plan and do is primarily concentrated on extension activities in the field of food crops and BPP (extension office) has nothing to with extension activities in other fields.
- 2) Concerning technical requests on animal husbandary and fish culture, etc. extension workers have to function as intermediary between farmers and MANTAN in that field (extension worker of Directorate-General in that field). About basic information, BIMAS extension workers try to reply to farmers' enquireies.
- 3) There are a very few number of farmers who are superior to extension worker's technical ability and skill. The question is how to utilize these competent farmers in the extension activities.
- 4) Extension workers of animal husbandary and fish culture are not always stationed at all Kacamatan office even in small number. They recognized that they have to study hard whatever techniques farmers are intersted in . They also are willing to acquire additional skill in addition to production technique of food crops. What is additional skill may be vegetable and horticulture, small-medium size cattle, fish, etc in accordance with regional characteristics of areas where they are assigned.
- 5) What they want to study further is differed from person to person. They pointed out " study on socio-psychological approach to farmers, animal husbandary technique, fishery technique, farm management, tec." They also stated that they like to receive continuous guidance and assistance from training center after they attended course.

(3) Problems and Countermeasures

- 1) Would it be for a shake of raising agricultural income and securing self-sufficient foodstuffs, farmers are vigorously seeking technical information about animal husbandary, fish culture or vegetable, and every kinds of high yielding variety, seeds, plants, young fish, etc..
We are convinced that seeds and plants being transfered to farmers can be expected to be disseminated them through field laboratory activities to other farmers.
- 2) PPL is desirous of training on technical field in which farmers are anxious to know.
- 3) We wonder whether extension workers hold questions associated with any activities about how to make approach to farmers and how to utilize influential effects of competent farmers to others under the extension activity system (BIMAS) which is carried out in reality.

4) The following would be to suggest as activities of training center to cope with these mentioned problems.

(1) Setting up of new training course

Course is designed to give training to BIMAS extension worker on the subject of animal husbandary, fish-culture, vegetable. But training must be limited to skills required for small self-sufficiency farm management scale.

(2) Training center try to play such a new role for regional agricultural development as a strongpoint of production and distribution of high-yielding variety, seeds, saplings, young-fish or farm mechanization.

(3) For the purpose of identifying training needs of extension worker concerning extension activities and also of materializing needed training course, instructor tries to station to work at extension office. At this office he is able to promote field laboratory activity, to find out the needs of training for extension workers through his own real experience of extension works and to make self-training or development, etc.

5) It is understood that technical guidance to such items as maintenance of soil fertility, cropping system, animal husbandary, fish culture and vegetables which are managed with small self-supply farming (for example, one cow, goat, 30 chickens, vegetable growing at 30 m², fish culture at 100 m² pond.) has become greater concern.

However, it is wondered who is going to give technical guidance to the farmers in the field. It should be considered to make positive utilization of competent farmers for this purpose.

P A R T (II)

Summary of Suvery Report Based upon the Questionnaire

I. Analysis regarding Questionnaire on Head of Training Center

1. Summary of results from questionnaire

(1) Career record of Head of the Center and Proportion of his Job

- 1) The length of years serving as head of the center, on average, is six years (maximum age difference among heads of the centers is ten years). Concerning previous post of heads, One half accounts for school master of agricultural high schools and another half is from officials of agricultural bureaus of provincial government.
- 2) Frequency of participation of training in the country is divergent (range from one to twelve times). Training outside the country is, on average, four times which do make little difference among heads. Proportion of trainings having been given to heads in his business content accounts for 3.6 % to 2.4 %.
- 3) Proportion of his business contents being associated with management of training center such as administration of training center, guidance and supervision of instructors and staffs, is ,on average, occupied by 55 %. Big difference could be observed on how to motivate and how to guide instructors and staffs. Proportion being occupied by conduct of training is shown from 5 to 40 %.
- 4) Head of the center often felt difficulties on the matters of motivation of instructor and staff and of controlling their duties. On the other hand, he feels relatively easy in "development of organization of the center, holding meetings in and outside BLPP, conducting training and participation of LOKKAKARIA".

(2) Facilities and Equipments

- 1) There are two to five class rooms depending on the training center. Capacity of dormitory and dining-room is ranging from 60 to 180 people. There are some centers which are not in good balance between capacity of dormitory and of class rooms.
- 2) Not only is that both centers, Cihea and Batangkaluku, are equiped with larger capacity, but also are fully arranged with multi-purpose hall, demonstration room, workshop, laboratory, home-life improvement room, etc.. However, there is also laboratory which is not installed with domestic water supply.
- 3) Training field (paddy) is arranged with 1.2 ha. on an average with four training centers. Some of the centers have not any paddy field. There are some paddy fields which are not equiped with irrigation facility and are lack of water supply in the dry season.
- 4) One center has none of fish pond, the other has large pond with area of 4,000 M². It is found that there is a center being provided with fish pond, but is not used at all.

- 5) Average number of cattles per hectare is; 12 large cattles (cow), 20 goats, 113 chickens, in comparison with small and medium-size cattle, there are more number of large cattles.
- 6) Opinion of the Head of the center regarding facility and equipments for practice is as follows;

(A)-Center:

1. Introduction of farm machinery is pretty hard due to the heavy clay soil.
2. Crops are heavily damaged by animals in and outside the center because there is no fence in the field.
3. Field for feed crops (currently 2 hectares are arranged) must be expanded with extra one hecter.
4. Protection device for garbage in the canal must be installed.
5. Fish pond is often used for bathing, must be protected with fence.

(B)-Center:

1. Irrigation water is not sufficiently available. It is the serious problem in the dry season.
2. Number of technical staffs (assistants) is needed to increase. Their technical competence is low and must be strengthened with training.
3. As expense of cattle feed is so high, budget for raising of cattle is required to increase.
4. Water leakage of fish pond must be maintained.

(C)-Center;

1. There is no paddy field for practice. It must be purchased.
2. Dry field is in the condition of terraced field and has no possibility of irriagation.
3. Water can not be supplied into fish pond in the dry season. Water canal with 200 M length is required to be improved.

(D)-Center :

1. Paddy field for practice is rain-fed and is not provided with drainage canal. Field is often full of water by flood. There is a plan to transform one portion of field into fish pond by developing drainage system with a set of water pump.
2. Protection fence must be built because crops in the field are often stolen.
3. It is precondition that grass field must be increased due to high feed cost for cow.
4. Operation expense of machinery is needed to increase because it is quite small.

(3) Instructors, Assistants and Clerical Staffs

- 1) Average number of instructor per center is seven persons. There is difference in number ranging from 4 to 11 instructors depending on center. It is requested to increase the number of instructors with one to five persons.
- 2) Number of office staffs is almost equal with 9 to 10 persons except (A)-center which is employed with 40 persons.
- 3) Average number of assistant per center is 7 persons and is equal to instructor in number.
Field in which technical staffs (assistants) are well arranged is food crops and farm machinery subject matters.
In addition to the above number, 10 persons on an average are demanded to increase. Workers are also provided with 5 to 31 persons per center. They are usually engaged in works at dormitory, workshop, animal house, training field, etc. 16 workers on an average is requested to increase.

(4) Training Courses and Numbers of Trainees

- 1) In 1982/83 period, training of crash program with longer terms of three to six months has been implemented in addition to regular training programs.
Number of trainees financed by budget of training center was as follows: (A)-center, 494 persons, (B)-center, 503, (C)-center, 305, and (D)-center, 342.
- 2) The training courses being financed from other source of budget (is meant to provide with only facility) are occupied with greater proportion in the three centers except (D)-center. Trainees account for 45 % in case of training being conducted with only facility and aggregate number of days also accounts for 23 % on average.
- 3) Number of class room use per day as follows:
(A)-center, 3.9 rooms, (B) is 5.3, (C) and (D) are 2.7 rooms on average.
In terms of average lodgers per day, (A) and (B) on average are 131 persons and (C) and (D) are 79 persons on average.
There are some occasions/periods being overloaded more than their capacity of class-rooms in case of (B) and (D)-training centres.
- 4) There is an area where extension workers graduated from agricultural highschool before 1978 have already completed in PPL polyvalent training course so that some center are not conducting this course.
- 5) Participating ratio of trainees is on average 98 % in case of regular training courses and 95 % in case of crash program.
In term of training being given with only facility, there is one center which is exceeded more than 100 %.

(5) Number of Subject Matters of Instructor and Judgement on their degree of skillfulness

- 1) Average number of subject matters per instructor is 2.4 .
Instructors in the (B) and (C) centers teach on average three subjects.

- 2) In (C)-center, there is no competent instructor being able to give training on the subjects of "Food Crops", "Estate Crops", "Horticulture" and "Farm Machinery". In the (C)-center, there is no instructor skillful in the field of fishery. Every center has plural number of instructors regarding subjects of animal husbandary, extension and farm management.
- 3) Concerning knowledge and skillfulness of instructor on his teaching subjects being judged by Head of the center, there is none of examples for instructor who is more competent in practical skills than in theory. Some heads of the center have evaluated that all instructors are marked with A-class both in knowledge and in skill. It appears that even skilled instructor is almost incompatible with theory and skill. In many cases, skillfulness is lower than knowledge.

(6) Ability of Teaching Materials Development by instructor and Actual results

- 1) Out of 21 instructors, 18 persons are judged to be fully capable of developing LPK/LPM. 19 persons have experienced in making materials.
- 2) With regard to ability to make such materials as flat materials(charts), voice materials, slide/film, sample, etc. about 48 % of instructors are considered satisfactory. 67% of instructors have experienced in developing these materials. Ability, experience and skill of application for flat materials(charts) are considerably higher than other types of materials. 71% of instructors have replied that they know very well about application of teaching materials.
- 3) About 62% instructors is satisfactorily able to use slide projector and film projector and about 68% of instructors have already used these equipments.

(7) Ability of Teaching Method by Instructor and Actual Conditions

- 1) Out of 21 instructors, 16 persons are considered as full competence holder of teaching methods such as lecture, discussion, practice, demonstration, observation, etc.. One instructor has yet experienced in teaching at all and four of them have yet experienced in demonstration.
- 2) Concerning evaluation methods(written examination and performance test(attitude test)), there are a few instructors who have sufficient skill and experience in preparation of performance test and in ability of scoring.
- 3) All instructors have already experienced in motivation, attitude development and advice, etc. for trainees. Who are considered to possess sufficient ability on them are 15 persons out of 21.

(8) Utilization of Facility for Practice

- 1) Practice on paddy rice is not carried out at the (C)-centre. Parabija practice in the paddy is implemented in the (B)-center. Being independent of aggregate 127 days of 6 training courses in the (B)-center, practice on paddy rice is becoming aggregate of 9 days for seven courses of three training centers on an average.
- 2) Practice on dry field is carried out as follows: average 6 courses, 10 days for estate crops, 8 courses, 12 days for parabija crops, 6 courses, 9 days for feed crops.
- 3) Practice in the animal house is very often conducted in the (A)-center. There, annually 10 courses, aggregate of 540 days of practice on cow, goat, chicken, are carried out. In the (B)-center, 11 courses, aggregate of 154 days and other centers are quite few days.
- 4) There is a few number of days of practice at the fish pond. 9 courses in the (A)-center, only one days/course. In the other centers, fish pond is used by one course and one day.
- 5) Practice on farm machinery is especially active both in the centers (A) and (B) where tractor is used in aggregate of 30 days on average per one course, pest control machines being applied in aggregate of 16 days on average. In both centers there are 8 to 9 courses of practice per year.

(9) Scale of Library and condition of Use.

- 1) Each center has library with average number of books, 647 books. In 1982/83 number of books to be lent was 362 books on an average so that every two trainees borrowed a book.
- 2) Heads of the centers mentioned as follows regarding problem of library.
 1. Budget of book purchase is not appropriated.
 2. Trainee is not able to have enough time for self-study. It is suggested to give more time to trainees for their self-study by ceasing conducting evening class.
 3. Library is just completed or not yet arranged in some of the centers.
 4. It is needed to give training to staff in charge of library.

(10) Paying to National Treasury Revenue from Sale of Produce

- 1) Regarding amount of payment to National Treasury, there is big difference among centers as shown by the example below. Actual rate of payment to National Treasury against budget and real amount of money are as follows:
 - i) (A)-center 5.8% and Rp.407,000.
 - ii) (B)-center 38.7% and Rp.2,346,000.

11) Management of Training Centers

- 1) Syllabus being modified by the center accounts for less than 10% out of all syllabuses
- 2) In many cases, choice (adoption) of training textbooks is decided by consultation between instructors and head of the center. In some centers, this is determined either by instructor or by head.
- 3) Determination of training method is made by individual consultation between instructor and head or by instructors' meeting. Either cases are observed in half and half.
- 4) Method of evaluation of training is decided by consultation between head and instructor. In some center, head of the center makes decision on it by himself.
- 5) Passing or failure of trainee is determined by consultation between head and instructor.
- 6) Field laboratory activities are implemented with full consent among parties concerned, instructor/head, farmer and extension worker.
- 7) There of on-campus-trial is decided by various procedures; "instructor consults with head of the center", "consultation with external specialists" and "head makes decision on theme in the instructors' meeting".
- 8) Guidance activity toward post-trainees (continuous guidance after training) is decided by head at the instructors' meeting. Actual results of post trainees' activity are such that :
(B)-center was holding of LOKAKARIA Meeting and sending of letter.
(A) and (B) centers held meetings at the working place of post-trainees.
Every head of the centers affirmed the needs to arrange the budget for post-trainees' activities

2. Problems and Countermeasures

(1) Composition of instructors and staffs

Composition of these staffs in the center exerts greater influence directly on outcome of training.

It has been thought that there is need to resort to some measures against the following realities.

1. There is a case that instructor being assigned newly right after graduation from university can not help conducting training on the subject of agricultural extension because no one else is available.
2. There is such a instructor as being in charge of four subjects alone.
3. There is greater gap in number of office staffs with 10 to 40 persons. In the center where a few of them are employed for office works, it seems possible to impose some burden of clerical works on instructors.
4. It is worried that correctness of practical training and standard of practical work are deteriorating due to a few number of technical assistants.

(2) Training Facility

Balance between setting up of training courses and facility of training center does also exert effects on outcome of training. Especially, it is important to make balance between the frequency and importance of training in subject matter and availability of facility and training field.

Facility for practical training on animal husbandary is well-arranged. In every center, instructor and technical assistant on this subject are assigned. However, with regard to facility of food crops centering paddy and dry land, it is difficult to say that sufficient facility has been arranged even though it is taken into accounts that "there is no enough facility for irrigation and no paddy field" and there is no single special course for food crops.

It is suggested that any trainees (participants of any training courses) require the training on rice cultivation and parabija. Therefore, it may be necessary or compulsory to assign practical training of these subjects to all courses even if extent of training would be differed. In some cases, it may be dealt as co-curriculum.

It may be necessary to reexamine the scale of cattle-raising of large ones (cows) because of the fact that there is balance among the factors concerned; cost of training, frequency of training and necessity of training.

(3) Utilization of Training Facility

Even if field in the center is used for the training, the center would not exhibit its authority if training field were managed in red ink. Farmers and trainees would not pay respect to the center as far as the center can not conduct the trials to achieve the yielding and revenue more than as usual.

For a time being, it may be necessary to make active utilization of real yielding and produce as training material and occasionally as supply of seeds and seedling. For this purpose, center must be making efforts to increase productivity by inputting even small amounts of production materials such as fertilizer and pesticide in proportion to real farm management being practiced by farmers.

It is thought that if target of output would be charged with responsibility, instructor and technical assistant must be encouraged to improve their technical skills as a result. However, for this aim, following conditions are needed to be improved: use of trainees' manpower, increase of workers, increase of cost for machinery use.

(4) Management of Training Materials

It is judged that instructors are generally not skillful in making training materials such as "voice material, slide film and sample/model material". 9 instructors out of 21 do not know how to make them and 7 persons out of 21 do not know how to apply and utilize them. How to develop and how to use would be one of the most important focal points to improve instructors' ability and skill in the future.

Improvement of ability for training material making and is identical with enhancing of instructors' capability of training guidance, in other words, Theory of guidance (that is, planning of training) must be integrated with real ability of instructor in the training (that is, motivation, attitude development, advice or group guidance, etc.). It would be one of points of training management as head of the center that he attempts to let instructors think over how to make and how to apply the training materials.

(5) Strengthening of Instructors' Capability

It is the most serious problem that instructor is weak at practical skill of agriculture. May it be necessary to take any measures such as designation of on-campus trials or their strengthening by which instructors can't avoid of active engagement in crop cultivation and livestock raising in the center in order to improve their practical ability in the future.

(6) Management of Production Revenue

It is also observed that management and use of products and revenue within the center is one of the most important issues from the view of management of the center. It is desirable of taking active attitude to this problem. Certainly, the greater effects will be born.

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II. Analysis of Questionnaire on Instructor

1. Summary of Results

(1) Career record of instructors

Object of survey is against 21 instructors with working experience of more than one year. On an average, they are 37 years old and serve four to five years in the training center.

Number of training opportunities in and outside the country and their periods are as follows; 5 to 6 times on an average and aggregate of 6 months to more than one year.

18 instructors have been finished P.G.P. course.

(2) Role and Charge of Instructor

1) Among business content of instructor and his time proportion, what is principal item as follows; Training 20.9%, Office works 13.8%, Preparation of training 12.9%, Self-study 11.5%, Guidance to Trainees 9.9%, Contact with external organizations 5.9%, Scoring tests 5.7%, Participation of LOKAKARIA 5%. Provided that (A)-center tries to count of one-day working hour as 17 hours from wake-up time to sleeping of the trainees.

2) What is prominent in the role and charge of instructor mentioned above, are ; (A)-center, role of coordinator in the training course , (B)-center, charge of practical training facility and charge of training administration.

Coordinator is not only partially charging of training, but also he is taking care of whole progress of the training course.

"Charge of training facility" is meant that instructor must be responsible for training field, facility for animal husbandary or audio-visual aids which he is dealing with in the training.

"Charge of training administration" is implied that he is doing some associated clerical works.

3) Average number of subjects per instructor is 2.5 subjects so that this figure is consistent with BPLPP guideline" more than 2 subjects, but must be less than three." However, in some cases, there are instructors charging of four subjects.

(B) and (C)-centers three subjects per instructor and, (A) and (D)-centers two subjects on an average.

4) In the last fiscal year, 1982/83, average number of hours for training per week is 10.6 hours (7.3 to 14.3 hours). According to judgement by instructor it is said that there is individual difference, but training capacity must be 16.1 hours per week on an average.

(B)-center have been already reached to the limit which is two time as much as (A)-center. (C)-center is exceeding average, but has still been room for training hour.

5) Feasible Number of Trainees for Practical Guidance

Instructors have varied judgement on how many trainees can be guided in the practice. It is different depending upon field of training and the centre, but it is from (4 to 30 persons) to (10 to 30 persons).

(3) Development of LPM and Training Materials

- 1) LPM/LPK regarding animal husbandary is the best arranged that a total number of LPM and LPK are respectively, 95 and 71. However, LPM and LPK per instructor of animal husbandary is nothing but 12 and 9 respectively. It is observed that there is some difference among centers with respect to number of LPM/LPK being developed. In total, 5 LPMs and 3 LPKs were made in respect of one instructor being charged of subject field.
- 2) There are the largest numbers of textbooks made by instructors and of reference books in the subject field of animal husbandary. But, one instructor prepared materials on two themes with a total of 55 pages. 0.8 number of theme and 18 pages per one subject on an average. The least one is "farm management" 0.2 theme and 3 pages, estate crops 0.5 theme and 9 pages, extension 0.6 theme and 9 pages. There is a big difference among centres ranging from 4 theme/97 pages to 20 themes/386 pages. Some centers make them limiting to one or two subject fields.
- 3) Training materials made by instructors are about flat materials, that is, charts, posters, hanging maps, etc., which exhibit the largest numbers. About 13 kinds of training materials have been made by one instructor and they have been used for only 2.5 courses. Concerning other kinds of materials, voice materials (cassette tape, etc.) 0.3 materials 0.7 courses, three-dimension materials (model, etc.) 2 materials 0.5 courses. Slides materials are made in quite few numbers (on an average 4.9 materials for 1.1 courses) except (A)-center where 10.5 kinds of slide for 1.4 courses are made). There is few materials being developed and utilized by the (B)-center.

(4) Field Laboratory and On campus Trial

- 1) On-campus-trial has been carried out by 6 persons out of 21 instructors. Out of 6 persons, 4 instructors belong to (A)-center. It is unanimously admitted that results of on-campus-trial are good. In the (A)-center trials on food crops, nutrition and farm machinery have been implemented and in the (C)-center trials on estate crops and on animal husbandary have been conducted. Contents of respective trails could not be known by this survey.
- 2) 6 instructors from 3 centers have already conducted field laboratory. Field laboratory on the subject of food crops, animal husbandary, nutrition and farm machinery has been implemented in the (A)-center. Outcomes from these are quite impressive. (B)-center conducted on animal husbandary and (D)-center did on estate crops. Field laboratory conducted by the centre (C) and (D) does not have anything to do with designated desa "village". It is the practical training conducted with search of external materials which are not available in the training center.

(5) Judgement on Mastery of Knowledge and Skill by Instructor

- 1) According to the judgement by instructor himself, mastery of knowledge on about 21% of training subjects in total is regarded as "average" or "insufficient" out of "very masterly, masterly, average, insufficient and can not " It is replied that 27% of instructors are "average" or "insufficient" on mastery on skills.
- 2) As instructor conducts training on 2.5 subjects on an average per person, it is only 4/54 (8%) of subjects that instructors can consider their knowledge and skills as "very masterly" with full confidence. Even if "masterly" on skill is added, figure shows only 9/52 (17%). Who are replied on both of knowledge and skill as "masterly" was 27/52.
- 3) It is admitted that ability of training materials development is generally weak at "slide/film", "voice materials", "model/sample materials" and "textbooks making".
- 4) All instructors have experienced in preparation for performance test (attitude) but there is a quite few of instructors being "masterly".
- 5) 30 to 90% of instructors replied that their ability is very good or sufficient, that is, 20 out of 21 persons on ability of lecturing, 19 persons on discussion guidance, 20 persons on practice guidance, 17 on motivation, 18 on attitude development, 16 on advice, are considered so.
- 6) 19 instructors out of 21 are replied as very good or as sufficient on ability of LPM/LPK development.

(6) Efforts and Effects of Ability Development

Instructors pointed out means of ability development such as guidance from superior, self-study and discussion with fellows instructors . In terms of effectiveness against efforts, they point out that self-study is the most fruitful effort followed by "guidance from superiors" and "discussion among instructors". In either cases, "trial and field laboratory " is placed at the lowest order. These three efforts mentioned above are high-valued for ability development.

(7) Instructors expect following measures to promote execution of their jobs.

1. (A)-center :
 - 1) complete arrangement of facilities and equipments
 - 2) implementation of trials
 - 3) consultation by research institutes
 - 4) implementation of job training
 - 5) age and level of knowledge of trainees must be identical.
- 2 (B)-center ;
 - 1) improvement of library
 - 2) development of knowledge and skill of instructors

3. (C)-center : 1) improvement of library
2) development of training materials
3) setting up of laboratory
4) arrangement of training field
5) implementation of field laboratory
4. (D)-center : 1) implementation of training in response of needs
2) strengthening of assistants
3) development of facility for trials
4) implementation of LOKAKARIA
5) development of training materials

2. Problems and Countermeasures

(1) Business content of instructor

1.) business hours of instructor

A total of following items such as training, preparation for training, self-study, guidance to trainees, scoring of test and participation of training, account for about 66% of his time proportion. This figure is considered quite reasonable as instructor. However, It is doubtful that office works occupy by 13.8% being next to 20.9% of training. It must be studied fully whether content of "office works" is rational and proper to business content as instructor.

For example, "training administration" of (B)-centre is just as clerical works and is done by instructors due to a shortage of office staffs and technical assistants. If so, it may be necessary to improve this situation.

2) Training time It is partly observed that

Because of busy works and large amount of training, instructors complain of shortage of time for training preparation and conducting trial. (To be sure, time proportion for training preparation at the centers (B) and (D) is less.

However, actual training time per day is, as a whole, less than amount of time which instructors think feasible. It is conceivable of seasonal busyness, but it seems possible to countervail this by rationalizing establishment of training course or by divisional cropping system in the training field. It must be also necessary to study at full length how actual time proportion for self-study and training preparation, that is, centers-(A) 26.6%, (B) 22.7%, (C) 27.5%, (D) 18% respectively, are effectively utilized. Further in details, there is strong tendency that the longer instructors have been in service, the more time of training is. It is to be analyzed that many or few of training time and busyness are dependent upon peculiar situation of instructor and the center, for instance, one instructor is in charge of four subject matters, in charge of multiple jobs or, more or less of occasions for lenthing nothing but facility.

3) The other role of Instructor

Every training centers has been devising to improve how to charge training affairs except conducting training. For instance, (A)-center adopts coordinator system for training course. Since this system is able to coordinate and manage the course as professional agricultural personnel, it is expected to exert better effect on implementation of curriculum, training material development and all aspects of training management.

At the same time, as for book-keeper-instructor, he will be able to gain confidence by fulfilling his responsibility as office-in-charge. Those instructors who have lived within the campus, have spent more time in making contacts with trainees. (A-center counts working time of instructors by 17 hours per day.)

Concerning charge of training affairs, it is suggested that rational system must be established by further study on the matters; management of LPM, control of training materials, management of cropping in the field and guidance to trainees' life including ability development of instructor.

4) Development and Utilization of LPM, Training Materials and Textbooks

13 LPM (training plan), 8 LPK (guideline for practice), on an average, are prepared per instructor. Textbooks and reference materials are made with 2 themes and 48 pages per instructor. The charts, posters, slides, etc. are only 20.3 kinds. Thinking of 2.5 subjects, on average, being charged by one instructor, it is clear to make and use very small number of LPK, LPM, training materials and textbooks per subject and per theme. It may be affirmed insufficient as a result of two hours self-study and training preparation. It is certain that there is some additional constraint to strengthen development and use of materials, for example, shortage of budget, library or facility. But the problem is not always so. Training materials and LPM are able to be produced without sufficient budget. It is needless to say that instructors must device to solve the problem in order to enhance training effects.

5) Practical Guidance

Feasible number of practical training is differed among centers and among subjects. It is hard to say in general term due to various influential factors such as present condition of practical facility, number of technical assistants, deffermciation of subject, theme and content of practice, etc..

It is reason behind that method of practical guidance and content are differed even if subjects and themes as a whole are identical each other. It is suggested that items and content of practice and method must be gradually made uniform. This fact-finding syrvey could not study fully actual conditions on proportion between practice (working skill and problem-solving capability) and lecture, items and contents of practical guidance.

(2) Capability of Instructor

1) Self-evaluation

About 69% of instructors, 36 instructors out of 52, have been evaluated by themselves on their "knowledge" and "skills" of professional agricultural technique with a range of "very masterly" to "masterly".

Concerning method of guidance and training, 80 to 90% of instructors have been evaluated with "very excellent" and "sufficient" on their guidance ability such as guidance on lecture and discussion, guidance of practice, motivation, attitude development, advice. It is not sure whether these self-evaluation is objectively appropriate or not.

The reason is that anyone has difficulty to evaluate his own ability. It is thought that instructor has no opportunity to compare him with other instructors, does not have the ability of self-evaluation.

As mentioned previously, considerable poorness of training material development and utilization is preventing from recognizing self-evaluation by instructor. It is needless to say to strengthen and heighten professional skill and ability of guidance and training of instructors.

2) Efforts and Effects of Ability Development of Instructor

It must be clarified to take steps for development of instructors' ability, that is, about what contents, by what methods and by what occasion, etc. It is quite important to accumulate the knowhow of development of ability.

The question here is about "guidance from superior" that is, guidance from Head of the center. Firstly, guidance from head of the center is not abstractive verbal advice or general theory, but must indicate concrete problems and shortcomings through observing actual training. Furthermore, if occasion/time for making up for these problem and expense required would not be provided, development of ability could not be come true in the real meaning.

In this respect, this reply from survey "guidance from superior" could be taken as the encouraging wording to head of the center concerning ability development. It is really reasonable to put a high value on "discussion among instructors". It is also highly desirable of making these occasions and chances into official arrangement and of increasing number of chances, too.

It seems to us that it can not help, at this moment, rating low on "trial and field laboratory". In any way, instructors should make further efforts to develop spontaneous and self-determined ability rather than heteronomous one.

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1. Summary of Results

1) Training Needs of PPL

(1) Training Needs of PPL observed by PPM

PPM(Number of object for PPM is 19 persons)

Replies concerning training needs of PPL are varied. PPM takes 20 PPLs who have been already completed PPL polyvalent training course to inquiry further training needs if opportunity could be offered in the future.

Among other things, training needs about agricultural skills are concentrated on the following items; Pest Control(knowledge 16 persons, skill 14 out of 19 correspondents), Soil & Fertilizer(knowledge 15; skill 9), Variety(knowledge 15, skill 12) Cultivation (knowledge 12, skill 12).

About management ; Marketing(knowledge 1, skill 12), Farm Management (knowledge 15, skill 13).

About extension methodology ; Extension Method(knowledge 11, skill 10), Extension Materials(knowledge 9, skill 9), Communication(knowledge 9, skill 8), Farmers' Psychology(knowledge 8, skill 8).

(2) Training Needs of PPL conceived by PPL himself

Training needs for his own PPL(number of correspondents 38) are also varied and divergent.

It is found that needs about agricultural skill are as follows; Soil & Fertilizer(knowledge 20, skill 17), Pest Control(knowledge 22, skill 20).

Farm Management(knowledge 25, skill 20), Extension Methods(knowledge 17, skill 16), Communication(knowledge 10, skill 9) These items mentioned above are relatively high in needs.

(3) Training Needs of PPL viewed from Key-farmers

Key-farmers(correspondents 40 persons) are desirous of PPLs, who have already finished PPL polyvalent course, being strengthened in the following aspects ; Human Relation(knowledge 10, skill 9) Leadership(knowledge 14, skill 14), Pest Control(knowledge 11, skill 13) Animal Husbandary(knowledge 10, skill 15 these figures are taken as average for 4 kinds of cattle), Fresh Water Fish Culture(knowledge 12, skill 19).

2) Technical Guidance conducted by People other than BIMAS extension worker

Key-farmers' requests on technical guidance given by the people other than BIMAS officials are quite serious. According to 10 correspondents of key-farmers per every training center, the result is as follows;

Concerning extension of Directorate-General of Fishery, 7 correspondents replied "No guidance at all" and 2 persons pointed out "few guidance"

About Ministry of DG of Animal Husbandary, 4.8 persons "No guidance" and 4 persons "few guidance".

About fishery extension workers, 8.8 persons "No guidance", 0.7 "few"

About animal husbandary extension workers, 7.8 persons "No guidance" and 1.8 persons "few guidance".

Concerning estate extension workers, 7 key-farmers replied "No guidance" and 1 "few".

(3) Relationship between Extension Office (BBP) and Training Center

All of PPM affirmed the necessity of cooperative relation and 90% of PPM also demanded that training centers continued to extend the guidance to PPLs even after they have finished PPL polyvalent course.

(4) Ideal Image of Extension Workers

1. Ideal image of extension workers conceived by PPM and PPL

- 1) Almost everyone thinks that educational level of extension workers is good enough at agricultural high school graduate standard. But, 10% of them considered to be desirous of university graduate.
- 2) They stated that they do not become extension workers right after graduated from agricultural high school, but they are required to have experience in one or two years. More than 30% of them replied that experience must be more than 3 years. Accordingly, all of them admitted that there should be certain period before they become extension workers. (It is not clear that what career must be desirous)
- 3) They are desirous of being young and those wishing of more than 35 years old accounts for only 18%.
- 4) A majority of them wish that extension workers had better to be children of farmers coming from village.

2. Ideal Image viewed by Key-farmers

- 1) Extension workers should not be talkative.
- 2) They should be doing by themselves rather be speaking. If they are good at both, doing and speaking, they are more qualified.
- 3) They want that extension workers come to see farmers in the field and they do not want these people who just normally stay at office and try to come only upon requests.
- 4) Extension workers had better to have wider scope and experience rather than those skillful of professional subjects.
- 5) They are willing to come whenever requested.
- 6) It is said that they be better not married yet and relatively younger coming from farmers and villages.
- 7) They should be earnest to hear of real problems of farmers.

(1) Minimal qualification necessary for Extension Workers

- 1) Concerning the question that what sorts of attitude, knowledge and skills are needed, in general speaking, for professional extension workers, it is observed that there is considerable divergence in response between PPM and PPL.
- 2) It is the same opinion that skill of cultivation and audio-visual material development must be acquired.
PPL pointed out the necessity of following skills such as extension method, utilization of farm machinery, livestock raising, fishery and sports. On the other hand, PPM emphasized needs of such matters as PANCA USAHA, skill of speech.
- 3) They are agreed upon the necessity of knowledge on extension method, sociology of village, communication, cultivation and religion.
However, PPL try to put emphasis on needs of knowledge on farm management, especially, fishery and animal husbandary. PPM points out the necessity of leadership. In these respects, it is found that there is some difference in the opinions mentioned above.
- 4) With respect to attitude required for extension workers, more than 40% of PPM indicated necessity of "justice, religion and politeness" and "discipline". PPL have somewhat divergent opinions that "discipline" more than 40%, "discipline" 30%. "responsibility" and "religion" 15 to 20%.

2. Problems and Countermeasures

1. Needs of Extension Workers

- 1) Principal items of training needs of extension workers which are almost agreed upon to three parties, PPM, PPL and Key-farmer, are such as cultivation skill, soil and fertilizer, pest control in the agricultural skills and also animal husbandary. Key-farmers, particularly, put an emphasis on animal husbandary and fish culture.
In the field of management, farm management, marketing are pointed to be important and in the field of extension method, extension method and communication must be stronger needs. Key-farmers point out leadership.
- 2) Key-farmers tend to give more weight on needs of strengthening various skills of extension workers.
PPM and PPL emphasized strengthening of contents of knowledge and skill, especially, skill of animal husbandary and of fishery.
- 3) Points of analysis mentioned suggested that training courses must be strengthened to meet to professional skills which will be regarded as important in the future because until now any existing training courses are apt to be established as comprehensive or polyvalent type of course.
- 4) It must be considered how to deal with the problems arising from extension activities on animal husbandary and fishery. This problem must be taken into account in relation with very small actual example of farmers' guidance activities conducted by the people except BIMAS extension workers.

2. Cooperation between Extension Office(BBP) and Training Center

1) It is studied in this survey that what sort of guidance activities be better to continue by training center through holding workshops where it is searched and discussed to solve the field problems associated with fishery and animal husbandary. It seems to us that problems solving through workshop is not always effective. In the future, it is necessary to make clear concrete countermeasures from the standpoints of training center. For a time being, one of the conceivable countermeasures is that, for example, technical and economic information being obtained through cooperative activities in the designed village of field laboratory, be used for other area.

2) It is already mentioned previously that it is big problems in this survey, of how to realize coexistence of knowledge and skills of extension workers.

Present training course on extension workers is supported by three parties concerned, that is, instructors of training center, PPS and PPM. It is real issue how to train extension workers through cooperation among three parties, utilizing field of BBP, of BLPP and of farmers.

3. Image of Extension Workers

Key-farmers are well acquainted with rural lives and village being full of young vitality. They are desirous of such extension workers who can hear real problems of farmers, take active leadership, be masterly at both knowledge and skills in every fields, be not talkative, but can really do in the field.

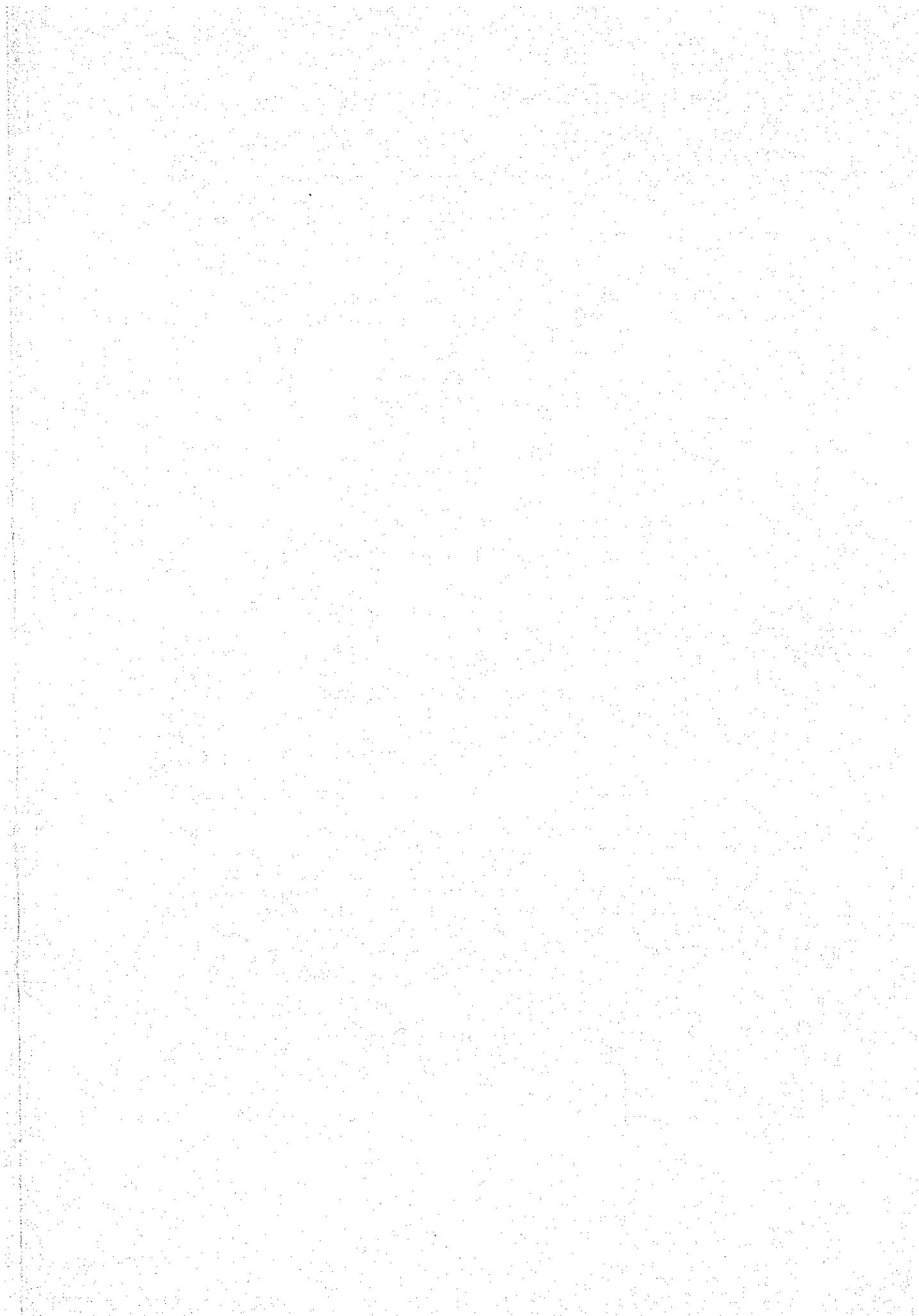
On the other hands, PPM and PPL also wish that extension workers be better qualified at real condition of rural life, cultivation technique(if possible, animal husbandary and fishery), agricultural extension, communication, and religion.

4. Business Content of training center in the future

Problem consciousness mentioned until now is still abstractive and it is not always clarified how training center must concretely be dealing with content of busienss of its own.

Ultimate issue which we have in mind at present is something to do with how these problems be integrated with concrete contents of training activities. For instance, It is necessary to examine the measure as the first step to be taken that instructors at the training center be sent to extension office to stay and train.

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