

INTEGRATION OF DEER WITH OIL PALM

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ompared to other types of livestock, the domestication of deer is relatively new. In mature oil palm plantation, they can be used as an effective agent for the control of weeds. Adequate fencing and security is vital to ensure deer does not escape.

Rotational grazing of deer in oil palm area with hurricane cyclone fence supported by galvanized iron pipe was proven to prevent the escape of deer. The mature oil palm plantation was proven to have enough pasture for the maintenance and growth of Timor deer (*Cervus timorensis*). The Timor deer is highly adaptable and can survive well in wet and dry conditions. They also have minimal disease problems. The canopy of the palm which resembles the natural habitat of wild life is more suitable for the deer as compared to open grazing. It is the management of deer in mature oil palm according to the concept of mixed farming. The two commodities are integrated to maximize land use.

A holistic approach in the integration can harmonize deer with oil palm and it is proven to be economically viable. Such harmonization is accomplished by rotational grazing in paddocks, secured with hurricane cyclone fence supported by galvanized iron pipe class B, at an interval of 6 m apart, with a height of 1.9 m. The use of deer as agents for weed control reduces herbicide contamination of the environment and reduces labour required for upkeep works. The rotational grazing system for weed control can contribute to realizing the goal of integrated pest management program.

METHODOLOGY

The practice is suitable for oil palm above five years old. Plan area for paddocks and strategically construct hurricane cyclone fence and dark house. Purchase disease free and productive deer, for breeding, 100 hinds and five stags require 47 ha of land.

Construct 12 paddocks of equal size in the 47-ha area and build a dark house in the middle of the area. Except for circle weeding, the undergrowth should be allowed to grow and make sure there is enough pasture. A culvert well is needed for each paddock without natural source



Deer grazing in paddock.

of water. Provide minerals salt at all time. Let the deer graze in the paddock for one month, after which move deer herd to the adjacent paddock. Remove all weeds not grazed by deer through manual or chemical means. Make sure that the dark house is built in the 12th paddock because the deer is rounded in the dark house once a year. Repeat the rotation and deer can come back to the initial paddock after one year.

BENEFITS

1. Deer improves soil nutrients status.
2. Biological control of weeds.
3. Deer replaces labour for weeding

ECONOMIC ANALYSIS

A capital cost of RM 378 000 is required to start a model with 100 breeding hinds and five stags in 47-ha area. The payback period is 10 years. The internal rate of return (IRR) computed for the model is 10% and the net present value (NPV) at 10% discount rate is RM 18 480. The benefit cost ratio (BCR) for a discount rate of 10% is 1.01. After three years of integration, deer can save 50% of the weeding costs.



MARKETS

The venison is considered as gourmet due to its gamy taste. The current market price of fresh venison is RM 30 kg⁻¹. The demand for venison exceeds the supply. Currently, there is no problem to buy and sell deer. There are local suppliers and traders involved in selling and buying of deer.

CONCLUSION

The integration of deer in 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 deer in oil palm can be realized to allow the maximization of land use.

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