The exposure-to-cold theory can scarcely afford a satisfactory explanation of the occurrence of this peritonitis. It would, in my opinion, be a thankful task for science to investigate more thoroughly the cause of this malignant peritonitis. Whereas the latter has generally a fatal termination in one or two days, the alterations induced by an accidental foreign body may frequently be already of several weeks' duration—a circumstance which may be of importance in legal cases.

In conclusion I shall briefly relate a case that ought to be worthy of attention in this direction, in respect of its etiology. A strong well-nourished cow turned suddenly ill under the following symptoms: complete loss of appetite, great difficulty of respiration, violent action of the heart, anxious staring expression, abundant perspiration, general collapse—in short the train of symptoms suggested internal hæmorrhage or rupture of some vital organ. Death took place in less than twenty-four hours. At the autopsy I found in the abdomen about three stable-pailfuls of dark green fluid without any clot. The peritoneum was permeated with strongly filled vessels, and yellowish green in the whole of its extent, as in advanced icterus, whereas the pleura had the normal colour. It seemed extremely interesting to find the abdominal aspect of the diaphragm yellowish green and its thoracic aspect on the contrary pale red. I found that the cause of the disease and of death was a rupture of the gall-bladder in consequence of obstruction of its duct with gall stones.

This case shows:—

1. How quickly an abundant serous effusion can take place into the abdominal cavity.
2. The eminently injurious action of bile on the peritoneum.
3. How rapidly the bile pigments can be distributed through the peritoneum by the lymphatics.

All of these particulars ought to be of weight in investigating the origin of peritonitis.

THE ERADICATION OF PLEURO-PNEUMONIA FROM HOLLAND.¹

By M. BUTEL, Meaux, France.

UP to the year 1870 pleuro-pneumonia caused annually in Holland such frightful losses that the introduction of cattle from it into other states was generally forbidden or submitted to certain restrictions. Thus, England, although it was itself poisoned with pleuro-pneumonia, would not permit the entrance into its territory of living Dutch cattle, except on the condition that for a whole year there should not have been observed a single case of pleuro-pneumonia in Holland. That was an absolute but disguised prohibition.

The Dutch law against contagious maladies which has permitted the combating of pleuro-pneumonia, dates from the 18th July, 1870.

¹ Translated from a paper contributed to the International Veterinary Congress, Paris, 1889.

Fortified by the opinion emitted at the International Congress (Veterinary) at Zurich in 1867, which recognised in principle that pleuro-pneumonia ought, from the point of view of sanitary police, to be considered as a malady that does not propagate itself except by contagion, the Government decided to engage in a vigorous struggle against that disease. The law of 1870 ordained only the slaughter of affected animals, but from 1872 a resolution prescribed the slaughter of suspected animals. For the first years recourse was had to this only in isolated cases, as, for example, when the malady broke out in a district where it had not appeared for a long time previous. But little by little the severity was augmented, and ultimately slaughter, not only of affected animals but also of all contaminated cattle, was applied with great vigour.

Thanks to these energetic measures, thanks also to the general obligatory inoculation which was subsequently ordained, and to the excellent organisation of the sanitary service, in less than twenty years Holland has caused pleuro-pneumonia to disappear from its territory. It is necessary to remark that importation is almost *nil* in this country, a circumstance which rendered this magnificent result more easy of attainment.

Holland, as regards the application of the law of 1870, had been divided into two parts; in the one, which comprised almost the whole extent of the country, the slaughter of diseased and contaminated animals was immediately carried out without mercy; in the other, that is to say, in the Spoeling district, or district of the distilleries, slaughter could not be applied without incurring enormous expense, and without seriously prejudicing the interests of the distillers and feeders of cattle. There, in fact, there was a bovine population which was very dense and being constantly renewed, and if the measure of slaughter of diseased and suspected animals had been rigorously applied at the outset, it would have necessitated the destruction of almost all the cattle in the district. For a long period, therefore, the sanitary law was not applied in this district, but in 1878, seeing that the disease was not extinguished, a resolution ordained general obligatory inoculation.

In the Spoeling district then all the animals which were in it or which were introduced into it were inoculated and branded. The fat cattle were not allowed to leave without the inspection and authority of a state veterinary surgeon; they had to be conducted directly to the slaughter-house or to foreign markets. The same permission was rarely accorded in the case of milch cows (Van Cappelle). The Government has had reason to be satisfied with having, for the first time in Europe, given legal consecration to the Willemsian inoculation, for this measure, assisted by a strict surveillance, had almost immediately an excellent result. As soon as, thanks to this operation, the malady had been almost completely stopped, recourse was had in the Spoeling district to merciless slaughter of diseased and suspected. The official inoculation ceased in 1884, and the district was thus brought under the ordinary regulations.

The veterinary surgeons who carried out the inoculations were paid by the State at the rate of one franc per head of cattle. In Holland, since the law of 29th July 1870, an indemnity is accorded to the

proprietors of animals slaughtered on account of pleuro-pneumonia. The compensation is made from the State funds, and the indemnity is fixed at the total value of the suspected animals, and only at the half for the animals affected at the time of slaughter. In one year this small country did not hesitate to inscribe in its budget the enormous sum of two million (francs), to permit the energetic application of the law.

En résumé, the results obtained in Holland are a striking proof that when desired pleuro-pneumonia can be combated, and rapidly eradicated from the different European States.

In less than twenty years this cradle of the disease, in which in 1871 over six thousand animals were slaughtered, has reached a sanitary condition which all the other powers ought to envy. In 1886 only a single case ¹ of pleuro-pneumonia was observed, and only one also in 1887; besides, it is necessary to add that those two cases were discovered in Limbourg, the one at three, and the other at four, kilomètres, from the Belgian frontier.

The amount of compensation, which in 1877 reached 1,360,000 francs, fell ten years later to 170 francs.

TABLE SHOWING THE LOSSES FROM INOCULATION AND PLEURO-PNEUMONIA
IN THE SPOELING DISTRICT ALONE.

<i>Year.</i>	<i>Number of Animals In- oculated.</i>	<i>Number of Animals died as a Result of Inoculation.</i>	<i>Proportion Per Cent.</i>	<i>Animals found attacked with Pleuro-Pneu- monia in the Abattoirs.</i>
1878	34,784 ²	112	0'32	1,208
1879	24,396	279	1'14	475
1880	22,407	290	1'29	177
1881	24,594	272	1'10	267
1882	22,172	207	0'93	184
1883	14,563	168	1'15	153
1884 ³	4,769	59	1'09	134
1885	286	—	—	59
Total .	147,971	1,387	0'94	2,657

¹ [Two cases were observed in 1886. See Table.—Ed.]

² All the inoculations of 1878 were practised after the 20th September in terms of a resolution of the 17th August 1878, which rendered obligatory the precautionary inoculation of every animal in the Spoeling district.

³ The official inoculations ceased in 1884, and since that date this district is like the whole of Holland, subject to the rule, general slaughter.

TABLE SHOWING THE ANNUAL LOSSES FROM CONTAGIOUS PLEURO-PNEUMONIA BETWEEN 1871 AND 1887 INCLUSIVE IN THE WHOLE OF HOLLAND *minus* THE SPOELING DISTRICT.¹

<i>Year.</i>	<i>Animals slaughtered attacked with Pleuro-pneu- monia.</i>	<i>Animals Slaughtered Suspected.</i>	<i>Value in Francs.</i>	<i>Amount Ob- tained by Sale of Car- cases.</i>	<i>Indemnities Paid by the State.</i>
1871	6,078	—	—	—	—
1872	4,008	—	—	—	—
1873	3,500	—	—	—	—
1874	2,414	52	—	—	—
1875	2,227	191	—	—	—
1876	1,723	822	—	—	—
1877	970	3,318	1,846,472	486,384	1,360,088
1878	701	2,200	1,016,232	352,136	660,096
1879	157	532	228,228	66,670	161,228
1880	44	451	114,638	39,240	75,398
1881	12	189	67,496	23,686	43,810
1882	11	664	274,490	149,732	124,490
1883	18	986	487,438	282,544	204,894
1884	234	3,050 ²	1,429,198	735,418	694,780
1885	83	324	134,900	65,938	68,962
1886	2 ³	1	240	70	170
1887	1 ⁴	3	1,030	224	806
Total for the 17 years.	22,183	12,783	5,600,362	2,202,042	3,394,722

AMYLOID DISEASE IN THE LOWER ANIMALS.

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THE occurrence of amyloid disease among the domesticated animals has been noted by a considerable number of continental veterinary

¹ [The figures for the last four years of the table refer to the whole of Holland, *including* the Spoeling district.—Ed.]

² Of these 3050 animals slaughtered as suspected 2932 belong to the Spoeling district.

³ & ⁴ The two cases observed in 1886 and the single case of 1887 were in Limbourg, four kilomètres from the Belgian frontier.