**Risk estimation to predict tuber blight**

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**Introduction**

Tuber infections can result in high yield losses at harvest and/or during storage. Infected tubers also form a source of inoculum for following cropping seasons. Therefore, fungicides are applied intensively to prevent leaf and subsequently tuber blight.

To prevent tuber infection and to minimize the fungicide input, prediction of tuber blight infection risks can help to identify critical periods for tuber infection so that preventive measures can be adapted to specifically negate this risk.

The following [key] factors are important:
- Tubers must be present
- Inoculum must be present in the foliage or the soil
- Weather/soil conditions must be conducive for infection

**Risk estimation**

A risk estimation can be made based on the relative conduciveness of the (combined) key factors for tuber infection (Figure 1).

A more detailed risk estimation could also include additional risk factors such as soil conditions (conducive for tuber infection), soil type, compaction of top soil layer and “tunneling” (influx of sporangia into the ridge) and therefore tuber blight levels. Infection risk is also influenced by the level of blight resistance of the cultivar and the virulence of the pathogen population.

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1. Weather: - = No rain; + = >0 – 4 mm rain; ++ = > 4 mm rain
2. Inoculum: - = No blight in crop; + = Sporadic lesions in the crop; ++ = Frequent lesions in the crop
3. Tubers: - = Tuber initialization or earlier; + = Early tuber filling; ++ = Late tuber filling

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Figures and tables should be clearly described and explained in the text. For example:

- Figure 1. Weather, inoculum and presence of tubers are key factors to estimate tuber infection risks. When all three factors are favourable, tuber infection risks will be high.
- Table: The table shows the conduciveness of weather, inoculum, and tubers, with possible combinations for risk estimation.