

Request for comments

RFC20050922ARc: Initiation of a vaccination program

1st draft: A. Reeves and B. Corso, September 22, 2005

2nd draft: A. Reeves and B. Corso, September 27, 2005

Applies to: Model description v1.0.2a (June 11, 2005)

Type of change: Addition to the specification

Summary: This RFC clarifies the events that must occur before any units are marked for vaccination. It proposes that no units should be flagged for vaccination until the required number of detected infected units has been reached.

Justification: This RFC codifies the results of a team-wide conference call discussion from September 22, 2005 and subsequent related conversations.

This second draft contains additional language designed to address situations like the following example: if 5 herds must be detected before vaccination begins, and if the 3rd, 4th, 5th, and 6th detections all occur on the same day, vaccination rings should be created around all four of these detected herds, rather than just the 5th and 6th detected herds.

Change: This change applies to Section 6.3 (Vaccination). A new subsection (highlighted) is proposed, as well as renumbering of existing sections (also highlighted). Deletion of one redundant sentence (struck through) is also proposed.

6.3. Vaccination

When the disease is detected, authorities may also initiate a vaccination campaign. This consists of vaccinating units within a specified distance of the detected units – in circles or rings around detected units. ~~The decision to vaccinate~~ **initiation of a vaccination program** may be delayed until a certain trigger point is reached in terms of numbers of detected units **(see section 6.3.1)**.

~~Vaccination orders result in vaccination unless the herd has already been vaccinated recently.~~

If a unit is marked for vaccination but cannot be vaccinated immediately, it goes onto a prioritized waiting list (see sections **6.3.2** and **6.3.3**).

For a unit to receive multiple vaccinations, vaccination of that individual unit must be triggered multiple times (see section **6.3.4**). It is not currently possible to schedule revaccination of units without an additional trigger.

Vaccination program parameters

Global parameters (applied to all production types):

- number of detected units before vaccination begins (see section 6.3.1)
- vaccination capacity vs. days since the first detection (units per day)
 (see section 6.3.2)
- vaccination priorities (see section 6.3.3)

Parameters set individually for each production type:

- radius of vaccination ring (km)
- minimum time between vaccinations (days) (see section 6.3.4)

6.3.1 Initiation of a vaccination program

A vaccination program is initiated when the user-specified number of infected units has been detected. Until or unless this number is reached, units are not marked for vaccination. Once this critical number has been reached, units within the specified vaccination ring surrounding the most recently detected unit are marked for vaccination. Vaccination rings also will be created around any unit that is detected on the same simulation day that the critical number is reached. Similarly, vaccination rings will be created around infected units detected on subsequent simulation days. Units marked for vaccination are then treated according to the steps described below.

6.3.2 Vaccination capacity

(The body of this section is unchanged, except for section renumbering)

6.3.3 Vaccination priorities

(The body of this section is unchanged, except for section renumbering)

6.3.4 Minimum time between vaccinations

(The body of this section is unchanged, except for section renumbering)

End of changes