BOVINE ABORTIONS

Laboratory Findings During the Current Year

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Introduction

An important financial loss to ranchers and farmers results annually from abortions in cattle. From September 1, 1968 through April 30, 1969, a total of 229 aborted bovine fetuses were submitted to the Department of Veterinary Science for diagnostic analyses. Standard bacteriological and mycological procedures were conducted on the fetal stomach contents. In addition, chick embryo inoculations, histopathological studies, and fluorescent antibody procedures were conducted to aid in the diagnoses.

Methods

The laboratory findings are shown in Table 1.

Table 1. Laboratory findings of 229 aborted bovine fetuses during the current year.

	No. of Positive Isolations/Identifications
Bacteria — PPLO	
Vibrio fetus	2
Listeria monocytogenes	11
Staphylococci, hemolytic	8
Streptococci, beta	5
Corynebacterium pyogenes	11
Pasteurella multocida	2
Mycoplasma sp. (PPLO)	49
Viruses — Spirochetes	
Chlamydia (Psitticosis)	52
Leptospira pomona	4
Fungi	
Aspergillus niger	18
Nocardia asteroides	4
Candida albicans	2
Actinomyces sp.	1
Microsporum nanum	2
Sporotrichum schenkeii	1

Vibrio fetus, Brucella abortus, Listeria monocytogenes, and **Leptospira pomona** have been categorized as the etiological agents of abortion in livestock for some years[5]. Through vaccination and other control measures, abortions caused by such classical agents have been significantly reduced. The relatively high incidence of the **Chlamydia** (Psitticosis-LGV virus) and the **Mycoplasma sp.** (PPLO) in the aborted fetuses is of interest. Chlamydial and PPLO abortions have both been described in the literature[5],[6], however, the reported incidence of such diseases has been low. The identification of both agents requires more than routine microbiological procedures, and this possibly has contributed to the low numbers of such abortions reported.

Although the pathogenicity of the other bacterial isolates is not predominately associated with an abortion syndrome, many have been found as the causative agent(s). Staphylococci[7], Streptococci[3], **Corynebacterium pyogenes**[2], **and Pasteurella multocida**[5] have been found to be the cause of abortion in cattle.

A number of fungi have been incriminated as agents of abortion. **Nocardia**[4], **Microsporum**[5], **Candida**[8], and **Aspergillus**[1] species are capable of causing bovine abortions.

In all, agents capable of causing abortions were isolated from 152 of the 229 fetuses. A total number of 172 agents were found; however, in 20 cases more than a single agent was isolated or identified. It should be noted that injury, noxious chemical and biological agents, climatic stress and borderline nutrition can also cause, or contribute to, abortions in cattle.

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