UNIVERSITI PUTRA MALAYSIA

A SURVEY ON THE SKIN CONDITIONS OF LIVESTOCKS IN UNIVERSITI PERTANIAN MALAYSIA FARMS

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A SURVEY ON THE SKIN CONDITIONS OF LIVESTOCKS IN UNIVERSITI PERTANIAN MALAYSIA FARMS

by

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ABSTRACT

A total of 405 cattle, 201 goats, 408 sheep, 354 pigs and 125 buffaloes in the various UPM farms were examined for skin conditions. Diagnoses were based on gross findings and laboratory confirmation. Results of each condition observed were arranged in order of prevalence and case distribution among the sexes, breeds and age-groups. Both the dairy and beef cattle had high prevalence of tick infestation. The Bos indicus breeds were less severely affected than the Bos taunus breeds, but the infestation in both was well controlled. Boophilus microplus and Haemophysalis bispinosa were principle ticks identified. Bovine papillomatosis was common in both herds but were of low prevalence. Lice infestation by Damalinia caorae was found in goats under both intensive and semi-intensive farming systems. More males with dirty coats in the semi-intensive farming group were affected. Mange was a problem in the intensive system of goat farming but not in the semi-intensive system. Chorioptes caprae was the main causal agent followed by Psoroptes cuniculli. There was a total absence of ectoparasitism in the kids. Contagious ecthyma was observed but the prevalence was low in both herds. In pigs, half of the total population were affected by sarcoptic mange. However, the degree of infestation was mild due to recent acaricidal treatment. Abrasions, lacerations and scarring were commonest condition among the buffaloes.

CONTENTS

INTRODUCTION

The skin functions as a barrier separating the rest of the body from the external environment. As such, it frequently acquires various skin conditions due to diseases or injuries. All these can exert their effects on the economy of the livestock industry either directly deteriorating the quality of the hide, wool and others, or indirectly causing poor body condition with subsequent lowering other aspects of productivity.

It is a wise indication to determine the extent of such damage. This project is thus an attempt to survey the prevalence of skin conditions of livestocks in the Universiti Pertanian Malaysia (UPM) farms. It should serve as a start towards understanding the extent of their damaging effects on the livestock production.

LITERATURE REVIEW

The major contribution on skin problems in the literature is on ectoparasitism. Griffiths (1966), prepared a summary on parasites of cattle in Malaysia which covered some portions on arthropods infestation of the skin. Zamirdin *et al*. (1967), recovered several mites from animals in various states of Malaysia. A survey was done by Rajamanickam (1968) on the major tick infestation of domestic animals in West Malaysia. Other recent works on skin arthropod infestation were carried out on species of lice and fleas of animals in Malaysia, (Ahmad Mustaffa, 1969). The common lice of domestic animals and man

in West Malaysia were later established, (Ahmad Mustaffa, 1977).

Chrysomia bessiana was identified by Griffiths (1965) as the main cause of cutaneous myiasis of cattle in Kuala Lumpur. Griffiths (1966) also cited the discovery of Stephanofilaria kaeli infection in Malayan cattles by Buckley (1937). Fadzil (1974), initially carried out studies on stephanofilariasis and followed up with the prevalence survey (1977) in Peninsula Malaysia. In other domestic animals, skin microfilariasis caused by genus Onchocerca spp. was reported in pigs, (Ramachandran and Tan, 1967), and buffaloes (Little, 1979).

Reports on bacterial and mycotic skin diseases were rare. One of the recent descriptions was made by Omar et al. (1980a) on dermatophilosis on two young bovine caused by Dermatophilus congolensis. Skin infections by dermatophytes in cattles in Selangor were described by Griffiths et al. (1969) who found that Bos indicus calves were commonly affected by ringworm, (Trichophyton venrucosum).

Of the viral infections, pox in most species of livestocks and contagious ecthyma in goats, were common in Malaysia, (Ahmad Mustaffa, 1980). Outbreaks of foot-and-mouth disease were reported in 1939 and 1973, (Manuel et al., 1974 and Thuraisingham, 1977), while a recent short outbreak occurred in 1978, (Ahmad Mustaffa, 1980).

Non-infectious skin diseases reported were mainly neoplastic conditions. In a review of cases diagnosed at UPM, Seiler and Punita (1979) reported the skin tumours in livestock animals were cutaneous papillomatosis in goats and porcine melanoma in the Duroc breed

which had been previously mentioned by Little (1979). The latter condition was said to be uncommon in Malaysia but the occurrence was due to the importation of the popular Duroc breed. Multiple squamous cell carcinoma in the skin of a pig associated with cutaneous microfilariasis was reported by Omar and Chong (1970). Other non-infectious conditions reported were pityriasis rosea in pigs, (Griffiths, 1969), and a case of parakeratosis in pigs, (Khaw, 1966).

METHODS AND MATERIALS

This study was conducted over a five-week period from 9th Dec. 1981 to 14th. Jan 1982. Livestock of all species in the Universiti Pertanian Malaysia farms, with the exception of poultry were screened physically for skin conditions. The screening covered the total animal population in all farms except cattle where 207 dairy and 298 beef cattle out of about 259 and 455 animals were screened respectively.

Where the skin condition was characteristic, it was given a definite diagnosis. Doubtful cases were tentatively diagnosed before a final diagnosis were given through laboratory confirmation of the specimen(s) collected during the examination, (Bush, 1975).

Large ectoparasites such as ticks, lice and fly-larvae, were preserved in 10% alcohol and identified later under dissecting microscope. Skin scrapings from suspected mange problem were collected with glycerine and put into small polythene bags. Clearing was done with 10% KOH solution to ease detection and identification of mites

from scrapings.

Specimens for bacterial culture were collected under sterile conditions. Bacterial examination included a direct smear stained by Gram's method and culture on blood agar and McConkey agar plate. Biochemical tests were performed to identify the organism cultured.

Hair pluck from animals with suspected cases of dermatomycosis was collected into small bijou bottle. The hair specimen was subjected to 10% KOH digestion and then looked under high power magnification (400x) for arthrospores. Positive case was identified by innoculating the spores on the hair into Sabouraud's agar.

Raw scabs from suspected dermatophilosis and contagious ecthyma were also collected in small bijou bottles. Giemsa stained impression smears of the scabs were used to demonstrate the filamentous form of Dermatophilus congolensis. Haalstra's (1965) technique of using blood agar in 10% CO_2 was employed in addition, to isolate the organism.

Scabs from goats with suspected contagious ecthyma was subjected to electron microscopic confirmation by the direct smear-negative staining method.

Skin biopsy was done using the Allen's (1974) technique. Biopsy specimens were fixed in 10% formalin and later sectioned for histopathological examination. Biopsies of suspected cutaneous microfilariasis were kept in normal saline. Detection was done on Giemsa stained smear of precipitate derived from the saline centrifuge.

The data collected for each animal species were presented as

prevalence to the various skin conditions found on the total herd of animals examined and as case distribution among the sexes, breeds and age-groups using the following formulae:-

$$\text{Herd prevalence (\%)} = \frac{\text{Total no. of recorded cases}}{\text{Total no. of animals examined}} \times 100$$

$$\text{Case distribution (\%)} = \frac{\text{Total no. of recorded cases in respective group}}{\text{Total no. of animals examined in respective group}} \times 100$$

The results were tabulated according to each respective animal species. Where different management or husbandry methods were used in some species, the tables were then subdivided accordingly.

The division of age-groups in the tables was based on the growth stages of the animals, ie. preweaning; post-weaning to puberty; and adults. For pigs, they were grouped under piglets; weaners; porkers; and parents.

RESULTS AND DISCUSSION

Dairy Cattle

A total of 207 cattle were examined. Nine different conditions were observed with tick infestations as the most prevailing condition affecting 48.3% of the animals studies, (Table 1). The male animals were affected to a lesser extent than the females because a greater proportion of the males in the dairy farm were young animals which

TABLE 1

The total recorded cases and case distribution of the skin conditions of cattle in the Dairy Unit, UPM.

	Skin Condition:	Total No. of Recorded Cases (%)	Case Distribution (%)							
			Sex		Breed			Age		
			Female	Male	Friesian•	Jersey•	LID	Pre-weaning (Birth-3mo)	Post-weaning (3mo-1½yrs)	Adult (> 1½yrs)
1.	Tick	100(48.3)	95(57.2)	5(12.2)	17(36.2)	32(44.4)	51(57.9)	7(21.9)	16(27.6)	77(68.9)
2.	Papilloma	12(5.8)	8(4.8)	4(9.5)	3(6.4)	2(2.8)	7(7.9)	0(-)	5(8.6)	7(6.0)
3.	Frictional hyperkeratosis	10(4.8)	9(5.4)	1(2.4)	4(8.5)	6(8.3)	0(-)	0(-)	3(5.2)	7(6.0)
4.	Nutritional alopecia••	8(3.8)	0(-)	8(19.0)	1(2.1)	4(5.5)	3(3.4)	8(25.0)	0(-)	0(-)
5.	Cutaneous myiasis	7(3.4)	6(3.6)	1(2.4)	2(4.2)	4(5.5)	1(1.1)	1(3.1)	2(3.4)	4(3.4)
6.	Dermatophilosis	6(2.9)	5(3.0)	1(2.4)	2(4.2)	3(4.2)	1(1.1)	1(3.1)	3(5.2)	2(1.7)
7.	Abrasions and/or Lacerations	3(1.4)	3(1.8)	0(-)	0(-)	1(1.4)	2(2.3)	0(-)	0(-)	3(2.6)
8.	Cutaneous abscessation	2(1.0)	2(1.2)	0(-)	0(-)	2(2.8)	0(-)	0(-)	1(1.7)	1(0.8)
9.	Overgrown hooves	1(0.5)	1(0.6)	0(-)	0(-)	0(-)	1(1.1)	0(-)	0(-)	1(0.8)
	Total No. of Animals Examined	207	166	41	47	72	88	32	58	117

Note:

LID - Local Indian Dairy
• - Include crossbred animals
•• - Tentatively diagnosed

tend to harbour less ticks. Furthermore, the larger number of lactating females in the dairy herd, also correlates to the observations done by Wharton et al. (1970) that animals under such stressfull condition were more susceptible to tick infestation. The Local Indian Dairy (LID) cattle had a higher prevalence as compared to the Friesians, Jerseys and their respective crosses. This was not surprising as the LID cattle were raised in the field while the others were kept within the vicinity of the stalls. However, the degree of infestation in the LID cattle was mild, with ticks found only at the ears and eyelids. Ticks collected from these regions were identified as Haemophysalis bispinosa. On the other hand, the ticks from the Friesians and Jerseys were Boophilus microplus, which were commonly found at the axillae and groin-inguinal regions, and sometimes throughout the whole body when the infestation was heavy.

The second most prevalent condition was papillomatosis where 5.8% of the animals were affected. This low prevalence does not favour distribution comparison but according to Moulton (1961), there is no sex or breed predilection by bovine papilloma virus while animals of less than 2 years old are mostly affected.

The 10 cases of frictional hyperkeratosis were found only on a group of post-weaning and adult cattle kept in the same stall. This condition was due to constant friction of the dorsal part of the neck with the wooden beams.

Nutritional alopecia was tentatively diagnosed in a group of

8 pre-weaning male calves. Specimens collected were free from primary pathogens except for one case where Dermatophilus congolensis was isolated from the lesion. It was stated that excessive vegetable fat intake in the milk replacer can result in nutritional alopecia, (Jubb and Kennedy, 1970).

Only 3.4% of the total herd was affected by cutaneous myiasis at the time of the survey, which suggested low incidence. Chrysomia bezziana larvae were identified as the causal agent for all. The Bos taurus breeds were more susceptible. Wounds at the ears, axillae and groins suggested tick predispositions.

Dermatophilosis caused by Dermatophilus congolensis was found in the same group of animals with frictional hyperkeratosis. Three Friesians and 2 Jerseys of the total 6 animals affected showed multiple small scabby lesions on the dorsal mid-line of neck and wither suggesting infection after epidermis disruption, (Roberts, 1967). Omar et al. (1980b) stated that cattle of all groups were susceptible and severe lesions were found on calves. Skin lesion on the remaining preweaning calf was, however, not apparent.

The low prevalence of abrasions and/or lacerations was due to light handlings on the dairy herd as compared to the beef herd, (see below).

Two cases of cutaneous abscessations were observed. Corynebacteria spp. was isolated from one while specimen from the other one was unfortunately contaminated.

One case of overgrown hooves was observed in an LID cow kept

TABLE 2

The total recorded cases and case distribution of the skin conditions of cattle in the Beef Unit, UPM.

	Skin Condition:	Total No. of Recorded Cases (%)	Case Distribution (%)												
			Sex		Breed							Age			
			Female	Male	Brahman	Kedah-Kelantan	Hereford-cross	Santa-Gertrudis	LID	Friesien-cross	Jersey-cross	Preweaning (Birth-7mo)	Post-weaning (>7mo-1½yrs)	Adult (> 1½yrs)	
1.	Tick	65(21.8)	51(25.4)	14(14.4)	33(73.3)	6(3.7)	15(31.9)	9(69.2)	0(-)	2(25.0)	0(-)	5(17.9)	13(18.6)	47(23.7)	I
2.	Papilloma	26(8.7)	15(7.5)	11(11.3)	7(15.6)	6(3.7)	6(12.8)	3(23.1)	2(10.0)	1(12.5)	1(25.0)	1(3.6)	10(13.9)	15(7.6)	S
3.	Abrasions and/or Lacerations	12(4.0)	7(3.5)	5(5.1)	2(4.4)	1(0.6)	5(10.6)	0(-)	2(10.0)	2(25.0)	0(-)	2(7.1)	2(2.8)	8(4.0)	I
4.	Cutaneous myiasis	9(3.0)	5(2.5)	4(4.1)	0(-)	0(-)	6(12.8)	2(15.4)	0(-)	1(12.5)	0(-)	1(3.6)	4(5.6)	4(2.0)	
	Total No. of Animals Examined	298	201	97	45	161	47	13	20	8	4	28	72	198	

Note:

LID - Local Indian Dairy

in the field.

Beef Cattle

Four conditions were observed, (Table 2). Tick infestation was most prevalent involving 21.8% of the total 298 animals. The degree of infestations was mild in the Hereford crossbreds, Santa Gertrudis and the Brahman cattle. This was because deticking had been done one week prior to the survey. The number of affected Kedah-Kelantan (KK) cattle was much lower to suggest the indigenous resistence of the breed. More females than the males were affected but all ages were prone to infestation, consistent with the findings of Wharton, et al.,(1970).

Papillomatosis was the second most prevalent condition with 8.7% of the cattle affected. The distribution patterns were similar to the dairy herd. Again, the low prevalence does not permit proper distribution studies.

The prevalence of abrasions and/or lacerations was expectedly higher (4.0%) in beef than dairy herd because of the inevitable rubbing against gates, fences and other coarse objects in the beef cattle.

Cutaneous myiasis caused by Chrysomia bezziana was observed in 9 animals consisting of Hereford crossbreds, Friesian and Santa Gertrudis. The location of the wounds and the greater susceptibility of these breeds highly suggest tick predisposition.

Goat (Serdang Farm)

Nine conditions were observed from the total of 91 goats, kept

~~TABLE 3~~

~~The total recorded cases and case distribution of the skin conditions of goats in the Serdang Farm, UPM.~~

	Skin Condition:	Total No. of Recorded Cases(%)	Case Distribution (%)							
			Sex		Breed			Age		
			Female	Male	Katjang	Jamnapari*	Anglo-Nubian*	Preweaning (Birth-3mo)	Post-weaning (>3mo- 1yr)	Adult (> 1yr)
1.	Lice	30(33.0)	23(32.9)	7(33.3)	15(29.4)	10(37.0)	5(38.5)	7(50.0)	17(56.7)	6(12.8)
2.	Mange	24(26.4)	16(22.9)	7(33.3)	17(33.3)	7(25.9)	0(-)	0(-)	9(30.0)	14(29.8)
3.	Contagious ecthyma	6(6.5)	5(7.1)	1(4.8)	4(7.8)	0(-)	2(15.4)	2(14.3)	1(3.3)	3(6.4)
4.	Tick	4(4.4)	3(4.3)	1(4.8)	2(3.9)	1(3.7)	1(7.7)	1(7.1)	1(3.3)	2(4.2)
5.	Cutaneous abscessation	4(4.4)	3(4.3)	1(4.8)	2(3.9)	2(7.4)	0(-)	0(-)	0(-)	4(8.5)
6.	Ringworm	2(2.2)	2(2.9)	0(-)	0(-)	1(3.7)	1(7.7)	1(7.1)	1(3.3)	0(-)
7.	Overgrown hooves	2(2.2)	2(2.9)	0(-)	0(-)	1(3.7)	1(7.7)	0(-)	1(3.3)	1(2.1)
8.	Interdigital wound	1(1.1)	1(1.4)	0(-)	1(1.9)	0(-)	0(-)	0(-)	1(3.3)	0(-)
9.	Dermatophilosis	1(1.1)	1(1.4)	0(-)	0(-)	1(3.7)	0(-)	0(-)	0(-)	1(2.1)
	Total No. of Animals Examined	91	70	21	51	27	13	14	30	47

Note:

* - Include each respective crossbred animals

under intensive system in Serdang, (Table 3). Lice infestation topped the list with 33.0% of the herd affected. Only Damalinia caprae, the most common goat-louse in Malaysia, (Ahmad Mustaffa, 1977), was found. No sucking lice, Linognathus africanus, was present although it had previously been seen in the farm, (Sheikh-Omar, 1982). The younger animals were more proned to the infestation but the degree was mild to cause any clinical problem. Prevalence among sexes and breeds were similar.

Mange caused by Chorioptes caprae was observed on 26.4% of the animals. Lesions were seen on the legs and scrotal tip as dry crusts over the surface. An elapse of time was apparently required for the establishment of clinical infestation in the preweaning kids. This explains the absence of mange in this group of animals. The 13 Anglo-Nubian goats were not affected while the male animals were higher in susceptibility. However, the presence of breed and sex predilection was not clear.

The prevalence of contagious ecthyma was low. Comparison on distribution was ineffective, but most symptoms were said to occur in young kids, (King, 1980).

There were 4 incidental tick findings on the legs that involved only Haemophysalis bispinosa, while 4 others had cutaneous abscessation. Staphylococcus aureus was isolated from one and no specimens were collected from the others.

There were 2 cases of dermatomycoses caused by Trichophyton spp. which were confirmed on the presence of arthrospores and growth

TABLE 4

The total recorded cases and case distribution of the skin conditions of goats in the Pucong Farm, UPM

	Skin Condition:	Total No. of Recorded Cases (%)	Case Distribution (%)				
			Sex		Age		
			Female	Male	Preweaning (Birth-3mo)	Post-weaning (> 3mo-1yr)	Adult (> 1yr)
1.	Lice	26(21.8)	7(8.0)	19(59.3)	4(36.4)	12(30.0)	10(14.7)
2.	Mange						
	a) Chorioptes	9(7.6)	4(4.6)	5(15.6)	0(-)	4(10.0)	5(7.3)
	b) Psoroptes	8(6.7)	4(4.6)	4(12.5)	0(-)	3(7.5)	5(7.3)
3.	Contagious ecthyma	7(5.9)	6(6.9)	1(3.1)	2(18.2)	2(5.0)	3(4.4)
4.	Tick	1(0.8)	1(1.1)	0(-)	1(9.1)	0(-)	0(-)
5.	Laceration	1(0.8)	1(1.1)	0(-)	0(-)	0(-)	1(1.5)
6.	Cutaneous senile atrophy	1(0.8)	0(-)	0(-)	0(-)	0(-)	1(1.5)
	Total No. of Animals Examined	119	87	32	11	40	68

Note: All animals were Jamnapari breed and its crosses

morphology on culture.

Overgrown hooves, common in intensive farming system, were found in 2 female goats. One animal had interdigital wound which had been treated, hence invalidated bacteriological examination.

Lastly, Dermatophilus congolensis was recovered from one Jamnapari goat with dry crusty lesions around the nostril and pinna of the ears. The infection was however, said to be of no economic importance in goats, (Munro, 1978).

Goat (Pucong Farm)

A total of 119 animals consisting of Jamnapari and its crosses were examined (Table 4). These goats were raised under semi-intensive system with the males and females separated. Field observations had revealed continous dirtying of haircoat in the younger male goats resulted from mounting among each other. This was likely a contributing factor towards higher lice infestation in the male animals (59.0%) as compared to that in females (8.0%). The lice which were found on dorsal mid-line of the neck and wither were identified as Damalinia caprae.

Mange was not a problem in Pucong goats but 2 species of mites, Chorioptes caprae and Psoroptes cuniculli, were recovered from the legs and aural canals, respectively. The total absence of mange in the kids was due to the time elapse factor previously mentioned, and the dirty coat might have contributed to the higher prevalence of mange among the male animals.

TABLE 5

The total recorded cases and case distribution of the skin conditions of pigs in the Pucong Farm, UPM.

	Skin Condition:	Total No. of Recorded Cases (%)	Case Distribution (%)										
			Sex		Breed*					Age			
			Female	Male	Landrace	Yorkshire	Duroc	Chesterwhite	Hampshire	Piglet	Weaner	Porker	Parent
1.	Mange	189(53.4)	88(54.3)	101(52.6)	97(68.3)	62(47.7)	19(43.2)	10(30.3)	1(20.0)	0(-)	85(60.7)	89(67.4)	15(38.5)
2.	Abrasions and/or Lacerations	21(5.9)	12(7.4)	9(4.7)	8(5.6)	5(3.8)	3(6.8)	5(15.1)	0(-)	0(-)	2(1.4)	14(10.6)	5(12.8)
3.	Chronic pustular dermatitis	8(2.3)	5(3.1)	3(1.6)	3(2.1)	0(-)	4(9.1)	0(-)	1(20.0)	0(-)	0(-)	0(-)	8(20.5)
4.	Cutaneous abscessation	2(0.6)	1(0.6)	1(0.5)	2(1.4)	0(-)	0(-)	0(-)	0(-)	0(-)	1(0.7)	0(-)	1(2.6)
5.	Lichenification	2(0.6)	0(-)	2(1.0)	0(-)	0(-)	2(4.5)	0(-)	0(-)	0(-)	0(-)	0(-)	2(5.1)
C.	Tabanus spp - (Biting on the parent animals)												
	Total No. of Animals Examined	354	162	192	142	130	44	33	5	43	140	132	39

Note:

• - Include respective crossbred animals

Seven animals showed characteristic mouth lesions of contagious ecthyma. One lactating doe, however, showed extra lesions on the teats which she had likely acquired from its affected twin-kids.

A tick was recovered incidentally from the leg of a goat and identified as Haemophysalis bispinosa. Thigh laceration was found in one animal and an old doe (> 5 years) was observed to have generalised cutaneous senile atrophy appearing as inelasticity, wrinkling of the skin with sparse haircoat.

Mange caused by Sarcoptes scabei var. suis, was the most prevailing condition in pigs, affecting 53.4% of the total 354 animals examined, (Table 5). The degree of infestation was mild as acaricidal treatment had been done following an outbreak of the disease one week before the survey was conducted. All sexes, breeds and ages, except for the piglets, were said to be susceptible, and well-managed, clean animals were more resistent, (Griffiths, 1964). The lower prevalence in the parent pigs was because they were the best managed group in the herd. The total abscence of infestation in piglets was because an elapse of time was required (6 weeks or more) to establish clinical symptoms, (Griffiths, 1964).

Most other skin conditions were low in prevalence. Abrasions and/or lacerations were common features in the porkers and adult pigs, as a result of fighting and struggling. The Chester-White cross-breds were observed to be more proned to the condition.

TABLE 6

The total recorded cases and case distribution of the skin conditions of sheep in the Serdang Farm, UPM.

Skin Condition:	Total No. of Recorded Cases (%)	Case Distribution (%)							
		Sex		Breed			Age		
		Female	Male	Local	Dorset-horn	Wiltshire•	Preweaning (Birth-3mo)	Postweaning (> 3mo-1yr)	Adult (> 1yr)
1. Overgrown hooves	3(2.8)	2(2.6)	1(3.2)	0(-)	0(-)	3(3.9)	0(-)	0(-)	3(5.2)
2. Laceration	2(1.8)	2(2.6)	0(-)	1(5.5)	1(7.1)	0(-)	0(-)	0(-)	2(3.4)
3. Tick	2(1.8)	2(2.6)	0(-)	1(5.5)	1(7.1)	0(-)	0(-)	1(3.3)	1(1.7)
4. Cutaneous myiasis	1(0.9)	0(-)	1(3.2)	0(-)	0(-)	1(1.3)	0(-)	1(3.3)	0(-)
5. Cutaneous abscessation	1(0.9)	0(-)	1(3.2)	0(-)	0(-)	1(1.3)	0(-)	1(3.3)	0(-)
Total no. of Animals Examined	108	77	31	18	14	76	20	30	58

Note:

• - Include crossbred animals

Lesions with microscopic features of chronic pustular dermatitis were seen on the shoulders of 8 parents pigs. The occurrence was likely due to the consistent irritation and pressure on the skin while the animals were lying down.

Focal cutaneous abscessation in two cases were caused by Staphylococcus aureus, while the exaggeration of normal markings or lichenification was found on 2 Duroc boars.

Lastly, flying arthropods of the genus Tabanus were observed biting and feeding on the skin of the parent pigs without causing any apparent annoyance.

Sheep

Five skin conditions of low prevalence were recorded through the examination of 108 sheep, (Table 6).

Overgrown hooves were observed in 3 adult Wiltshires kept under intensive system. These animal were only allowed to graze when cut-grasses were inadequate.

Lacerations on the legs where there was no wool covering, were observed in 2 animals.

The tick recovered from 4 animals were all Haemophysalis bispinosa, while the only case of maggot wound was caused by Chrysomia bezziana larvae.

One male sheep had perineal abscessation but due to accidental contamination of the sample collected, bacterial culture was not attempted.

TABLE 7

The total recorded cases and case distribution of the skin conditions of buffaloes in the Pucong Farm, UPM.

	Skin Condition:	Total No. of Recorded Cases(%)	Case Distributions (%)						
			Sex		Breed		Age		
			Female	Male	Swamp-buffalo	River-buffalo	Preweaning (Calving-1yr)	Post-weaning (> 1yr-3yrs)	Adult (> 3yrs)
1.	Abrasion, laceration and/or scarring	48(38.9)	40(41.2)	8(2.9)	46(41.1)	2(15.4)	2(100.0)	13(22.0)	33(51.6)
2.	Albinoid	7(5.6)	6(6.2)	1(3.6)	7(6.2)	0(-)	1(50.0)	1(1.7)	5(7.8)
3.	Chronic dermo-titis (unknown etiology)	6(4.8)	3(3.1)	3(10.7)	6(5.4)	0(-)	0(-)	6(10.2)	0(-)
	Total No. of Animals Examined	125	97	28	112	13	2	59	64

Buffalo

Table 7 shows a high prevalence (38.5%) of cutaneous lacerations/ abrasions/scarring. These conditions were due to rubbing friction incriminated by the broad body size of the adult buffaloes relative to the narrow crush built to sustain proper physical restraint of the animals. This problem was observed to be especially common in pregnant animals.

A higher prevalence (5.6%) for albinoid was found present in the 125 animals examined. This condition is associated as a recessive trait, is observed in about 3% of the total Swamp-buffalo population in Malaysia, (FAO, 1977).

Chronic dermatitis of unknown etiology was found on the sternal skin of 6 post-weaning calves. Diagnosis was based on microscopic findings.

CONCLUSION

Time was a major constraint in this survey. It is obvious that the time available for the survey is inadequate to see the whole spectrum of the skin conditions of livestock in the UPM farms. Furthermore, the prevalence of the cases will depend on various factors such as farm activity, human factor and season. These factors also limit to a more detailed epidemiological study of the conditions observed.

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