Chapter VIII

SUMMARY

1. Mycoses of animals has been studied and 326 isolates of fungi were obtained from 876 skin lesions of which 287 were identified and placed in 22 species including 9 dermatophytic fungi. The dermatophytic isolates are: Trichophyton mentagrophytes, T. verrucosum, T. simii, T. equinum, T. tonsurans, T. violaceum, T. rubrum, Microsporum canis and M. gypseum.

2. Studies on the degree of pathogenicity of the dermatophytes have shown that Trichophyton rubrum, T. tonsurans and T. violaceum are weak pathogens and are of very minor veterinary importance. The infection is influenced by dry climate with less rain and low temperature.

3. The proportion of air-borne spores of dermatophytic fungi in the air within cowsheds and over grazing field is low. Commonly recorded types of other fungi are species of Aspergillus, Penicillium and Cladosporium. Actinomycetes such as Thermoactinomyces vulgaris and Micropolyspora faeni are common over air of grass silo. M. faeni is present in the oropharyngeal passage of animals suffering from respiratory disease. The major changes of spore concentration depend on the weather conditions and phenology.
of the surroundings. Spore concentrations are higher in the cowsheds than in the field.

4. Animal feeds are contaminated by a great variety of fungi, prominent infecting types being *Aspergillus*, *Penicillium* and *Mucor*. *A. flavus*, *A. terreus*, *A. niger*, *A. fumigatus* and *A. candidus* are recorded; *A. flavus* being the most frequently present fungi in all feed samples with higher degree of incidence. Out of 17 strains of *A. flavus*, 4 strains show the characteristic fluorescence associated with aflatoxin production in culture substrate. Toxins elaborated by *A. flavus* strains in feed include aflatoxin (*B*<sub>1</sub>), at levels of 1.1, 6.5 and 20 ppb. The influence of moisture on toxin production in natural substrate has been noted. The chicken embryos are sensitive to aflatoxins which are toxic at certain doses; *LD*<sub>50</sub> is between 0.04 μg and 0.05 μg per embryo.