

**A STUDY ON ENVIRONMENTAL ASPECTS AND
ASSOCIATED IMPACTS OF SELECTED FARMS
MANAGEMENT PRACTICES**

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**FACULTY OF SCIENCE
UNIVERSITY OF MALAYA
KUALA LUMPUR**

2011

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MANAGEMENT PRACTICES**

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**DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT
FOR THE DEGREE OF MASTER IN TECHNOLOGY
(ENVIRONMENTAL MANAGEMENT)**

**FACULTY OF SCIENCE
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KUALA LUMPUR**

2011

UNIVERSITI MALAYA

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ABSTRACT

Livestock farming contributes the production of food at the expense of environmental degradation on air, water and soil/land. The qualitative study, an initial environmental review (IER) was conducted to identify overall farm operation and management practice via various environmental aspects and associated impacts. The study has identified activities in selected farms with significant impacts on environment are transportation, resource consumption, manure and wastewater management. As observed, two farms have initiated a sustainable and environmentally livestock farming practice by taking consideration on natural resources consumption, animal, waste and impacts to nature. An increase of livestock population with time, a periodically review and assessment on baseline information is proposed in future hence findings might quite different. Other farms operator can adapt a Good Farming Practice (GFP) implemented in two farms determined by the study findings. As recommendation, activities with significant impacts should taken into consideration to mitigate the impacts and proposed modification on any technology used in farm operation so that it meets the economic resources and other aspects of farm producer to achieve sustainable farming in Malaysia.

ABSTRAK

Penternakan binatang menyumbang kepada penghasilan makanan dengan menjejaskan alam sekitar iaitu elemen udara, air dan tanah secara tidak langsung. Kajian kualitatif ini dilakukan secara penilaian alam sekitar peringkat awal untuk mengenalpasti keseluruhan operasi ladang dan pengurusan melalui aspek dan impak alam sekitar. Kajian menunjukkan antara aktiviti-aktiviti yang memberi impak signifikan pada alam sekitar adalah pengangkutan, penggunaan sumber alam, pengurusan baja dan air sisa. Hasil peninjauan juga menunjukkan amalan penternakan binatang yang mapan dan bercirikan alam sekitar telah diadaptasi di dua ladang dengan mengambil kira elemen penggunaan sumber alam, binatang ternakan, sisa dan impak terhadap alam semulajadi. Penilaian semasa berdasarkan maklumat asas disyorkan kerana keputusan didapati mungkin berbeza disebabkan peningkatan populasi ternakan seiring dengan masa,. Keputusan kajian menentukan dua ladang yang mengamalkan amalan penternakan yang baik boleh diadaptasi. Sebagai cadangan, aktiviti-aktiviti yang memberi impak signifikan harus diambilkira untuk mengawal impak-impak tersebut dan modifikasi pada penggunaan teknologi yang digunakan di operasi ladang adalah perlu untuk menepati sumber ekonomi dan aspek lain pengurus ladang dalam mencapai penternakan mapan di Malaysia.

ACKNOWLEDGEMENTS

First and foremost, I would like to thank the Almighty god for standing by me all the way and helping me to complete this research project.

My deepest gratitude to both Dr. Noor Zalina Mahmood and Dr. Noraida Ismail, my research supervisor and co-supervisor for all their guidance, advice, assistance and time throughout the course of this research. I would also like to extend my grateful and sincere thanks to all five farms that allowed me to conduct my research, observation and review in understanding the overall farm operation, and made it possible for me to carried out this research.

I would also like to take this opportunity to thank my friends for their fellowship during my time of site-visit and thesis writing.

I would love to express my gratitude and grateful to my parent, Haji Ramli and all my family members for their continuously support, encouragement and prayer for me to succeed in my studies.

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LIST OF ABBREVIATIONS

AFO	Animal Feeding Operation
AI	Avian Influenza
CAP	Common Agricultural Policy
CH ₄	Methane
CLA	Caseous Lymphadenitis
CO ₂	Carbon Dioxide
Cu	Copper
DOE	Department of Environment, Malaysia
DVS	Department of Veterinary Service, Malaysia
EMP	Environmental Management Program
EMS	Environmental Management System
EPA	Environmental Protection Agency
EU	European Union
FAO	Food and Agricultural Organization
Fe	Ferum
ft	feet
FEC	Fecal Egg Count
GAHP	Good Animal Husbandry Practice
GAP	Good Agricultural Practice
GFP	Good Farming Practice
GHG	Greenhouse gaseous
HACCP	Hazard Analysis Critical Control Points
H ₂ S	Hydrogen Sulfide
IER	Initial Environmental Review
IMO	Indigenous Microorganisms
ISO	International Standard Organization
JE	Japanese Encephalitis
Km	Kilometer
MOA	Ministry of Agriculture, Malaysia
N ₂ O	Nitrogen Dioxide
NH ₃	Ammonia
NH ₄ ⁺	Ammonium
NO _x	Nitrogen Oxide

NRC	National Research Council
SAM	Significance Assessment Matrix
SPS	Sanitary and Phytosanitary
SOP	Standard Operating Procedure
SS	Suspended Solids
TDS	Total Dissolved Solids
UN	United Nation
VOC	Volatile Organic Compound
WTO	World Trade Organization
Zn	Zinc

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