



Bijlage foto's klinische beelden

Table 1: clinical symptoms of FMD in cattle

	Food and Mouth disease in cattle
General	Nearly all animals become ill within a short time. Cows show apathetic behaviour.
Death	Possible death of (very) young calves as a result of heart muscle degeneration 
Fever	High fever 40°-41°C, often only 1 day, maximum of 3 days.
Milk yield	Sudden and severe drop in milk yield in many animals in the herd.
Appetite	Obvious loss of appetite, animal leaves food untouched. Often because of vesicles in mouth. Sometimes animals exhibit audible chewing without touching food.
Reduction of weight	Sick cows lose weight rapidly (in the Netherlands susceptible animals on infected premises will be culled, so this symptom won't play a role in the diagnosis in the acute stage).
Nervous signs	Not a typical sign of FMD. Pain can cause symptoms such as teeth grinding and trembling of the lower jaw.
Ocular discharge	Not a symptom of FMD.
Lip smacking	Obviously present and audible in a quiet stall.
Salivation	Vesicles cause painful swallowing, resulting in visible drips of frothy saliva on the ground. 
Teeth grinding	Yes
Muzzle	No vesicles/lesions are found on the muzzle.
Nasal discharge	Nasal discharges (first day serous, after that mucopurulent).

Tongue, palate, gum, cheek and lips

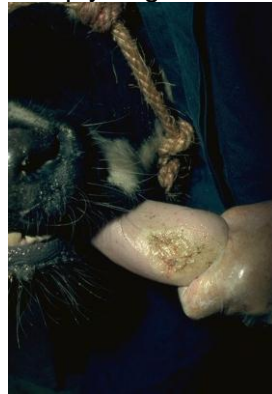
Vesicles on the tongue, from the tip of the tongue to the dorsum, on the inside of the lips, around the teeth and on the gum.
The blae burst after a period of one to three days, which causes wet, painful, sharply edged, raw, red lesions.



A large part of the tongue epithelia can disappear when vesicles coalesce together.


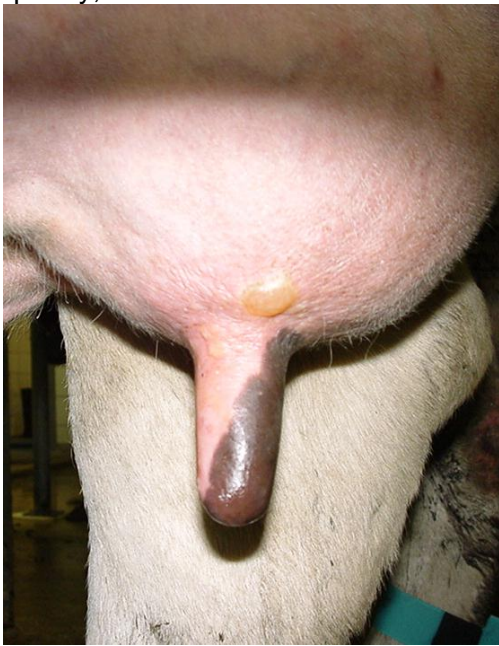



After a few days the lesions in the mouth start to regenerate and are less sharply edged.



Initially the lesion will turn dull, sometimes a little yellow as result of filling with fibrin.



	<p>After seven to ten days, the lesion turns white when tissue connects again. A scar tissue without the pappils is being formed.</p> 
<p>Udders and Teats</p>	<p>Cows in milk initially may develop vesicles on the teats. The vesicles burst quickly, then scabs form.</p>  <p>Mastitis could result from this.</p>
<p>Coronary band and interdigital space</p>	<p>When inspecting the cattle whilst standing, sometimes vesicle forming is already noticeable: a pale area on the tissue between the claws with a red band.</p>  <p>Vesicles here burst less quickly than in the mouth because of thicker</p>




	epithelia. After rupture, scabs often occur . 
Lameness	Acute lameness often gradually develops into chronic lameness, as a result of a secondary bacterial infection (in the Netherlands animals are culled before this can be observed).
Abortion	Can occur

Table 2: Clinical symptoms of FMD in sheep and goats

	FMD in small ruminants
General	<u>Sheep</u> few symptoms, sometimes some lameness. With certain virus types abortion. <u>Goats</u> showed in 2001 in NL very clear general signs of illness: with depression, lesions on the udders and a very few cases of deshoeing.
Death	With some virus groups death of small lambs.
Fever	In sheep no important clinical symptom; in experimental infections only very rarely temperatures of 40°C were found. With goats, in the outbreak of 2001, 1/3 had fever > 41°C.
Milking yield	Sheep: no information available. milking goats: in 2001 in NL a clear production decrease was noticeable
Appetite	No changes
Reduction of weight	Mostly no change, as there appear to be fewer lesions and secondary inflammation.
Nervous symptoms	No typical FMD sign.
Fleece/coat	No deviations .
Ocular discharge	None.
Lip smacking	With small ruminants no signs observed.
Salivation	With small ruminants deviations are less obvious.
Teeth grinding	Not noticed.
Muzzle	No vesicles.
Nasal discharge	In the nose, lesions can occur.

		
<p>Tongue, palate, gum, cheek and lips</p>	<p>Vesicles are seen on the inside of the lips and the gum, which burst very quickly. The palate is not damaged. Only small vesicles are found on the tongue (see photo).</p>	
<p>Udders and Teats</p>	<p>In animals in milk, very small vesicles are found on udders and teats.</p>	
<p>Coronary band and interdigital space</p>	<p>Lesions on the coronary band and in the interdigital space are hard to see; often hair needs to be cut to allow observation.</p>	
		<p>The lesions recover in just over one week, later under running at the coronary band can be seen.</p>



The lesions at the coronary band could cause deviations in the growth of horn, not to be seen until weeks after the infection.



Lameness	Can occur.
Abortion	Occurs, depending on the type of virus. In 2001 in England it was the most obvious symptom.

Sources photographs

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