DEVELOPMENT NOTES: NO. 14

RECOMMENDED MANAGEMENT FOR 1000 BROILER CHICKEN PROJECTS

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ABSTRACT

Poor performance of contracted broiler growers (1000 - 5000 broiler chickens per batch) in Morobe Province was investigated. Poor management was identified as being largely responsible for the problem. An alternative management system is recommended.

Key words: *broiler chickens, management systems, contracted growers*

INTRODUCTION

In Morobe Province, about 45 farmers (though less presently) are contracted by Niugini Table Birds Pty Ltd to raise 1000 - 5000 broiler chickens per batch for its processed chicken operation. However, for some time the farmers were faced with poor performance and low returns, largely because of high mortalities experienced during and after the brooding periods and lower growth rates. Labu Animal Husbandry Research Centre, based in Lae, Morobe Province, investigated the reasons for such poor performance and found the causes were of management nature and widespread. To avoid poor flock performance and lower returns from reasons similar to those found in the investigation an alternative management system is recommended.

CAUSE(S) OF THE PROBLEM

The following management problems were identified;

Housing

The growers build their houses with bush materials and wire netting. All the birds were reared on deep litter with floor space of about 0.1 m^2 per bird. The housing is adequate. However, it was found to be not secure and, thus, thefts and attacks by predators were commonly experienced.

Water Supply

Most projects have no water supply close to the chicken houses, so water is usually carried from a long distance. This hard work, particularly during the last three weeks of the growing period is discouraging. Bamboo water troughs were used in most projects, but they can hold very little water for such numbers of birds and, therefore, need filling about every two hours. Other growers used 20 litre drums partly buried under ground. Though water was available all the time, waterer space was inadequate, and therefore, many chickens could not drink when they needed to, especially during the hot times of the day.

Feeders

An adjustable self feeder, with a tube and tray which could be dismantled, were used in all projects. This self feeder has several disadvantages in that the wire connecting the tube with the tray often disconnects and, as a result, causes considerable wastage of feed. The tray is also shallow (only 5 cm high), so the feed tends to overflow from the tray causing wastage.

Brooding

Brooding of day old chickens was left to the farmer's resources. In most cases, the chickens were confined to a small area of the house without additional protection. The temperature during the day was within, or slightly less than, the optimum

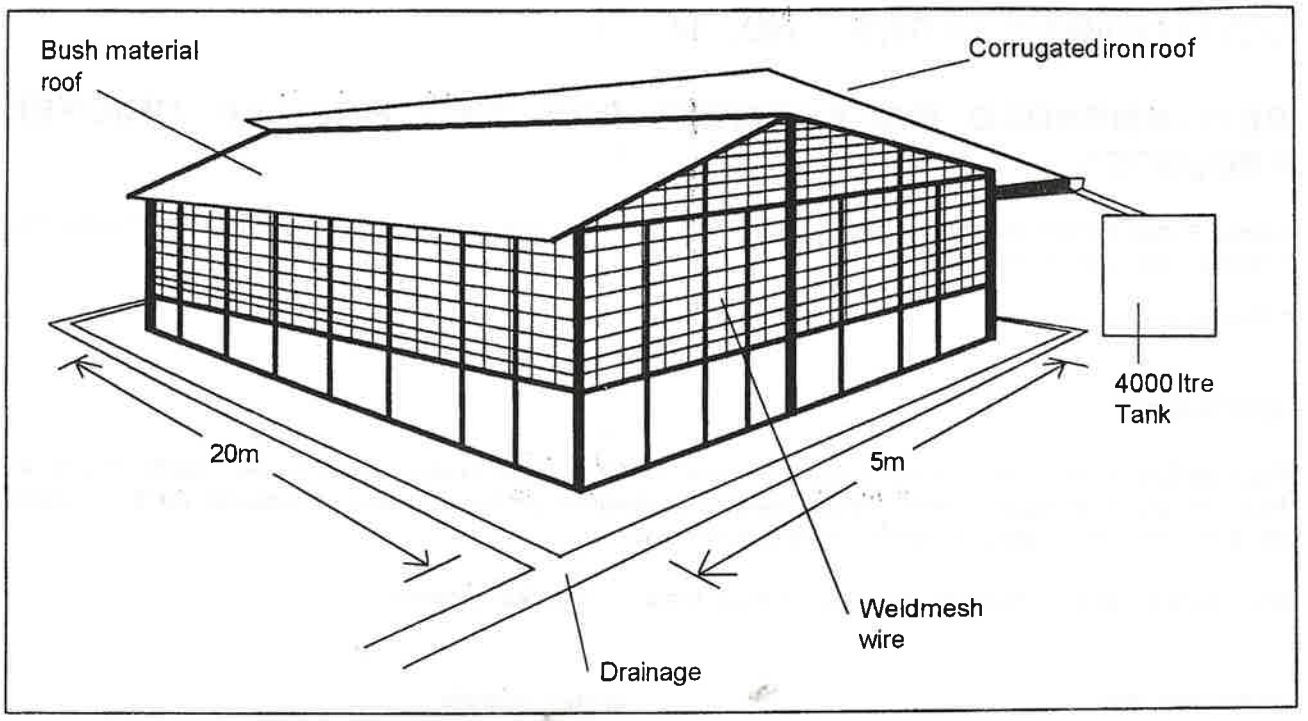

Figure 1. **Type of house suitable for rearing broiler chicken in peri-urban conditions.**

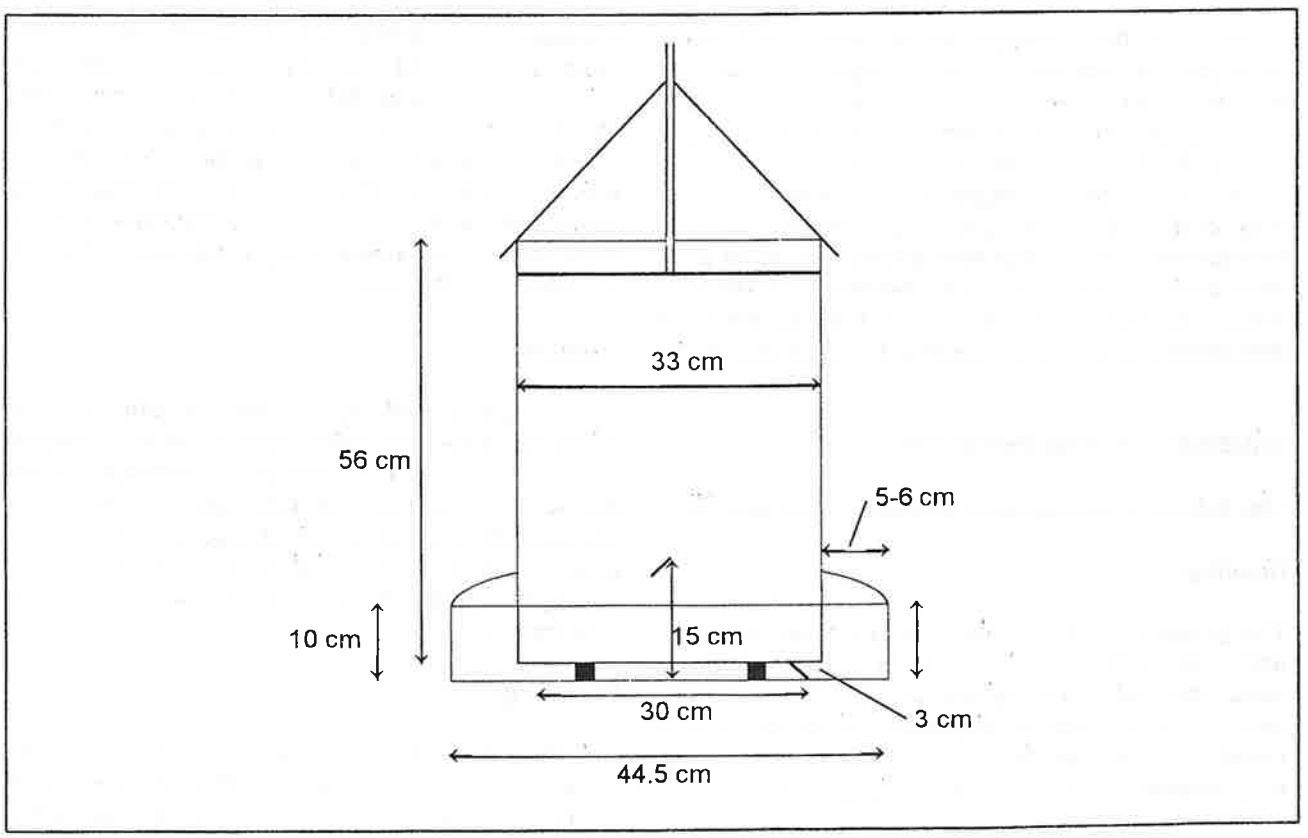

Figure 2. **A model self feeder suitable for raising broiler chickens.**

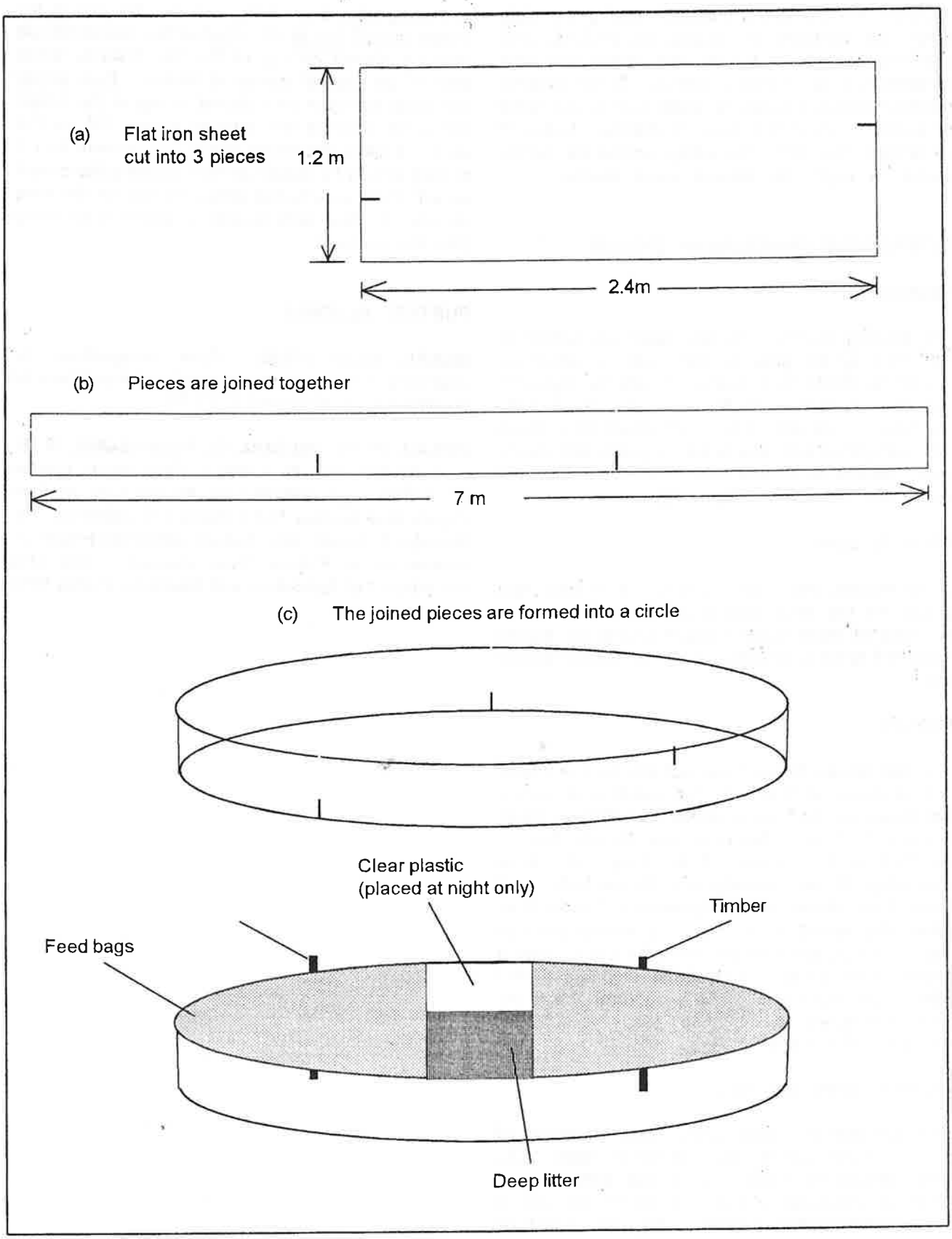

Figure 3. **Type of a cold brooder suitable for brooding 250-300 chicks.**

requirements (30-35°C). However, during the night when the temperature drops to 19-22°C, the chickens were subjected to cold stress and high mortality due to chilling occurred. Some farmers provided kerosene lamps for extra heating, but failed to provide enough kerosene to maintain lamps lit all through the night. Crowding around the lamps during the night also caused some deaths.

ALTERNATIVE MANAGEMENT SYSTEM

Housing

The housing design to remain essentially similar to that used by the growers, but some modifications should be made to increase security by replacing the wire netting with 5 cm x 8 cm security weldmesh. One side of the roof should be covered with corrugated iron sheets with a gutter and down-pipe installed to collect rain water from the roof into a 4000 litre tank (Figure 1).

Water Troughs

Water troughs should be made of 1.8 m long blind gutter, 15 cm wide and 8 cm deep. Sufficient numbers of these water troughs should be placed inside the shed to provide 2.5 cm of waterer space/ bird.

Feeders

The self feeder found most suitable is a modified one as shown in Figure 2. It consists of a circular tray measuring 44.5 cm diameter and 10.0 cm deep. A cone 30.0 cm, diameter and 15 cm high is revetted to the centre of the tray. A barrel measuring 33 cm diameter and 56 cm high is set firmly 3 cm above the tray by means of three legs. When the barrel is placed at a central position above the tray, there will be about 5-6 cm of feeding space at all points. The whole unit is provided with a sire handle to allow suspension from the roof when necessary. One self feeder is sufficient for every 50 chickens.

Brooders (Cold Brooder)

The brooder is constructed from a sheet of galvanised iron 6.8 m long and 50 cm wide. The sheet should be made into a ring with the two ends overlapping about 1.2 m to provide a surrounding for the chickens. The ring could be expanded to a larger size as the chickens grow older. Two pieces of bush timber measuring about 4 m long should be placed on top the ring at the centre and 60 cm apart. Another two pieces should also be placed on top of the ring towards either side of the central pieces of timber. Four empty jute bags cut open and placed on top of the timber will cover most of the brooder except the central area. A clear polythene sheet 90 cm wide and 3 m long should be placed at night covering the central area to form a complete enclosure for the chickens (Figure 3). One such brooder is sufficient for every 250-300 chickens.

FURTHER READING

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