

INTEGRATION OF BOER GOATS IN OIL PALM

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367

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The demand for mutton in this country has increased from 9160 t in 1993 to 15 570 t in 2003. Unfortunately, the production is far short of demand, with self-sufficiency of only 7% in 1993 and 8.4% in 2003. Imports to make up the deficit were valued at close to RM 90 million in 2003. Most of the goats in this country are left to scavenge for themselves. To satisfy the demand, organized and economical goat rearing needs be developed.

With the shortage of land for grazing and considering its competitive nature vis-à-vis other uses, the only practical option is to use the land under oil palm. In its Keratong Station, MPOB is investigating rearing Boer goats for meat under oil palm.

The study has revealed that goat rearing under oil palm is practical and economical. The goats can be fenced in an oil palm block with an electric fence or enclosed in a paddock. The overall performance of the breed was good, indicating their good adaptation to the environment under oil palm. The kidding rate and kids survival rate were 2.7 kids doe⁻¹ and 70%, respectively. Therefore, rearing meat goats under oil palm is highly recommended for oil palm plantations and smallholders.

METHODOLOGY

Boer goats can be reared under oil palm of at least six years old. The stocking rate recommended is 50 does with two bucks in a 10-ha area. The production system is semi-intensive with the goat allowed to graze in the day under the oil palm and herded back to the shelter at dusk.

Breeding Stock and Facilities

One of the keys to success is to use good stock – disease-free and productive breeders goats. The Boer breed is recommended for its easy adaptability

to any environment. The main facilities required to start is a good shelter and two sets of tape-type electric fence. The goat shelter is constructed in the centre of the grazing area to house the goats at night, or during rains. A wooden hut of 9 m width and 21 m length is sufficient to accommodate 100-150 goats. The floor is raised 1.5 m above the ground. The height from floor to roof should be 3.5 m (Figures 1 and 2). Two portable sets of electric fences are required for grazing. Each set includes an energizer, a wet cell battery, insulated rods and tape-type polywires.

Grazing and Oil Palm Management

The oil palm area should be divided into smaller paddocks to ensure optimal grazing. Before being allowed into the grazing area, the goats have to be conditioned to the electric fence. They can be released into a paddock already electrically fenced up for five to seven days (Figure 3). A 2000 m² paddock can accommodate 52 heads for a day's grazing. The following day, the herd is moved to an adjacent paddock to avoid over grazing and to prevent any negative impact on the oil palm (Figure 4). Non-palatable weeds not consumed are removed manually or with selective herbicide spraying. The goats can return to the first paddock after 60 to 80 days, depending on the recovery of the vegetation.

Daily Operation and Breeding Management

The goats are monitored daily for any injury and to ensure that they remain healthy (Figure 5). Fodder from the oil palm area and goat pellets need to be offered, especially during the rainy season. A mineral block and water must be available at all times in the goat house. To evaluate the goats performance, the individual activities such as feeding, drinking, mating and lambing have to be recorded and monitored.

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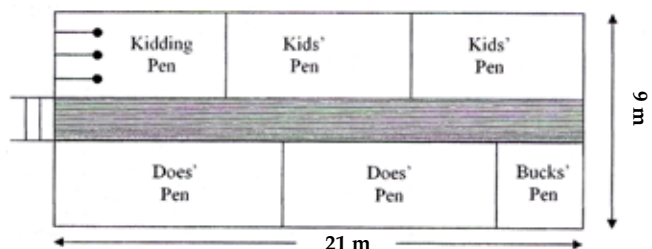


Figure 1. Goat shelter (floor plan view).

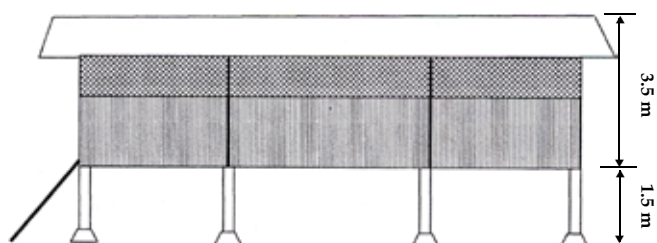


Figure 2. Goat shelter (side view).



Figure 3. Conditioning of goats (five to seven days) to electric fencing.

The bucks are allowed to mate freely with any doe all year round. The buck to doe ratio should be 1:15. Two bucks are assigned to mate in a group of 50 does. The bucks are recommended to be replaced every three years to avoid in-breeding. Unproductive does should be culled, and only productive females allowed remain in the flock. All the kids are left with their dams until weaning.

ECONOMIC ANALYSIS

The total cost required to start a herd of 50 does and two bucks in a 10-ha area is RM 304 000. The break-even period is around five years. The internal rate of return (IRR) for this model is 16%. The net present value (NPV) at 12% discount rate is RM 23 525.44.



Figure 4. Avoid overgrazing by leaving sufficient undergrowth.



Figure 5. A healthy doe delivering good kids.

CONCLUSION

Integration of Boer goats with oil palm is an economically viable and recommended for smallholders. There is no negative impact on the productivity of the oil palm. Besides increasing the farmer's income by reducing the weeding cost and sales of the animals, it will also contribute to the national economy.

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