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## CHAPTER 5

# *Field staff*

### 5.1 Introduction

The performance of field staff is the one factor that can be singled out as the most crucial to the success of any rural development programme. No matter how well a programme is planned, if the field staff are not well motivated the programme *cannot* succeed. Lack of motivation results in the inability to develop and to *overcome* problems. Motivation is not just a question of a decent salary. It is the result of a host of factors, including selection, training, leadership, responsibility, and comradeship.

Undoubtedly one of the most striking features of the programme in Malawi is the high performance of its field staff who, with relatively little training, assume enormous responsibility and enjoy the confidence and respect of the communities they serve. This chapter examines these issues in detail. The principal features are applicable to most rural development programmes anywhere in the world.

### 5.2 Policy

All government personnel have to fit somehow into the government's standard staffing structure. Generally, this structure is fairly rigid and it is not possible to change rules and regulations. Unfortunately, very often these rules are more geared to a formal, office-based, bureaucratic structure than they are to the needs of development. A development programme may need a large number of field workers who can be trained in a short, specific training course, yet government regulations may stipulate all field workers must have a certain minimum educational qualification and a further 2 years training; the result is that there are hardly any eligible people for the posts. Nearly all developing countries face this shortage of trained technical manpower. While one of the solutions is obviously to train more people, another is to rationalize manpower policies so that necessary staff can be given short, specific training in a particular programme and relatively large numbers of staff turned out. It is better to have larger numbers of less highly trained staff than a few highly trained people, because the most important factor in staff performance in rural development is on-the-job *experience* gained under adequate supervision.

In Malawi, staffing policy developed as a result of the needs of the programme. Initially, from 1968 to 1971, projects were staffed by regular government workers transferred from other duties. As mentioned in Chapter 2, the lessons learnt from the Pilot Phase included the requirement for a closer level of field supervision, implying a rapid increase in the number of field technicians, and a more specific and

appropriate level of training. The lowest level of regular government staff were the Community Development Assistants who were used in the Pilot Phase, but they were very few in number and had to undergo a 2-year academic training which was inappropriate to the programme's needs. Some alternative clearly had to be found. Fortunately, the Ministry of Agriculture had faced this problem before, and the Government had specifically created a category of staff who were appointed only for the duration of a project. Their salary and allowances were on the same scale as permanent Civil Servants. Other countries have tackled this problem in a similar way. It is only a temporary solution, as invariably the staff have no career structure or promotion prospects. This temporary solution was adopted in Malawi, and a level of staff called Project Assistant was created. Twenty Projects Assistants were recruited for the two major "consolidation" projects in 1972. As the programme expanded, experienced Project Assistants were transferred to other projects and new staff were recruited for the major projects. The major projects were used as a training ground for the whole programme. The number of Project Assistants recruited were 20 (1972), 10 (1974), 20 (1976), 10 (1977), and 10 (1979).

### 5.3 Selection Criteria for Field Technicians

The selection criteria used in Malawi are applicable to most rural development programmes that need relatively large numbers of field staff. The term 'field technician' is used below, as this is a more generally applicable description than the title 'Project Assistant'.

#### Age

Applicants should be at least 25 years old. Field technicians are expected to communicate with community leaders who are usually senior and respected citizens. A person less than about 25 years of age is often regarded as a youth in many traditional societies and would not be able to gain the respect and confidence of leaders or villagers. The upper age limit should be about 40 years.

#### Education

Great care must be taken to choose the right educational level so that field staff are capable of being trained to do the job, yet are not unnecessarily highly educated. In most developing countries, very few people attend secondary school; the vast majority either have attended primary school or have had no schooling at all. The few secondary school leavers naturally consider themselves to have risen 'above' their fellow villagers and are often unable to reconcile their education and aspirations with the rural environment. They tend to 'look down' on rural people as uneducated, backward, and uncooperative. These people aspire to 'white-collar' jobs in the town and regard a job in a rural area as second-best. They are also generally "allergic" to manual labour and practical work.

It is essential that field technicians are socially compatible with rural communities, and their technical skills must be practical rather than academic. It is, therefore, preferable to recruit staff with *primary school* education. There are exceptions when a

secondary school leaver may make a first-class field worker, and may show considerable potential for eventual promotion to the Supervisor category, but these exceptions should only be made if the candidate is personally known to one of the selectors, or if he has outstanding and reliable recommendations.

Staff members should be able to speak, read, and write in the national language.

### **Previous employment**

In general, preference should be given to applicants who have had some form of satisfactory previous employment, as such people will be more able to bear the considerable responsibility given to project field staff. Applicants displaying outstanding qualities, however, should be considered even without previous employment.

## **5.4 Recruitment Procedure**

### **Timing**

The recruitment and selection process should be carried out in good time so that successful candidates can be appointed at the beginning of the work season. From the time of advertising, at least 1 month should be allowed for the receipt of application forms, a further 2 weeks before interviews take place, and the selection/training course should begin at least 2 weeks after the interview. The intervals will be longer in areas of poor communication.

### **Applications**

Applications should be sought from the districts in which the programme is active. Vacancies should be advertised by notices displayed at the district level government offices, post offices, offices of the traditional leaders, markets, bus stations, and any other places where villagers regularly meet. Application forms should also be made available at these points, and applicants should forward the completed forms to the programme office, giving basic information including age, education, and previous work. These forms should then be sorted according to the criteria above and a reasonable number (six times the number of vacancies) should be called for interview.

### **Interview**

The interview board should consist of the engineer in charge of the programme in that area, one experienced Supervisor, one representative from ministry headquarters if possible, and one 'outsider', such as a district officer of another ministry. The interviews should be held in the district concerned.

As candidates arrive at the place of interview they may be given a simple written intelligence test of the multiple-choice type, lasting about 30 minutes. This test need not be used to grade candidates, but it may affect the decision on borderline cases.

The purpose of the interview itself is to form an initial impression as to whether the candidate is the right material to *proceed to the second stage* of the selection process. In order to interview as many candidates as possible, each interview need last only 5 minutes, including 1 minute for awarding marks. The candidate should be encouraged to talk about himself, his family, and his previous work so that he is given an opportunity to portray his personality to the board. Appropriate personal qualities are considered to be most important, for experience has shown that the extrovert, smart, and articulate candidate does not necessarily make a good field worker. The attitude of the candidate to rural life is particularly important.

After the interview, the board should discuss the candidate briefly and each member should give him a mark. This method relies heavily on the judgement and experience of the interview board, but it has worked well in Malawi. When all the interviews are completed, the candidates should be placed in order of merit according to marks awarded, and the appropriate number (if possible, twice the number of vacancies) should then be called for the selection/training course.

## 5.5 Selection/Training Course

### Purpose of the course

This is the most important stage of the selection procedure. Normally, government selection procedures finish with the interview, after which selected candidates are appointed and sent for training. However, experience has shown that, especially for this level of personnel, performance at an interview can be very misleading, and success in rural development depends so heavily on the quality of field staff that an interview alone is not sufficiently rigorous to eliminate unsuitable candidates. By contrast, a candidate's true qualities can be revealed remarkably quickly during an intensive course.

The purposes of this course can be summarized as follows: first, to give all candidates the time and opportunity to display their true qualities; secondly, to give the selecting staff time and opportunity to get to know each candidate; thirdly, to teach the technical skills and organizational procedures required of field technicians; fourthly, to impart a spirit of motivation.

### Site of the course

Field technicians live and work in the rural areas, sometimes under difficult conditions and in temporary accommodation. It would be inappropriate and misleading, therefore, to run the course in one of the formal government training institutions, which generally follow an urban-oriented, academic pattern; it is more realistic and appropriate for the course to take place in a rural area similar to where the work is to be carried out. A certain amount of privacy and isolation is nevertheless desirable to avoid the distractions and constant scrutiny of village life.

A camp-site or local institution in or near a project area is ideal for the purpose, as it has the additional advantage that the resources of the project are available for the benefit of the course.

### **Duration and numbers**

The duration of the course should be as short as possible. The purpose of this course is to select the right candidates, not to impart *all* the training necessary to carry out the job. The main part of the training will take place on the job itself, during the first 2 years of appointment. Courses in Malawi lasted from 2 to 3 weeks. This is the absolute minimum time necessary for the selection of good candidates, and it is only possible because of the very close supervision and high level of on-the-job training that trainees receive in their first 2 years. In other programmes this may not be possible, and so a longer course will be necessary to impart a higher level of knowledge and skills, so that trainees can manage with less supervision. The maximum duration of such a course should be 6 weeks.

The ideal number of candidates for a 2-week course is about 20. On the expectation that only half the candidates will be selected, it will be necessary to run more than one course if there are more than 10 vacancies. This may be impractical if there is a large number of vacancies and if it is necessary to run a longer course. In such cases, the absolute maximum is 40 candidates for a 6-week course.

### **Training staff**

The course should be run by experienced programme staff. The best instructors are *experienced* Supervisors and field technicians as their experience is generally more relevant than that of the engineers, and they are usually able to convey their experience in a more colourful way. Ideally there should be a maximum of six or seven candidates per instructor. It is *not* advisable to leave the training to staff of a training institution who have not had experience of the programme. As the programme develops and expands the training needs will become so great that it will be necessary to appoint a full-time Training Officer who may be an experienced engineer or, more likely, a Supervisor. Continuity is important so that experience in conducting courses is accumulated. This Training Officer should also be responsible for in-service training courses, refresher courses, and on-the-job training.

### **Description of the course**

The nature of the course will vary from programme to programme. To give an idea of one type, the course in Malawi is described here.

The candidates are divided into four groups for the duration of the course, and are issued with name badges, and some stationery. They are given 2 days to elect a camp leader who is responsible for domestic arrangements, including buying food at the local market. A local villager is employed as a cook.

The daily programme is divided into three sessions (see Table 5.1). During the morning sessions, from 6 a.m. to 9 a.m., each group progressively digs a length of trench, specially selected to give the candidates training in the use of all tools at their disposal. The purpose of this session is also to make the point that field technicians are expected to join in physical labour, and cannot supervise village labour unless they are prepared to tackle the problems themselves. In addition, the experience of working in a small group on a specific task, with an element of competition, helps to develop that team spirit which is a hallmark of the Malawi programme. During the

**Table 5.1 Timetable for programme selection course in Malawi, 1979**  
(Arrival on Saturday preceding the beginning of course for preparation of camp site)

Week 1	6.00-9.00	9.30-12.00	13.00-15.00	Evening	Week 2	6.00-9.00	9.30-12.00	* 13.00-15.00	Evening
Monday	Trench digging AC*	Procedure for AC pipes	Reading maps and marking	Film	Monday	Protection of pipelines	Procedure for PVC	Organization and committees	Role games
Tuesday	Trench digging AC	Laying AC pipes	Aerial photographs organization		Tuesday	Preparing tap sites	Forming PVC heads	Gully crossings and checkdams	
Wednesday	Trench digging AC	Laying AC pipes	Cast-iron fittings	Role games	Wednesday	Preparing tap sites	Steel pipes	Tanks	
Thursday	Trench digging PVC	Visit to Phalombe and Sombani projects	Visit	Role games	Thursday	Preparing tap sites	Visit to Mulanje West and Namitambo projects	Visit	
Friday	Trench	Laying AC pipes	Cast-iron fittings		Friday	Tests	Tests	Tests	
Saturday	Removal of obstacles	Stores	Football		Saturday	Departure			

\* AC = asbestos cement

second week each group practises the laying of asbestos cement pipes in their trench until the procedure is perfect.

The middle session, from 9.30 a.m. to 12 noon, is used for practical instruction in all aspects of handling and connecting asbestos cement, PVC, and steel pipes and fittings. Later in the second week the candidates are taught how to construct a standpipe apron, and a competition is held at the end of the course to discover the group with the best apron.

The afternoon session, from 1 p.m. to 3 p.m., is the "classroom" period, for lessons in project and community organization, stores, reading aerial photographs, writing work programmes, reports, etc. Study visits are also made to current and completed projects.

For each lesson or practical session, the candidates are given a lesson plan for their own record so that they do not need to make their own notes. On completion of the course these lesson plans constitute the Field Handbook (see Table 4.3) which they keep for the rest of their service.

At the end of the course candidates undergo practical tests which are marked by the instructors. These marks, and the overall performance of candidates, are discussed by all instructors, and candidates that are considered to have reached the standard required are selected. Sub-standard candidates are not selected, even if this means leaving vacancies unfilled. Successful candidates are appointed within 2 weeks of completing the course.

## 5.6 On-the-job Training

### Training period

Any training course, however long and thorough, can never be more than initial training. It is a common fallacy that all that is necessary to produce the required manpower is to conduct enough training courses. In reality, a person who has been trained in this way probably only has about one-quarter of the training he needs. The poor performance of some programmes is due partially to the assumption that staff who have undergone a training course are fully competent, and can therefore be sent off to a project on their own.

It is essential therefore that field technicians undergo a further period of on-the-job training under close supervision before they are considered competent to work with less supervision. During this period they develop the technical skills learnt on the course, and the social skills *which can only be learnt by experience*. They should work alongside more experienced colleagues, and should be given specific attention and support by their Supervisors. Regular staff meetings play an important part in the training process.

In Malawi this training period lasted 2 years, after which, if their performance was satisfactory, the field technicians' appointments were confirmed.

### Annual refresher/upgrading course

In addition to on-the-job training, field technicians should be given the opportunity to update their skills, discuss their problems, share their experiences with their

colleagues and Supervisors, and learn new skills. An annual course should therefore be held in a slack work period. This course is also a social occasion that plays a valuable role in the maintenance of team spirit and motivation. It is particularly valuable for those more experienced field technicians working on smaller projects in relative isolation from their colleagues. Compared with those under close supervision, they may not be so aware of new procedures, new ideas, and new skills that are always developing on any programme.

The course also functions as an upgrading course. All staff should be required to take a test before moving up to a higher grade. The course will therefore have periods of formal instruction as well as periods of informal discussion.

### 5.7 Field Technicians' Career Structure

One of the most important factors affecting motivation and morale in any organization is a career structure with reasonable prospects of advancement. This is common knowledge, yet it is a fact that in some developing countries many government-employed staff have no promotion prospects at all, but are expected to stay at the same level for the whole of their career, with periodic salary increments. This is particularly true of relatively junior staff and field extension workers.

It is not easy for a programme or ministry to change government's long-established personnel regulations. However, by careful study of the rules it may be possible to identify a suitable category of staff into which field technicians can fit reasonably well.

In Malawi, the Project Assistants were originally employed on a temporary basis, being paid from project funds rather than from the government payroll. Unfortunately, because of government regulations, they could not be promoted to Supervisor unless they had at least 2 years of secondary education. Hardly any Project Assistants had this qualification, so however competent and experienced they became, the majority had no career prospects at all. This was not seen as a serious problem until the time came to promote some of the better ones to Supervisor level. If this could not be done, the whole organizational structure would become meaningless—experienced staff cannot supervise less experienced staff unless they are senior to them.

It was therefore necessary to find an alternative system. It was decided that Project Assistants should be reclassified as skilled workers, for which there existed a system of grades according to experience and skill, regardless of educational qualification. These employees could achieve a reasonable wage level compared with field workers on the permanent list. The Project Assistants were renamed Water Project Operators (WPO) with the following basic career structure:

- (1) Selection after 2-week field training course.
- (2) One to two years as ungraded WPO trainee.
- (3) Two-week refresher/upgrading course and Grade III test.
- (4) One to two years as WPO Grade III.
- (5) Two-week refresher/upgrading course and Grade II test.
- (6) Two to three years as WPO Grade II.
- (7) Two-week refresher/upgrading course and Grade I test.

- (8) Rest of service as WPO Grade I (Supervisor).
- (9) Grade I WPOs with appropriate educational qualifications (2 years secondary level) are eligible for selection for Foreman's course.
- (10) Foreman's course and Test—successful candidates promoted to Foreman (equivalent to Technical Officer in the permanent list).

It is likely that classification of field technicians as skilled workers is preferable in most programmes, because this is usually the only way to avoid the requirement of having some secondary education. It has been mentioned above that primary-level field technicians are generally preferable in rural programmes because secondary-level people tend to have higher aspirations and often no longer identify themselves with the rural people.

However, the classification does not do full justice to the skills and status of field technicians who have greater responsibilities, require social as well as technical skills, and generally live and work in more difficult conditions than skilled workers in other ministries or departments. To cater for this, it is desirable to award some form of special 'field' or 'project' allowance on top of this basic salary.

## 5.8 Motivation of Staff

Promotion prospects and a decent wage are essential, but they are not the only factors that motivate people. Visitors to the programme in Malawi have been struck by the motivation and personal involvement shown by staff at all levels (WHO/World Bank, 1978. *Water Supply and Sewerage Sector Study*. Report to the Government of Malawi), yet until recently there was neither a particularly good career structure nor an adequate wage. It is difficult to analyse in detail how this degree of motivation has been achieved, but it is such an important factor in the success of any rural development programme that it is worth attempting to identify at least some of the factors involved.

### The motivation process

The most important characteristic of motivation is that it is "infectious". Yet the degree to which an individual motivates others is dependent on the development process. If, for example, a motivated individual tries to launch a large-scale programme involving numerous field staff over a wide area it is unlikely that his own motivation will be sufficient to motivate them. If, on the other hand, he works with a small group of people in a Pilot Phase he will be closer to his staff and more likely to motivate a reasonable proportion of them. Those who are not motivated should leave the group, and will generally do so of their own accord. The remaining small group of motivated individuals can then carefully select suitable people to join them and, assuming a rigorous selection process, these would themselves become motivated and absorbed into the team. This process can be repeated until a formidable, highly motivated team is *gradually* built up.

This, in rather simplistic terms, is an interpretation of the motivation process that occurred in the Malawi programme. In reality the process takes time and patience, but the result can be striking. The 'take-off' point in Malawi came in 1972 when a

nucleus of five motivated people very carefully selected 20 new individuals and succeeded in motivating them. Since then the process has been self-generating.

### Factors affecting motivation

Some of the factors that create favourable conditions for motivation can be identified as follows:

- (1) *Initial impressions.* Impressions and attitudes formed during initial selection, training, and early contacts with programme staff generally set the standard that a new staff member can readily adopt. If mediocre standards are initially acceptable it will be much more difficult to raise standards later.
- (2) *Belonging to a team.* Team spirit can be fostered by regular meetings, open consultations between all levels of staff, sporting and social events, newsletters, plotting team progress, friendly competition, etc.
- (3) *Remuneration and promotion prospects.* A necessary but not sufficient condition for motivation.
- (4) *The loyalty and support shown by Supervisors.* Supervisors who are concerned for the welfare of their subordinates, who actively promote their cause in justifiably seeking better conditions, and who regularly visit them in their place of work will in turn elicit their loyalty. "Absentee Supervisors" rarely motivate anyone. This applies not only to immediate Supervisors but also to senior ministry officials.

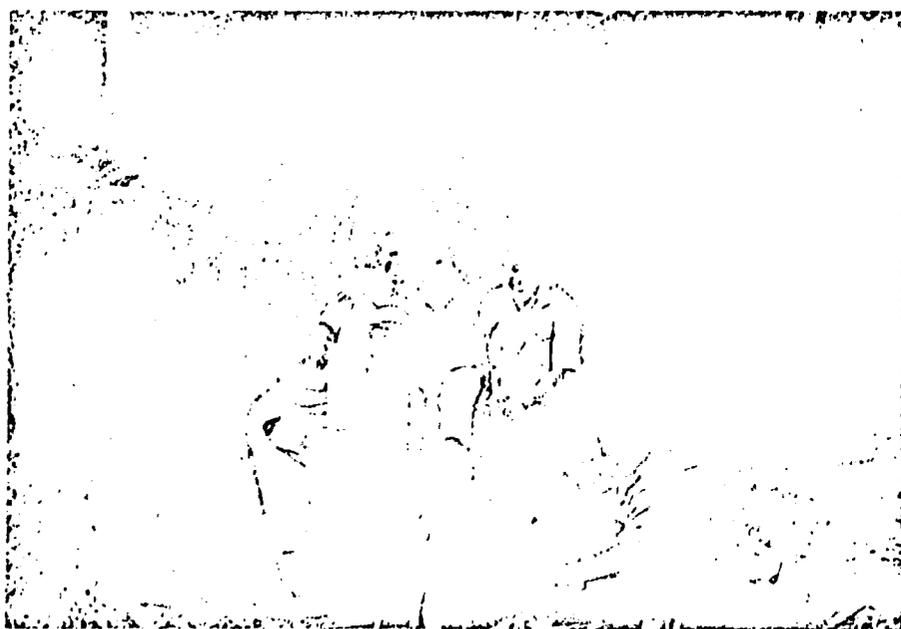


Figure 5.1 A happy group of Project Assistants after successfully pressure-testing their section of 200 mm pipeline

(Photo: the author)

- (5) *A specific objective.* It is generally easier to be motivated in a job that has a specific objective, such as to construct a water supply system, than in a routine job, such as accounting or clerical work. Constructing a water system is a dynamic process in which different techniques and procedures are applied as the work progresses. This contrasts with the repetitive nature of many other jobs.
- (6) *Responsibility.* A certain degree of responsibility is an essential condition for motivation. Provided responsibility is given within a framework of sufficient support and supervision, field staff whose talents may otherwise have passed unnoticed can succeed even in the most difficult tasks. For example, in Malawi, a Project Assistant excavated a tank site 15 m in diameter and 2 m deep out of fractured rock, by skilfully managing and motivating a self-help labour programme lasting several months; the Project Manager (the author) originally thought it was impossible without explosives and excavation equipment.
- (7) *Social pressure.* In a programme which involves and responds to the needs of the community, field staff who live and work with the community naturally come under social pressure to carry out their duties conscientiously.

## 5.9 Supervisors

Initially in a new programme it is necessary to recruit Supervisors from another rural development programme. It is essential that they have had good experience of rural conditions, particularly with working in rural communities. Their technical qualifications are less important than their personal qualities. They should be competent and confident enough to supervise staff and should therefore be very carefully selected by the senior programme staff and not, as often happens in a civil service, arbitrarily transferred from another department without consideration as to suitability. Ideally such Supervisors should initially be employed on a temporary basis, so that they can revert to their original department if they turn out not to be suitable.

As the programme develops, Supervisors should be drawn from the ranks of the field technicians. Not only is this an essential feature of their career structure, but experienced field technicians make the best Supervisors. They should have a minimum of 5 years experience, though accelerated promotion may be necessary in the early period of the programme. Their selection should be on the basis of an assessment of their field performance, coupled with some competitive tests or interviews. If a career structure similar to that described in Section 5.7 is used, Grade II field technicians with 2 or 3 years experience in this grade could be promoted to Grade I (Supervisor) after a 2-week upgrading course and grade test. Generally, Supervisors do not need any special training other than this upgrading course.

The ratio of Supervisors to field technicians will depend largely on the nature of the programme. On average, each field technician should meet his Supervisor at least 1 working day in every 5. In a large-scale project with easy communications, this may mean he is visited once every 10 days, and attends a staff meeting once every 10 days, giving an average contact frequency of once every 5 days. In a programme involving a number of smaller projects scattered in difficult terrain,

regular staff meetings are impractical and the Supervisor's visit would need to last more than 1 day at a time. In this case the Supervisor may visit each technician 1 week in every 5. In all cases the frequency and intensity of supervision will vary according to the tasks in hand and the experience of the technician. More supervision is required at the beginning of a project, when the self-help labour programme is being tried for the first time and when intake structures are being constructed, than later during routine trench digging or pipelaying. Similarly, more supervision is required at the end of the project to make sure all the details are finished off properly.

In general, therefore, the ratio of Supervisor to field technician will vary between 1 in 10 for an easily supervised programme, and 1 in 5 for a more difficult one.

In addition to field supervision, Supervisors often have other responsibilities. Experienced Supervisors are required for feasibility surveys, particularly to assess the *social* feasibility of proposed projects; they are required as instructors for training courses; they may be given special responsibility for stores, to ensure the storekeeper is keeping proper records and that stores are well looked after. Much of the Supervisor's time must be spent in "trouble-shooting"—concentrating where the local community is divided, helping out a trainee technician who is in trouble with the community, or visiting a particularly difficult section of trench that is being dug.

## 5.10 Engineers

### Role

The principal role of the engineer is to be the leader of the team. He may be supervising a group of smaller projects within a local area, or he may be the Project Manager of a major project. A sample Job Description is shown in Appendix 2.

He carries out the detailed surveys and designs, submits material requirements, plans the implementation schedule, motivates and coordinates the self-help labour programme, supervises field staff and their training, supervises the work of skilled contractors, inspects the projects on completion, and liaises with other government officials. His duties are mainly technical and managerial but, as with all field staff, it is essential that he is sensitive to community and social issues and that he develops some skills in committee work.

### Recruitment

As with the lower levels of staff, very careful selection is required. Engineers who have been working in traditional technology-oriented jobs may find difficulty in adjusting to the flexible, community-oriented and low-cost technology approach. On the other hand, engineers fresh from college are generally attracted to the sophisticated, high-cost technology that they studied and the best of them will tend to get jobs in that field. Rural development work is often the last choice of most engineers seeking a job. The problem is aggravated by the fact that in most developing countries there is a shortage of trained engineers.

One way of solving the problem is initially to recruit diploma engineers rather than degree engineers. Their training is generally less sophisticated and less

academic, and they are often more ready to learn and adapt to engineering in rural areas. This is not to say that engineering in rural development work is inferior to sophisticated technology work. In fact simple, low-cost *community-oriented* technologies are often more of an engineering challenge. The engineer is left much more to his own ingenuity and his engineering appreciation of the situation. Almost certainly, a young engineer in rural development work will get much more responsibility and first-hand experience than will his counterpart in the high technology sector.

The most effective way of attracting recruits is to contact the college from which the engineers are about to graduate and arrange a study visit to see the work on a particular project. This gives potential candidates an idea of the work, and can also give them a preliminary impression of the high morale and team spirit of the programme staff. This is often an attractive feature and at least a few of them will become interested. These should be invited to fill out application forms to apply for the vacant posts. Applicants should then be interviewed according to normal government procedure and successful candidates should initially be given a probationary appointment which will be confirmed after satisfactory performance.

### **Training**

Newly appointed engineers should be sent for initial training, preferably to work on a major project as an assistant to the Project Manager, or to work alongside the engineer in charge of a number of smaller projects. They should follow a training programme, not just work haphazardly from day to day, so that they become familiar with all aspects of project work. In particular they should spend a period working with a field technician and with a Supervisor. They should also be given certain technical tasks such as survey and site work. This field training period should last about 3 months, or less if the engineer has appropriate previous experience.

After the field training they should spend a further 3 months at the programme headquarters to carry out design work and learn the administrative, logistic, and accounting systems. Again, they should have a specific training programme and be closely supervised by the head of the programme or another experienced engineer.

After this period of training they should be appointed either as assistant engineer on a large project, or as the engineer in charge of a number of smaller projects. It is essential that inexperienced engineers are given adequate supervision and support, and that they are able to rely on experienced Supervisors and field technicians.

### **Further training**

A rural water supply programme must have a certain number of fully qualified professional engineers if it is to develop along sound professional lines and be accorded equal status with the other professional ministries and departments. The best way to achieve professional standards while retaining the community-oriented engineering approach is to send some diploma engineers, after a suitable period of field experience, to a professional degree course. Professional engineers brought in from other programmes who have not had the benefit of the unique experience in the particular programme will usually be unable to understand and adapt to the different approach required. The possibility of a degree course also acts as an

incentive to the diploma engineers both to join the programme in the first place, and to perform well. Once suitably qualified, the professional engineers can return to the programme, often in relatively senior positions. Again it should be stressed that academic qualifications alone do not guarantee the competence of an engineer. Non-technical administrators and senior civil servants tend to assume that once an engineer or technician has completed an appropriate course of training he is automatically competent to carry out his duties. In fact, his *previous experience* will have a much greater bearing on his competence.

### 5.11 Conclusion

The success of any rural development programme depends heavily on the quality and training of field staff. One of the problems experienced in many countries has been finding the appropriate employment structure within a civil service whose personnel policies are more geared to urban-oriented institutional requirements than to the needs of rural development. In addition, government policies often encourage the attainment of educational qualifications by raising educational standards for Civil Service posts. Paradoxically, this militates against rural development, for the education system is such that higher education is usually synonymous with greater urban orientation. Meanwhile, there is a great reservoir of talent and ability among people in the rural areas with relatively lower educational standards who have no wish to join the urban unemployed and who welcome the chance of rural employment. Such people, with suitable training and motivation, can become effective agents of rural development.