

INCIDENCE AND MORTALITY OF MUCOSAL DISEASE IN IOWA

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MUCOSAL DISEASE was first recognized in Iowa as an apparently new disease entity in cattle in January of 1951. The following inquiry is often made: Is the incidence of mucosal disease in cattle increasing in Iowa? It is difficult to determine accurately the incidence of any disease in farm animals.

The following information definitely suggests that there has not been a decline in the incidence of mucosal disease in

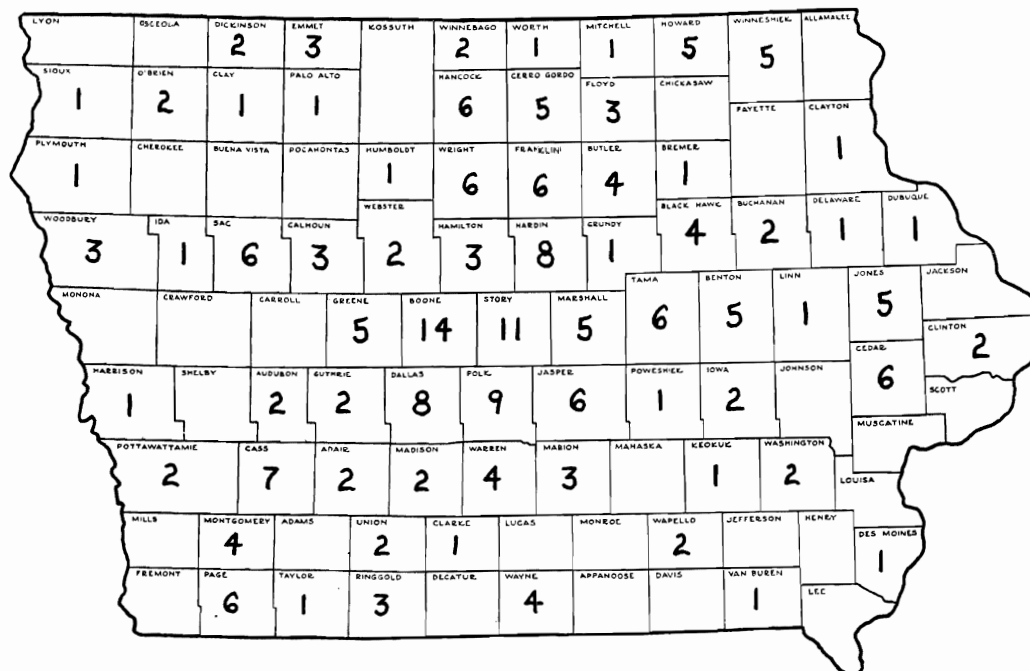


Figure 1.

Iowa. The information is presented in three columns. The date represents the day the first animal was autopsied in our post-mortem laboratory. In the last column the first figure separated from the

second figure by a diagonal line means a certain number of deaths occurred out of the total number of the herd. Distribution of cases of mucosal disease in Iowa may be noted in Figure 1.

MORTALITY IN MUCOSAL DISEASE IN IOWA

Herd	Date	Deaths	Herd	Date	Deaths	Herd	Date	Deaths
1	1-26-51	7/70	3	2-22-54	3/54	29	1955	8/150
2	1-29-51	1/?	4	3-10-54	5/42	30	1955	3/30
3	2-21-51	6/?	5	3-15-54	5/23	31	1955	2/100
4	2-21-51	1/22	6	3-22-54	4/?	32	1955	1/28
5	4-11-51	4/33	7	3-30-54	5/37	33	1955	7/30
6	4-27-51	1/?	8	3-31-54	9/23	34	1955	4/24
7	5-18-51	3/24	9	5-8-54	1/?	35	1955	8/200
8	8- 3-51	1/?	10	5-11-54	12/70	36	1955	2/15
9	10-1-51	6/34	11	6-4-54	2/17	37	1955	1/100
10	10-23-51	4/50	12	6-5-54	6/?	38	1955	1/25
11	11-29-51	5/62	13	6-9-54	3/?	39	1955	2/40
Reports from Veterinarians			14	7-28-54	6/160	40	1955	1/25
12	1951	2/26	15	8-18-54	1/?	41	1955	1/12
TOTAL			16	9-4-54	1/?	TOTAL		
1	2-16-52	1/9	17	9-21-54	2/?	109		
2	2-21-52	2/26	18	10-1-54	4/27	Cattle from 24 additional		
3	2-22-52	2/29	19	11-13-54	4/?	herds have been necropsied		
4	2-23-52	10/37	20	12-18-54	1/?	at Iowa Veterinary Medical		
5	3-7-52	1/8	Reports from Veterinarians			Diagnostic Laboratory since		
6	3-10-52	1/3	21	1954	2/25	1951.		
7	3-18-52	7/53	22	1954	1/50	1	2-11-56	2/?
8	5-20-52	1/?	23	1954	6/150	2	2-12-56	1/100
9	9-8-52	1/70	24	1954	2/60	3	3-12-56	1/?
10	9-24-52	1/52	25	1954	2/25	4	4-23-56	2/?
11	10-10-52	1/?	26	1954	1/20	5	4-27-56	4/45
12	11-11-52	5/?	27	1954	1/?	6	5-5-56	1/35
Reports from Veterinarians			28	1954	1/20	7	5-23-56	1/?
13	1952	1/40	29	1954	3/80	8	5-28-56	1/?
14	1952	3/15	30	1954	2/15	9	5-29-56	1/?
TOTAL			TOTAL			10	6-9-56	1/?
1	1-12-53	1/?	1	1-28-55	6/50	11	8-4-56	5/13
2	2-9-53	8/100	2	1-31-55	3/37	12	9-12-56	1/?
3	2-12-53	4/?	3	2-3-55	2/?	13	9-1-56	5/?
4	2-21-53	13/55	4	2-7-55	1/?	14	9-28-56	1/?
5	4-21-53	5/?	5	2-14-55	4/?	15	9-28-56	5/16
6	4-24-53	9/42	6	2-17-55	5/?	16	11-9-56	3/21
7	5-16-53	12/174	7	2-26-55	1/?	17	11-18-56	2/50
8	6-12-53	4/?	8	2-28-55	2/?	18	12-20-56	1/?
9	7-14-53	3/?	9	3-4-55	2/42	Reports from Veterinarians		
10	7-20-53	1/?	10	3-4-55	3/25	19	1956	2/40
11	7-27-53	11/56	11	3-5-55	1/?	20	1956	2/15
12	9-12-53	1/?	12	3-23-55	1/?	21	1956	3/25
13	9-14-53	33/96	13	3-28-55	1/55	22	1956	3/20
14	9-25-53	3/8	14	3-29-55	2/?	23	1956	8/200
15	12-4-53	12/75	15	3-29-55	1/?	24	1956	2/?
16	12-19-53	1/?	16	3-29-55	1/?	25	1956	3/?
17	12-29-53	9/27	17	4-6-55	12/?	26	1956	6/80
Reports from Veterinarians			18	4-30-55	1/?	27	1956	2/42
18	1953	2/40	19	7-2-55	3/?	28	1956	1/35
19	1953	2/30	20	8-4-55	3/?	29	1956	2/50
20	1953	1/20	21	8-25-55	1/?	30	1956	3/70
21	1953	2/20	22	9-8-55	2/?	31	1956	3/110
22	1953	2/40	23	9-15-55	3/17	32	1956	1/20
TOTAL			24	11-2-55	2/?	33	1956	1/40
1	1-7-54	2/52	25	11-24-55	1/?	TOTAL		
2	2-17-54	9/18	26	12-6-55	1/?	80		
Reports from Veterinarians			Reports from Veterinarians			1	1-11-57	4/37
1	1-7-54	2/52	27	1955	2/25	2	1-22-57	1/9
2	2-17-54	9/18	28	1955	1/10	3	1-22-57	1/9
						4	1-26-57	2/40

Herd	Date	Deaths
5	2-21-57	2/30
6	2-26-57	5/64
7	3-4-57	9/20
8	3-5-57	1/153
9	3-13-57	1/42
10	3-20-57	4/100
11	3-27-57	1/140
12	3-26-57	2/46
13	3-29-57	1/140
14	3-27-57	7/20
15	3-30-57	2/14
16	4-6-57	1/40
17	4-16-57	5/200
18	4-17-57	2/64
19	4-23-57	3/25
20	4-27-57	2/70
21	5-2-57	2/?
22	5-15-57	1/15
23	5-22-57	5/?
24	5-29-57	3/?
25	6-8-57	3/15
26	7-3-57	7/12
27	8-20-57	1/90
28	10-5-57	2/37
29	10-12-57	2/14
30	10-25-57	4/35
31	11-19-57	1/23

**Iowa Veterinary
Diagnostic Laboratory**

32	1957	3/?
33	1957	3/100
34	1957	1/?
35	1957	1/?
36	1957	1/?
37	1957	1/5
38	1957	4/40
39	1957	2/59
40	1957	3/88
41	1957	1/?
42	1957	2/?

Reports from Veterinarians

43	1957	1/35
44	1957	1/25
45	1957	2/60
46	1957	1/2
47	1957	1/30
48	1957	2/15
49	1957	3/25
50	1957	4/30

TOTAL 124

One should suspect mucosal disease if the following history and symptoms are present. The animal is between 6 and 18 months of age, completely refuses food, may or may not drink large quantities of water, usually has a normal temperature, persistent diarrhea often accompanied with tenesmus, and has a lethargic attitude. It is emphasized that at least one-third of the animals will not show any oral or eye lesions. Most of the cases will run a course of 4 to 10 days duration. It

must be differentiated from urethral calculus that usually causes marked straining and diarrhea in young cattle caused by coccidiosis. If urethral calculus and coccidiosis can be eliminated, the above history and symptoms strongly suggests that it could be mucosal disease.

Our experience at Iowa State College indicates that a necropsy is usually necessary to make a specific diagnosis of mucosal disease. A good history and clinical observations are helpful, but in some instances we have failed to diagnose the condition in the antemortem state.

It is believed at times upon the death of one or two animals in a herd that a specific diagnosis is not always made because the local veterinarian is not afforded the opportunity to perform a necropsy. We feel that post-mortem examinations of many of these cases with a history and symptoms suggestive of mucosal disease would substantiate a specific diagnosis of mucosal disease and that the incidence of mucosal disease may be higher than our facts suggest.

The above information has been presented to clarify the confusion and misunderstanding that exist about the morbidity and mortality of mucosal disease. Many factors such as lack of complete knowledge of this disease, incomplete records, and insufficient herd observations are primarily responsible for insufficient information on morbidity. An attempt in all instances has been made to determine the mortality in each herd by questionnaire. Even this method has failed in a number of cases. Furthermore, it is a common practice now for farmers in Iowa to immediately sell the remaining animals in a group of cattle as soon as a diagnosis of mucosal disease is made.

Perusal of the above data shows a mortality of 1 to 50 percent. A mortality of 20 to 30 percent has occurred in a number of herds, and a 5 percent mortality is very common. Morbidity calculations have not been given in the tables included. However, in the cases which we have been able to observe almost all animals showing definite symptoms have died regardless of treatment.

End.