

INTEGRATION OF DAIRY GOATS WITH OIL PALM

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The majority of goats in this country are reared by smallholders for their meat. Most of these goats roam freely in the plantations and few are integrated with the crops using workable system. There are only 58 commercial goat farms in the country and only four of them rear dairy goat for milking. The dairy goats are reared on improved open pasture. MPOB has established a practical system and a viable approach of integrating goat with oil palm. There is a need for goat farming to be undertaken by large commercial investors. With the constraint of lands for grazing and its competitive advantage over other commodities, it is only practical that existing plantation land be utilized for this purpose.

The dairy goats produce two edible products, the meat and milk. It will be more viable to venture into dairy goat as compared to meat goat. The demand and price of goat milk are very encouraging and on the rise lately. The goat milk is well known for its health attributes and is usually recommended for children and geriatric as well as those who have specific ailments. The milk is also used in the making of certain type of soap which is said to give good effect on skin when used.

In 1999, MPOB (then Palm Oil Research Institute of Malaysia, PORIM) developed a model on the integration of dairy goat in mature oil palm plantation. The aim of the project is to develop a workable and economically viable system of integrating dairy goat (*Capra hircus*) and mature oil palm plantation on the same piece of land.

METHODOLOGY

The practice is suitable for oil palm above five years old without any stray livestock. Plan area for



Figure 1. Saanen goats grazing in the oil palm plantation.

imaginary paddocks and strategically construct a goat house at the centre. Purchase disease-free and productive dairy goats such as Saanen breed which is used in this model. Fifty does and two bucks require 10 ha of land. Condition the goats to the electric fence if they have no previous exposure.

Encircle an area with portable electric fence and introduce goats into the area in the morning and herd them back to the house in the evening. Make sure there is enough pasture (do not call weed any more) and there is supply of water. Provide mineral salt and water in the house at all time. Encircled 2000 m² area with the electric fence, this can accommodate the goats for one day. Get ready an adjacent paddock by encircling electric fence next to the grazed area.

When optimally grazed, move goats to the adjacent paddock. Remove all weeds not grazed by the goats which can be done manually. Repeat the rotation and goats can come back to the initial paddock 60 to 80 days depending on the regrowth of forages.

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Figure 2. A doe being milked for her produce.

Before releasing the goats into paddock, milk all lactating does. Major portion of milk collected are for sale and some are used for bottle-feeding of kids. The same does are milked when they return into the house in the evening. Provide dairy goat concentrate in the house for the lactating does. Carry out scheduled vaccination and worm control.

BENEFITS

1. Biological control of weeds.
2. Replace labour for weeding.
3. Save 80% of weeding cost.
4. Goat dung beneficial to soil fertility.

ECONOMIC ANALYSIS

A capital cost of RM 288 000 is required to start a model with 50 Saanen does and two bucks in 10 ha area. The payback period is five years. The internal rate of return (IRR) computed for the model is 15% and the net present value (NPV) at 12% discount rate is RM 22 641. The benefit cost ratio (BCR) for a discount rate of 12% is 2.47. After three years of integration, goats can save 80% of the weeding costs.

MARKETS

The goat milk has a niche market. The price of goat milk ex-farm is RM 8.00 litre⁻¹. The demand varies according to locality, the demand in Klang Valley is high. It is important to make sure that there is good demand for the milk before starting to produce. Currently goat milk are sold frozen or pasteurized.

CONCLUSION

The integration of goats with oil palm can be applied to the integrated pest management programme in relation to the biological control of weed. It is a viable enterprise. With some changes in the normal agronomic practices of the plantation and by using a holistic approach, the synergistic effect of goats in oil palm can be realized to allow the maximization of land use.

For more information kindly contact:

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