

Training Manual

Six Days/Training

On

Poultry management

Capacity building training on, Poultry management

Objectives: To give the knowledge and skills of the participants on Poultry farming.

Expected outcome: Participants will develop understanding and awareness on the scientific method of poultry farming.



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With the increased in knowledge it seems that the needs for healthy food for humans also increased. We came to realized that we need lots of effort to meet our nutritional needs from chicken and eggs and also to increase our economy. Therefore, rearing poultry is increasing at a greater pace; it is not only a good source of income but also could meet our daily needs. In agriculture sector poultry rearing is one of the advanced sectors. At present it is calculated that a person consumed only 45 no of eggs and 1.76 kg of chicken. Thus, this may show that we need to put more effort so that our country could get sufficient nutrition. Because of all these we need to know an overview of poultry management. If we rear poultry one should be careful and should have a keen interest in it. Record keeping, construction of shed, chick selection, health management (vaccination, de worming, cleanliness and health), management, feeding and evaluation should be kept in mind. There are different kinds of poultry. The common ones reared by Mizoare broiler and layer. Broiler is a chicken of 8-10 weeks old, 1.5-2 kg of weight, soft meat, reared for meat purposed. Layers are otherwise reared for meat and egg production.

Why poultry farming?-

1. Chicken contains many nutrients like proteins, minerals and vitamins.
2. -Chicken provides balanced diet for humans.
3. -Poultry attain market weight within a short period of time, so, it can be a source of income within a short time span.
4. It is one of the important source of income for a family.
5. -It can add a source of income for a family.-
6. Eggs is required by all humans therefore, there is no problem for its market.-
7. Poultry faeces are a good manure.

Advantages of rearing poultry:

1. It requires less capital for starting a poultry farm.
2. Poultry rearing requires only 8-10 weeks to attain market weight.
3. If there is sufficient place broilers and layers could be reared together at large numbers.
4. Broilers needs less feeds for body growth so, they required less feeds.
5. There is easy return of money in poultry farming.
6. As compared to other meat chicken can be consumed by most people.

Selection of site

1. A well leveled place with proper sunlight and having sufficient space.
2. It should be away from human habitat so as not to cause problems for others.
3. It should have clean supply of water and also sufficient electric supply.
4. It should have an easy access to raw materials and market to sell eggs.
5. It should have enough space to increase the shed size.

Poultry rearing system:

1. Deep Litter System:

The floor of the shed is covered with litter materials, which is very comfortable for the chicken and the faeces are absorbed by the litter material quickly.

2. Cage System:

Cages with sufficient space for poultry are made where water and feeds can also be given. Suitable place for laying is also made for layers.

3. Traditional system:

Traditional system of rearing is also good if sufficient and suitable place could be provided. The place should safe for the poultry keepers, suitable climatic conditions and should be free diseases.

Floor Space Requirement:

The floor space requirement differs according to the age and size of the poultry. The following are the floor space requirement.

Age	Small size poultry (sq. ft.)	Large size poultry (sq. ft.)
0-8 weeks	0.7	0.7
9-12 weeks	0.95	0.95
13-20 weeks	1.9	2.35
Above 21 weeks	2.5-3	3-4

Preparation of poultry shed:

1. Brooder should be prepared before the arrival of the chicks.
2. The whole shed should be cleaned and disinfected with disinfectant. Eg: formalin ½ litre in 50litre of water or fumigation should be done(20 KMnO₄ and 40ml formalin).
3. The shed should be cleaned before 1 week of the arrival of the chicks.
4. Materials to be required should be in place before the arrival of the chicks.
5. The temperature of the shed should be adjusted and maintained at suitable degree for at least 24 hours before the arrival of the chicks
6. A foot dip containing KMnO₄ 1gm in 100 ml water should be made at the entry of the shed to maintain sanitary.

Care and management of growers:

1. Chicks from 8 weeks to 18 weeks or to the time they start laying eggs are called grower/pullet.
2. When they start growing the size of the grower house also increases. Eg: For 900 cm²(3 sq. ft.), 2 ft feeder, 2.5 cm waterer.
3. After shifting of chicks from the brooder it is advantageous to provide light for 1-2 nights.
4. After this, lighting is not required even at night. Grower Mash should be started for the chicks but this should be done gradually, grower mash should be given together with chick mash for about 4 days.
5. Then, grower mash alone can be given.
6. In the grower mash the protein and energy level is lowered to prevent over fattening of the chicks.

Care and management of layers:

At the age of 18 weeks or when the chick start laying the ovary start working, this gives lots of stress to the chick so proper care is required during this period. During this the chicks are more prone to diseases. Therefore, antibiotics, vitamins and calcium should be given. When they reach 18 weeks layer mash should be started to be given to the chicks. When they reach 20 days or when they reach 20% egg production light should be increases to 16 hours. In a floor space of 100 sq. ft. 40 watt bulb should be kept at a height of about 6-7 feet. This increase in light duration can increase egg production. Layer needs 110gm/bird/day feeds and 220ml/bird/day water. In a year a layer approximately consume 40kg feeds and 80 litres of water.

Feeding:

The health and growth of the chicks highly depends on the type of feeds given. The feeds contain-protein, energy, vitamin, minerals in balanced proportion. Depending upon the age, type and breeds of the chicks the feeds are of different types, this should be kept in mind while buying feeds for the chicks. These days there are different types of feeds from different companies available at retail shop. These feeds may be of powder form or in pellet form but this does not effect the quality of the feeds. One has to keep in mind that depending upon the type of feeds and system of feeding the Feed Conversion Ratio can differ. It is necessary to be careful in selecting the type of feed as most of the cost for poultry farming is for the feeds.

Poultry feed is differentiated into two types

A)Energy sources –eg : Vitamin, Jowar, barley oats etc..

B)Protein source –eg: Vegetable source (Mustard Oil Cake, Groundnut Cake, Soyabean) and animal source(Fish meal/Meat meal)

Different type of feeds:

1. Broiler ration:

- a.Starter ration (1 day-5 weeks)
- b.Finisher ration (5 weeks-market age)

2. Layer ration:

- a.Chick mash (1day-6 weeks)
- b.Grower mash (6 weeks-20 weeks)

c.Layer mash (from 20 weeks onwards)

It is good to give lots of green vegetables, and during laying of eggs calcium should be given.

Age (weeks)	Water requirement(ml)
1	30
2	60
3	95
4	135
5	195
6	215
7	255
8	299
9	290

General signs of diseases

1. Weight loss-Diarrhoea
2. Paralysis-Swollen leg
3. Unable to move-Dry feather
4. Watery eyes and nostrils
5. Dyspnoea -Itchiness
6. Falling of feathers

Care and management of sick poultry

1. To prevent spread of diseases the diseased chick should be separated.
2. If the causative agent of the disease is a virus treatment is difficult so symptomatic treatment should be done
3. If the disease is of bacterial origin antibiotic should be given for at least 5-7 days.
4. If it is of parasitic origin, deworming should be done, deworming should be given again after 21 days, this is necessary to kill all the parasites.-If it is a deficiency disease, an expert should be approached.
5. If they suffer from diarrhoea, they should be given tetracycline powder. Half a teaspoon of tetracycline power should be added in 1 liter of water and should be given for 5-7 days. The dosage differs depending upon the size of the chicks.
6. The shed of diseased chick should be clean and tidy.
7. The shed should get proper sunlight.-Expert should be consulted for management of disease chick.

Vaccination Schedule :

Sl. No.	Disease	Vaccine	Time of vaccination	Route of vaccination	Duration of prevention of disease
1	New Castle Disease/Ranikhet Disease	Live virus F.D vaccine (Mild strain)	1-7 days	1 drop, eyes and nostrils	2-4 months
2	New Castle Disease/Ranikhet Disease	Live virus F.D vaccine (virulent strain)	6-8 weeks	0.5 ml S/C or I/M	1 years
3	Fowl pox	Fowl pox vaccine (live strain)	2 weeks	Feather follicle method or wing web method	2-3 months
4	Fowl pox	Fowl pox vaccine (freeze dried)	6-8 weeks	Feather follicle method or wing web method	1 year
5	Marek's disease	Herpes virus vaccine	1 day	S/C	lifetime

Feed conversion ratio :

It is necessary to know the feed conversion ratio of poultry. A stage can be reached where the chicks keep on consuming feeds but does not gain weight anymore, at this point the amount of feed consumed and body weight gain is not proportional anymore. i.e.

$$F.C.R. = \frac{\text{Total amount of feed consumed}}{\text{Total body weight gain}}$$

Total body weight gain

Value of less than 2.00 at 6 week of age is preferable.

Prevention of diseases:

Chicks are more prone to disease than other animal and their mortality is also usually high. Moreover, broilers and layers are more prone to diseases so, we should keep in mind that prevention is better than cure.

When poultry suffers from diseases there can be a loss in two ways. One is that if the chick died there is loss of the chicken and also the expense s of the feeds of the chick. The other is the

expenses on medicines used during their sickness. So, it is important that one should know the different predisposing factors and causative agent of diseases.

The predisposing factors are

1. Low quality of feeds
2. Improper feeding method
3. Improper ventilation
4. Unhygienic areas and practices
5. Congested floor space
6. Critical temperature

For prevention of diseases the poultry shed should be disinfected from time to time. The shed should be emptied for disinfection. When a batch of poultry is sold the shed should be disinfected before bringing in new batch. For disinfection the following should be practice

1. The whole shed should be cleaned, if needed scrapping of the floor should be done and then clean it with water.
2. Feeder and waterer should be taken out.
3. Dust and left over feeds could be a good place for microbes to hide so they should be cleaned properly.
4. 4.3 days before disinfection the floor should be cleaned by sweeping the dust and faeces away.
5. The walls of the shed should be cleaned with soap/detergent.
6. The floor should be soaked with a mixture of half a litre of formalin and 50 litres of water.
7. After cleaning the shed and materials they should be soaked in disinfectant. after that fumigation should be done by using a mixture of potassium permanganate at the ratio of 2:3. It should then be sprayed with Aerosol, Kohrsolin 2:3
8. If the litter is to be used again it should be treated with disinfectant.
9. During fumigation for about 12 hours the shed should be closed.

For rearing healthy chicken it is our responsibility to take proper care and management. If proper care is not taken it will be just waste of time and money. For this there are some points to be noted, they are

1. Only healthy and clean chick should be selected for rearing. Before arrival of new batches the shed should be kept vacant for at least 2 weeks, no one should enter the shed 2 days before arrival of the chick, it should be kept warm for 24 hours before arrival of the chicks.

2. For prevention of diseases vaccination should be given on time, the vaccine should also be bought from recognised company. Expire vaccine should not be used. The left over vaccine should be properly disposed.
3. The poultry shed, feeder, waterer should be cleaned thoroughly.
4. Only quality feeds and clean water should be given. Feeder and waterer should be cleaned before using the.
5. Proper observation of chicks, if there is any diseased chick. If there is diseased chick one should consult a veterinary doctor, soon after their recovery they should be sold. If there is a dead chick it should be taken out immediately and the reason should be enquired and post mortem may also be done. The body of the dead chick should not just be thrown away but should be disposed properly.
6. Only the poultry keeper should be allowed to enter the shed. There should be a foot dip at the entry of the shed. If possible there should be boots and apron.
7. The shed should be dry, the litter should also be dry. Birds and rodents should not be able to enter the shed.
8. The shed should be well ventilated and should get proper sunlight.
9. A good drainage system should be made. The faeces should be covered with straw to keep away flies.
10. .If there is outbreak of diseases the litter and other materials should be treated with disinfectant. The walls and floors of the shed should also be covered with lime. The shed and the places around and the place where materials a kept should be disinfected at regular intervals.
11. The shed should be disinfected before bringing in new batches of poultry.
Record of Mortality rate, numbers of sold chick, medication and vaccination schedule, income and expenditure etc. should be maintained properly.
12. It is always advisable to give medicine according to expert.
13. Isolation shed for diseased chick should be made not very far away from the shed, where sick animals could be kept to prevent spread of diseases.
14. The healthy and diseased chick should not be taken care by one person.

Training Agenda

Cycle 1			
Name of Module	Day	Topic	Mode of Delivery
Capacity building on Poultry farming	1 st day	Opening ceremony and participant's introduction	Training opening & discussion
		Course Overview and Participants Expectation	Discussion and QA
	2 nd day	Session 1.1: Introduction and importance of Poultry farming & why go to all the effort? : Advantages of rearing poultry:	interactive lecture, discussion & QA
	3 rd day	Session 2.1: Selection of site Deep Litter System Cage System Traditional system	interactive lecture, discussion & QA
	4 th day	Session 3.1: Floor Space Requirement Preparation of poultry shed Care and management of growers	Group work, interactive lecture, discussion & QA Practical work
	5 th day	Session 4.1: Care and management of layers Care General signs of diseases Prevention of disease The predisposing factors	Interactive lecture, discussion & QA Practical work
6 th day	Session 4.1 All session will revise ,question answer and group discussion	Group work, interactive lecture, discussion & QA	