

Part 2: Guidelines for trainers

- 1. Creating conditions for learning
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1. Creating conditions for learning

What the trainer must do
The conditions of learning

What the trainer must do

Before beginning the training programme, the trainer should learn about the trainees. He should know who they are, their age, where do they come from, what work do they do and if they own animals, what form of schooling have they had. He will need to discover what the trainees can already do and what they know about livestock and animal health care. He will also need to determine if they are physically able to do the work expected of them and do not suffer from any illnesses which could be passed on to other trainees.

Encouraging the trainees to talk about themselves and their background in the first training sessions (the orientation period) is very important. It helps the trainer discover more about the trainees but also allows the trainees to share and compare their experiences. From this the trainer will learn not only the background of each individual but also what the trainees expect from the programme. The trainer may find that because of the extent of their rural or nomadic background some individuals are naturally more opinionated, and perhaps argumentative, than others. The trainer should not try to argue the point with such individuals, but having identified them, he will need to slowly change their opinions through the course of the programme by demonstration.

During the first sessions it is also necessary for the trainer to discover the extent of the trainees reading and writing skills. It can be the case that attendance at school may not necessarily have resulted in the development of these skills. Proof of these skills will be needed and the trainer will need to incorporate into the first sessions a means of testing individuals for these skills. The trainer may decide on a straight test for these skills, but it is also possible to judge the trainee's ability by participation in group sessions.

The trainer should know exactly what areas the trainees need training in and he will need to make it clear exactly what the trainees will be expected to learn. At the beginning of each unit, in this book, are a number of Learning objectives which state what the trainee is expected to know, or be able to do, after completing the unit. The trainer and the veterinary service may decide to use other learning objectives if it is deemed necessary for additions or deletions to be made to the programme to meet with local requirements.

The trainer will need to arrange the means by which trainees can practice the skills they are expected to develop. It will be necessary to arrange training exercises wherein the student can learn to do what the learning objective describes. Trainees must be given repeated opportunities to practice the techniques. It is often difficult to obtain animals for demonstrations. Animals can be bought in the market, used in training, then resold. Cooperating farmers may be happy to let trainees learn and practice on their animals.

The conditions of learning

In order to facilitate the running of a training programme the trainer will need to carefully plan his teaching, practical arrangements and facilities. In doing this he should consider some relevant points.

The first point to consider is that the trainees come from a nomadic or rural background and will be familiar with livestock, unlike the majority of university and college students who come from towns and cities. In many cases they will have their own traditional methods of animal management and treatments which have been passed down from generation to generation, e.g. castration of livestock using red hot skewers, or using two pieces of wood to crush the testicles. Some of these ideas have been developed through necessity and are useful while others at best are useless if indeed not harmful. The trainer should encourage the trainees to discuss the various practices which are carried out in their communities. He should discuss them and praise those which are useful. He will then need to demonstrate the benefit of the methods he is expecting them to learn and encourage the trainees, through practice and discussion, to adopt the new methods. In this way trainees can be encouraged to decide for themselves that

such practices as keeping old animals (perhaps because traditionally a man's wealth is judged by the size of his flocks and herds) are of no benefit and that culling old stock will release feed supplies to benefit increased numbers of younger stock.

Trainees can learn tasks only if they are given the opportunity to practice them repeatedly while under supervision. The trainer must therefore be skilled in this form of training. It is essential that the trainer and the organisation or institution providing the training arranges the means by which trainees have the opportunity to learn in this way. The training programme contains an element of work which will involve a certain amount of straight forward classroom teaching, but the overall emphasis is on practical experience.

It will be necessary for the trainer to arrange suitable facilities for training and to give the trainees access to livestock on which to practice their skills. It may be deemed necessary for some skills to be practiced away from the live animal e.g. injections can be practiced on oranges, dead animals or meat before being carried out on the live animal. It is also possible to use the dead animal in some training exercises. However the trainer will have to make provision for young animals (lambs, calves, piglets) to be castrated and for adult animals to be restrained by trainees. It may be decided to train them to take blood samples and again it will be necessary to use a live animal.

The trainer may encounter reluctance on the part of owners to allow their animals to be used in training. It may prove necessary to use animals kept by government institutions or farms or to buy in animals for demonstrations. It may be possible to use animals prior to slaughter for some work and a visit to the abattoir can be

extremely useful. Many trainees will never have seen a foetus because traditionally pregnant animals are not sent to slaughter. However a visit to a slaughterhouse can provide the trainer with foetuses which can be used to demonstrate the correlation between foetal development and duration of pregnancy. The abattoir can also be the source of organs, diseased or otherwise, which can be used throughout the course.

The trainer should develop a range of training material including large drawings, bones and specimens. An artificial womb can be made out of a suitably sized box and used with dead foetuses. Trainees should also be shown important veterinary tools, e.g. Burdizzo, and made familiar with them even if, for the time being, they cannot be provided with their own to take back to their community. The assumption is that they will eventually have such equipment.

The trainer will need to arrange some classroom facilities in addition to the practical outdoor facilities. He will also find that the organisation of the trainees into small groups for training will allow each trainee the chance to practice skills.

2. Evaluating the trainee's progress

Simple and complex tasks

Developing trainee's learning abilities

Evaluating the performance of trainees and the success of the training programme

The trainer must decide how to judge the trainee's ability to perform the various

tasks. It is usual to test the trainee's skills at the end of each unit and at the end of the training programme. The best way of assessing performance is to watch the trainee perform a task and check against a list prepared by the trainer before training commenced.

In order to do this it is necessary for each complex task to be broken down into individual simple tasks. The trainer must then determine an acceptable level of performance for each component task. If a trainee fails to reach the required standard the trainer must explain why he/she has failed and then allow further opportunity for the trainee to practice these parts of the overall task. A trainer needs to remember that asking a trainee how he would perform a task and receiving a written or oral reply to the question is not a satisfactory assessment method. It does not provide the means of testing the trainee's ability to actually perform the task.

After some experience the trainer will be able to tell whether any of the objectives need to be changed or omitted, whether it is necessary to make new objectives, and if the assessment tests are satisfactory. He will also be able to judge whether the training conditions are satisfactory or will need to be changed. In this way the trainer will be able to improve on the programme.

Simple and complex tasks

Training should be delivered by first developing proficiency in simple tasks before the trainee attempts the more complex tasks. The complex task should be divided into the component tasks and the trainee works through each component. If training and assessment are based on this, then it will be easy to identify problems that a trainee may have and allow for further practice to attain the required standard.

Using this method also allows for evaluation when trainees return for further training. It will then be possible to identify skills they have not practiced for some time and offer the opportunity for refresher training and practice.

Developing trainee's learning abilities

The trainer needs to help the trainees to become "self-learners", i.e. they learn by themselves, independent of a trainer, using books and by experience. In order to use books the trainee will need to read and write at least to the level needed to use this book. Provision must be made to assess literacy skills at the onset of the course and provide tuition to cover weaknesses. Some trainees will expect to receive tuition in the classroom style they remember from their school days and expect the trainer to tell them everything. This must be discouraged and the trainer must take steps to stimulate such individuals into learning some things by themselves.

Trainees need to be numerate to allow them to make simple calculations and keep records. The trainer needs to incorporate arithmetic into the course to ensure that trainees are capable of performing the simple mathematical calculations deemed necessary in their work.

Other skills that the trainee will need are social skills, i.e. the ability to relate to others. Trainees need to develop the ability to listen respectfully to people, to encourage them to talk about problems. The trainee needs to deal respectfully but

firmly with individuals and the elders and leaders of the community. Trainees will also need to be able to determine what is important and what is not and develop the skills of persuading people to do what is necessary to improve the health of the community's livestock. In some cases this may be contrary to traditional husbandry methods.

By observing the behaviour of trainees the trainer will be able to identify those who have weaknesses in social skills. It will be necessary to improve these skills and help trainees to develop greater self-confidence. A trainer will make provision for this by incorporating into the programme some time for class discussion and if necessary individual tuition in social skills. On completion of the course trainees will return to their communities and their progress should be monitored. This will ensure that those who encounter problems can be helped and also provide feedback on the success of the training programme.

Evaluating the performance of trainees and the success of the training programme

Trainees will be continually assessed during the training programme to determine any problems and ensure that they are given every opportunity to develop the required skills. At the same time identification of problems encountered by the trainee will indicate weaknesses in the training programme and/or the ability of the trainer to implement the programme. All tests used to assess trainees' abilities must be relevant and reliable. That is, tests should measure exactly what it is required, e.g. how much the trainee knows about a problem and what he can do about it. The test should also be objective and different independent examiners should agree on what is a satisfactory answer.

When the trainees are at work in their community, monitoring their work will indicate:

- If what they learned is appropriate to their work.
- If there are any problems for which they have not been trained.
- If PAHCWs are working with interest and satisfaction.
- Whether PAHCW's continue in their work.
- If the community is satisfied with the services they offer.

The information gained by this can then be used to determine whether or not it is necessary to alter the training programme in any way. It will also determine what continued support the individual PAHCW will require.

3. The units and learning modules

The Learning objectives given with each unit outline what a trainee should know or be able to do after completing that particular unit. With experience the trainer may decide to alter the Learning objectives. During the course of each unit, the trainer should relate the disease, treatment, etc. to the local name, available medications, etc. Trainees can make notes of this local and familiar information in the box provided.

local name of disease, condition, plants, parasites.

commercial medicine available in the country.

herbal remedy used locally.

area well known for this health problem, e.g. parasites in wet and marshy areas. similar problems in trainee's community.

types of animal feeds which are available.

Each unit in the Working Guide (Part 1) can be broken down into a number of learning modules.

A learning module is a planned set of activities which assists the trainee in learning a particular group of skills. The trainer breaks down the unit into the various individual tasks and determines the learning module which will cover each task. He can then draw up a training plan to cover the complete unit which will make teaching and learning easier.

The method below should be followed for each of the units to be covered in the course:

- 1 State the problem or aim.
- 2 Define the learning objectives.
- 3 Find out what the trainees already know about the problem.
- 4 Determine what the trainees should know (knowledge) and what they need to be able to do (skills).
- 5 Build on the trainees' knowledge and skills.
- 6 Select and list the learning and teaching methods in the most suitable order to meet the teaching objectives.

7 Continually assess and evaluate the trainee's progress.

4. Examples of training plans

The following are examples of training plans based on units in this book.

Example 1. Castration of ruminants (Unit 14)

Learning objectives

After studying this unit the trainee should know:

- Why we castrate animals.
- When do we castrate animals.
- The way animals are controlled for castration.
- How to castrate with a knife.
- How to castrate with a Burdizzo.
- How to castrate with rubber bands.

This unit covers the entire topic of castration of the ruminant. The trainer will determine what part or parts of the unit are applicable to his trainees. For example it may only be necessary to cover castration of the small ruminants, sheep and goats, and the decision will be to use the knife method only as there are no Burdizzos or elastrators available.

Training plan

The trainer defines the topic to be covered (castration of sheep and goats), and

the relevant Learning objectives (in this case all of the above except the last two).

He will have made provision for the necessary equipment:

- Scalpels or sharp knives and clean container for them, scissors.
- Bucket or bowl of water containing soap or mild antiseptic solution.
- Cotton wool or clean cloths, antiseptic powder or solution to treat wound.
- Straw bale or bench.
- Lambs or kids a few days old.

Finding out what the trainee already knows

Find out the answers to the following:

Has the trainee ever castrated sheep and goats and if so how did he do it? Does the trainee know why we castrate animals? At what age does he think the animal should be castrated?

How, why, when

Explain to the trainees why animals are castrated, why the operation is carried out on the young animal and show the equipment which will be used. Use trainees' prior knowledge, if any, which has been determined by the questions above.

Tasks:

1. Preparing equipment

Explain what equipment is needed, safety precautions and the hygiene measures required.

Question trainees to check their knowledge of what is required and safety precautions.

2. Catching the lamb or kid

Explain need to handle mother and young safely and quietly. How to recognise the male to avoid unnecessary distress to females.

Show how animal is checked to ensure it is healthy, explain why operation is not performed on animal showing signs of ill health.

Explain and demonstrate the preparation of the animal by trimming soiled wool away from hindquarters. Repeat above steps on 1 or 2 additional animals.

Trainees to practice catching, checking and preparing animal. Question them on knowledge, ask them to talk through the task.

3. Holding the lamb or kid for castration

Demonstrate how animal is to be held for castration with helper sitting on bale of straw or bench. Demonstrate position of handler's hands and discuss safety measures. Repeat if necessary.

Trainee to practice handling and explain how to hold animals and safety measures.

4. Castrating the lamb or kid

Explain and demonstrate how the scrotum is prepared and checked to ensure both testes are down in scrotum. Demonstrate and explain incision emphasising why incision is made in bottom of scrotum. Explain safety when using scalpel or knife and demonstrate how it is returned to container.

Demonstrate squeezing testicles out of scrotum to reveal cords. Demonstrate and explain technique for twisting and scraping each cord to sever it. Emphasise that cord is not cut but scraped with knife in order to avoid excessive bleeding. Demonstrate how wound is dressed and emphasise that the fingers are not placed in the scrotum, explain why. Repeat demonstrating hygiene by cleaning hands before castrating another animal.

Trainee to talk through procedure before practicing it on animal. Must be able to demonstrate knowledge of necessity of cutting bottom of scrotum, safety and hygiene. Allow trainee to perform castration of several animals. Trainer to redemonstrate skills to trainee if necessary.

5. Releasing animal

If animal is to be marked before release demonstrate marking procedure and any recording required. Release young with mother.

Trainee to perform marking and recording.

6. Care of equipment

Explain and demonstrate how to clean and safely store equipment used.

Trainee to clean and return equipment to store.

7. Aftercare

Inspect castrated animals after one hour. Explain to trainees important points, e.g. how to identify excessive bleeding, that must be looked for. Emphasise that animals must be checked during following week for any signs of infection. Describe what signs should be looked for.

Trainee to demonstrate knowledge of checking animals and what problems can occur.

Example 2. Teeth clipping in young pigs (Unit 27)

Learning objectives

After studying this unit you should be able to:

- Handle a sow and litter in such a way as to minimise stress and injury to animals
- Clip the eye teeth using tooth pliers
- Take precautions to minimise infection

Training plan

The trainer will have made provision for:

- The availability of young pigs which require tooth clipping
- Driving boards, empty pens and pig boxes or other suitable means of separating mother and young
- Teeth clippers or forceps
- Suitable antiseptic and means of marking animals after clipping are also needed

The trainer will explain the aim of the training and explain the equipment which will be used. The Learning objectives will be outlined.

Finding out what the trainee already knows.

Find out the answers to the following questions:

Has the trainee ever handled pigs? If so has he dealt with adult or young animals? Does the trainee know why the teeth of pigs require clipping? Does the trainee know what teeth the young pig has?

How, why when

Explain why and when teeth clipping is carried out utilising any previous knowledge gained by trainees.

Explain what hygiene methods are required and emphasise that sick animals are not operated on.

Tasks:

1. Separating sow and litter

Explain why sow and litter should be separated and demonstrate how this can be done safely with least distress to animals or danger to people.

Trainee to separate sow and confine titter.

2. Restraining young pigs

Check trainees knowledge of handling and restraining pigs (Unit 26). Demonstrate preparing and using pig box and picking up and holding piglet so that mouth is held open. Explain how to avoid stress to animal and need to fully support body.

Trainee to describe method and practice until they can perform the task.

3. Clipping teeth

Show which teeth are to be clipped and demonstrate technique. Demonstrate clipping at normal speed and slow speed. Explain need to cut teeth as close as possible to jaw and how to avoid bruising the tongue and lips. Explain and demonstrate checking for tooth fragments in jaw and removal of these. Show cleansing of forceps after dealing with each animal.

Trainee to practice clipping teeth (4 to 6 animals). Trainee should be able to explain method and relevant points.

4. Marking and releasing piglets

Demonstrate marking and any recording required.

Trainee to mark and release each piglet as task is performed. Reunite sow and litter.

5. Caring for equipment

Demonstrate the cleaning of instruments and method to prevent corrosion, safe storage of equipment and cleaning of pig box.

Trainees to clean equipment and return to store.



Part 3: Guidelines for adapting this manual

- 1. Introduction
- 2. The need for primary animal health care
- 3. The Primary Animal Health Care Worker (PAHCW) and the community.
- 4. The role of women in PAHC
- 5. Working group

- 6. Adapting the manual
- 7. Adaptation process
- 8. Health of the community
- 9. Who uses this manual?
- 10. Translation

1. Introduction

The preparation of a concise manual for the Primary Animal Health Care Worker is not an easy task. The range of species reared for food or as work animals has necessitated that the manual deals with health care and management relating to the major species of domestic animals throughout the world. In addition a balance was struck between first aid, health problems, husbandry and management of the animals.

Every attempt has been made to do this within the confines of a book which remains easily readable and not overlarge. A large, thick text book with complex phrases and terms would do little to encourage the participation of those for whom it is intended, the PAHCWs.

In addition this book has been prepared with the intention that it should not necessarily be used as it is but rather that it will serve as the basis for local adaptation. The best teaching and training is that which always takes into account the local conditions and the abilities of the trainees. Some sections of this book may not require any adaptation, others will need to be adapted to meet the local conditions encountered in the training programme.

Because the book covers the health and management of many animal species it is obvious that not all will be kept as livestock in any one area. Indeed, it may well be the case that some trainees will have never seen some of these species, e.g. camel, llama and alpaca. It is also the case that others will have only recently become involved with keeping animals such as poultry and rabbits for food. In addition some of the diseases covered in the book may not be a problem in the individual country. Therefore some parts of this book may not be applicable to the training programme conducted in any one area.

The following guidelines have been prepared for those who will be adapting this book for use in their training programmes for PAHCWs. It must be stressed that adaptation should be carried out by livestock specialists who are well acquainted with the prevailing situation and culture in the communities.

Adopting this book does not mean adopting this manual alone but also adapting Primary Animal Health Care in the communities. It involves the need for and development of PAHC and its sustained use in the community.

2. The need for primary animal health care

There is a need for a primary animal health care programme when the existing veterinary service cannot be extended because of financial, geographic and technical problems.

It is widely known that the running of a veterinary service is expensive. Training of personnel, equipment, drugs, transport and supplies all require financial resources which cannot be fully met by many countries. This leads to shortcomings in the

service which is more pronounced in outlying regions and districts.

In order to fill the gap which can arise in the veterinary service and provide essential health care for livestock in these communities, the concept of Primary Animal Health Care was evolved. PAHC will not eliminate the need for the veterinary service but simply provides a means of extending the service to more communities. It has been said that the more we as veterinarians and livestock specialists teach livestock raisers about health and production, the more questions they will have. So we will never be out of work! PAHC cannot fulfill the requirements unless it is supported by both the veterinary and livestock services and the communities.

The veterinary service needs Primary Animal Health Care in order to extend their activities and the community needs it to provide health care for their livestock. If it is established that there is a need for Primary Animal Health Care then a programme can be initiated.

3. The Primary Animal Health Care Worker (PAHCW) and the community.

If the need for a Primary Animal Health Care programme has been established then the question arises as to how to organise it.

The involvement of the livestock officials in the selection of people, both men and women, to be trained is essential in order to guarantee future support of the programme. Village elders, traditional leaders and livestock raisers must be involved in the selection of candidates for training. These people must make the right choice as the PAHCW will be trusted with the task of looking after the health

of their livestock.

The PAHCW must be an enthusiastic, intelligent, physically capable man or woman who is ready to commit his or herself to serve the community for as long as is necessary. It is essential that they can read and write in order to carry out the work which is required of them.

The PAHCW must be able to readily communicate with all members of the community and the veterinary service. Therefore the choice of people who are already established or exhibit a potential to establish themselves in the community should be encouraged. In brief, the PAHCW candidate must not only be enthusiastic and intelligent but must also be a communicator.

4. The role of women in PAHC

The PAHCW may be a man or a woman. However some women may wish to participate in the PAHC programme but are reluctant to do so because of family, social, religious and physical considerations. These women should nevertheless be encouraged, by both the veterinary service and their communities, to join in the training. It is very important that women learn tasks which are essential for livestock care in the community. For example a woman can vaccinate chickens, use elastrators with rubber rings, care for small ruminants including hoof trimming, assist ewes with lambing, rear the orphans and many other tasks. In addition they can inform other women in the community about good livestock practices. Livestock and poultry are important sources of family food and income. Women need to be PAHCWs to care for their own animals as well as help others in the community.

5. Working group

A working group is essential to a PAHC programme and the adaptation of this book. The working group must be appointed by the highest authority dealing with livestock in the community and should consist of veterinarians, livestock specialists, extensionists and people dealing with development in the communities. The F.A.O. office in the country will gladly advise and help in establishing the programme.

6. Adapting the manual

When the working group meets to discuss adapting this book they must remember:

- The contents of this book cater for a wide range of countries and communities and the relevance of some units may differ. The working group must select those units which are relevant to their own communities and adapt the book on the basis of these.
- Any traditional remedies in use in the communities should not be ridiculed and ignored out of hand. These traditional practices must be carefully studied and those which cause harm must be discouraged while any that are beneficial should be encouraged. In many countries herbal medicines, homeopathy and acupuncture are now being used more frequently in the treatment of both humans and animals.

7. Adaptation process

Types of animals

The book consists of units which are grouped in chapters which deal with animal groups. Each chapter include units dealing with basic management, housing, feeding and first aid for that group of animals.

Obviously those chapters dealing with the animals kept in your communities will be of most importance but many other chapters will also have useful information. Information such as that on external parasites or the storage of feed for the dry season can be very useful. You may also wish to encourage the introduction of a particular livestock species and the units referring to them will be beneficial.

Feeding and management practices in the book have been based on modern methods. These include aspects of nutrition, management and animal housing and hygiene. You will need to talk with your livestock officer or extension specialist for more information about planting special pasture grasses or fodder trees or about silage making.

Disease

Throughout the manual there are very few diseases which are mentioned by name. Those named are of major economic importance. Emphasis is given to general signs of disease, abnormalities and first aid. Be sure to write the common, local names of diseases in this book.

Medicines

A doctor prescribes a drug but the patient receives a medicine, so in order to

simplify the concept the term medicine is used throughout the manual. A limited number of drugs are mentioned and names are given either as generic, group or approved names. Few trade names are used. In Annex 1 blank lines are left at the end of each section of medicines so that the names of those drugs which are available locally can be written in. Trainees should be encouraged to write notes in this training manual.

It is important to reduce the use of trade names as this can lead to the development of the idea that only a drug marketed under a particular brand name can be used to treat individual conditions. Some people will refuse to accept anything other than a certain named drug even if others are more effective. This can mean the use of a particular product which is many times more expensive than an effective alternative. As part of the PAHCW training the utilisation and relationship of drugs should be explained to trainees and the preference for trade names discouraged.

Techniques in the manual

Most livestock owners practice some form of foot care, castration and dehorning. Some of the methods used are cruel and need to be discouraged. However the discontinuation of traditional methods in favour of other techniques will take time and it will be necessary to explain the trauma and stress caused by some practices, e.g. castration with hot skewers. Many traditional methods are used because people simply know no other way. Training and demonstrating better methods and practices, e.g. using a sharp knife instead of an axe to trim a hoof, will encourage the ready adoption of new methods. To do this the PAHCW must be well trained and able to explain to owners the benefit that will result from improved

treatment and care of his animals. Most importantly the PAHCW can actually do these tasks in a competent and professional manner!

Administering injections, sterilisation of instruments, castration, taking blood samples, etc. are discussed in varying amounts of detail in the manual. New techniques, or the further elaboration of others, can be added by the working group.

8. Health of the community

Veterinarians, veterinary assistants and PAHCWs through the nature of their work are involved with food production and the health of the community. There is a direct relationship between animal health and the community's health through diseases communicable to man. Disease prevention has been highlighted throughout the manual with particular reference paid to problems of zoonoses and food hygiene.

9. Who uses this manual?

Although this manual is intended principally for use in a PAHC programme, it may equally well be used in the training of veterinary auxiliaries, agriculturalists and extensionists.

10. Translation

Care has been taken to use a simple English vocabulary throughout the text. In many cases further explanation or alternative terms are placed in brackets. In addition Annex 7 gives a full explanation of all terms used. For English speaking

countries this will be sufficient and where other languages are used the manual must be translated.



