CLAIMS

1. An immunogenic composition comprising an antigen component and an adjuvant component, wherein

a) the adjuvant component comprises an emulsion containing oil, an immunostimulatory oligonucleotide comprising CpG, and diethylaminoethyl (DEAE) Dextran and

b) the antigen component comprises 0.5 - 10 μg or 6-20 μg of an FMD (Foot-and-Mouth Disease) virus composition per dose.

2. The immunogenic composition of claim 1, wherein said oil is a non-metabolizable oil.

3. The immunogenic composition of claim 1 or claim 2, wherein the immunostimulatory oligonucleotide comprises at least 15 contiguous nucleotides of SEQ ID NO: 8.

4. The immunogenic composition of any one of claims 1-3, wherein the immunostimulatory oligonucleotide comprises SEQ ID NO: 8.

5. The immunogenic composition of any one of claims 1-4, wherein said oily phase is present in the amount of up to 80% v/v of the composition.

6. The immunogenic composition of any one of claims 1-5, wherein the oily phase comprises 50.01%-55% v/v of the composition.

7. The immunogenic composition of any one of claims 1-6 further comprising one or more emulsifiers.

8. The immunogenic composition of any one of claims 1-7, wherein the adjuvant component comprises SEQ ID NO: 8, diethylaminoethyl (DEAE) Dextran and light mineral oil.

9. The immunogenic composition of any one of claims 1-8, wherein the DEAE Dextran is present in the amount of 6-200 mg per dose.

10. The immunogenic composition of any one of claims 1-8, wherein the immunostimulatory oligonucleotide is present in the amount of 6-200 μg per dose.

11. The immunogenic composition of any one of claims 1-10, wherein said FMD virus composition is a preparation of FMD virus Cruzeiro strain.

12. The immunogenic composition of claim 11, wherein said FMD virus Cruzeiro strain is genetically engineered.

13. The immunogenic composition of claim 12, wherein said FMD virus Cruzeiro strain contains a deletion of the leader coding region (LL).

14. The immunogenic composition of claim 12 or 13, wherein said FMD virus Cruzeiro strain contains negative antigenic markers introduced in one or both of the viral non-structural $3D^{pol}$ and 3B proteins.

15. The immunogenic composition of any one of claims 12-14, wherein said FMD virus Cruzeiro strain contains a heterologous capsid protein.

16. The immunogenic composition of claim 15, wherein the heterologous capsid protein is selected from the group consisting of capsid proteins of strains Asia1, Turkey06, O1Campos, C3Indaial, and A2001-Argentina.

17. The immunogenic composition of any one of claims 1-16, wherein the antigen component comprises a 0.5 - 6 μg of FMD virus per dose.

18. The immunogenic composition of any one of claims 1-16, wherein the antigen component comprises a 0.5 - 4 μg of FMD virus per dose.

19. The immunogenic composition of any one of claims 1-16, wherein the antigen component comprises 0.5 - 2 μg of FMD virus per dose.

20. The immunogenic composition of any one of claims 1-16, wherein the antigen component comprises 0.5 – 1.5 μg of FMD virus per dose.

21. The immunogenic composition of any one of claims 1-20, wherein the FMD virus composition comprises both structural and non-structural FMD proteins.

22. Use of the immunogenic composition according to any one of claims 1-21 in the manufacture of a medicament for treating or preventing FMD lesions in an animal in need thereof.

23. A method of herd management comprising the step of:

taking a herd suspected of coming into contact with FMD infection, wherein at least some members of which, have been vaccinated against FMD infection using the immunogenic composition of any one of claims 1-16 wherein, in said composition,

a) the antigen component comprises between about 8 μg and 20 μg of FMD virus composition per dose;
b) the immunostimulatory oligonucleotide comprising CpG comprises 75-200 μg per dose;
c) diethylaminoethyl (DEAE) Dextran comprises 75-200 mg per dose;

and ensuring that the vaccinated members of said herd are either:

a) not slaughtered;
b) quarantined for less than 30 days; or
c) are moved beyond the infected premises.

24. The method according to claim 23, wherein the vaccinated members of the herd are not slaughtered and are quarantined for less than thirty days.

25. The method according to claim 23 or claim 24, wherein the herd is a bovine herd.

26. The use according to claim 22 or the method according to any one of claims 23-25,

wherein the FMD virus composition is prepared by hollow fiber filtration.

27. Use of the immunogenic composition of any one of claims 1-16, wherein, in said composition,

a) the antigen component comprises between about 8 μg and 20 μg of FMD virus composition per dose;
b) the immunostimulatory oligonucleotide comprising CpG comprises 75-200 μg per dose; and
c) diethylaminoethyl (DEAE) Dextran comprises 75-200 mg per dose, in the manufacture of a medicament for reducing frequency of FMD persistence in a ruminant infected with FMD, wherein said composition is to be administered to said ruminant prior to the infection.

28. The use of claim 27 wherein should the herd be suspected of coming into contact with FMD infection, vaccinated members of said herd will either:

i) be not slaughtered;
ii) be quarantined for less than 30 days; or
iii) be moved beyond the infected premises.

29. The use according to claim 27 or claim 28, wherein the vaccinated members of the herd are not slaughtered and are quarantined for less than thirty days.

30. The use according to any one of claims 27-29, wherein the ruminant is a bovine.

31. The use according to any one of claims 27-30, wherein the FMD virus composition is prepared by hollow fiber filtration.

32. The method according to any one of claims 23-26 or the use according to any one of claims 27-31, wherein said FMD virus comprises negative antigenic markers which allow for DIVA (differentiating infected from vaccinated animals) assays.

33. The use according to claim 32, wherein said antigenic markers are introduced to 3D and/or 3B proteins of the FMD virus.