

Sclerotinia sclerotiorum on oilseed rape

Peter Frei

Station de recherche Agroscope Changins-Wädenswil ACW, 1260 Nyon; www.agroscope.ch

Introduction

Since 1996 were the last huge attack of *Sclerotinia sclerotiorum* in Switzerland a survey of the disease has been undertaken.

Stocks of sclerotia:

Stocks of 100 naturally formed sclerotia (in the region of the trial) are placed every year in autumn-sown oilseed rape fields. In spring the emerging apothecia are weekly observed and numbered.

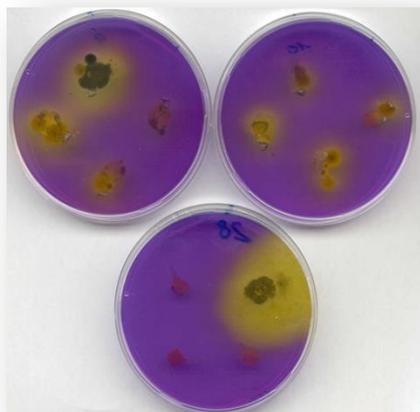
Between harvest and sowing, the stocks are kept under outdoor conditions.

The stocks are kept for 4 to 6 years and during this time every spring, apothecia were formed in all of the pots. A peak level (hundred and more apothecias) is observed in the second and third year.

Test petals at BBCH 61:

40 inflorescences are collected and one petal from each flower is incubated on a semi-selective medium according the method of CETIOM.

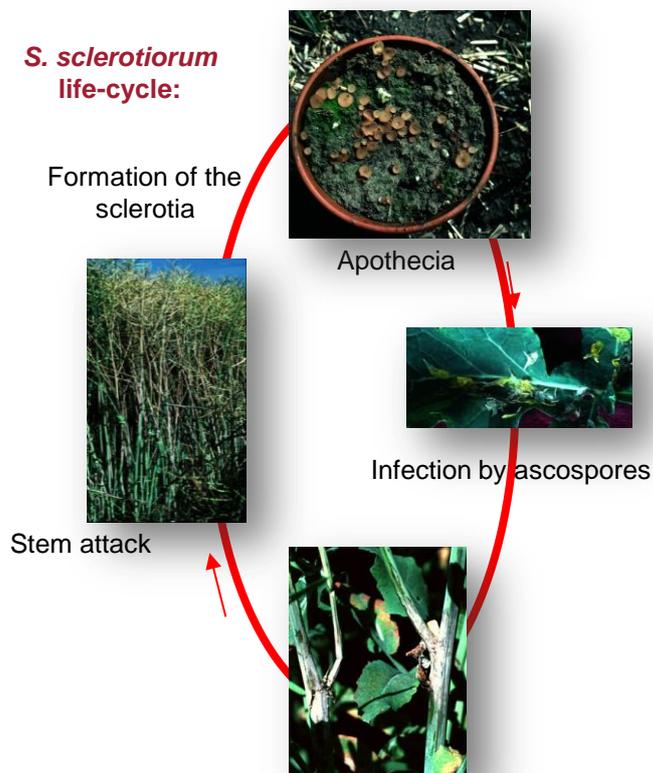
Media colour turns to yellow in presence of oxalic acid produced by *S. sclerotiorum* or *B. cinerea*. This change of colour is checked after 3 to 5 days incubation at 21°C.



Stem attacks check at BBCH 85:

In each repetition the attacked stems and the sum of all stems are counted on 8 X 1 meter and the percentage of diseased stems is calculated. At the same time the attacks of *Phoma lingam* is compiled.

S. sclerotiorum life-cycle:



| Test on CETIOM Medium 40 inflorescence / site = 160 petals / site | | | | petals (160) | plants (40) | infected stems before harvest | 20 days following BBCH 61 | | | |
|---|------|-------|------|-----------------|----------------|--|---------------------------|-------------------------|-----------------------|------------------|
| year | site | date | BBCH | % SS | % SS | % SS | temp mean °C | prec. mean mm/day | rainy days n/20 | N-wind (bise) |
| 1996 | CHA | 21.04 | 60 | not available | | > 70 | 12.2 | 2.9 | 13 | no |
| 2003 | CHA | 4.04 | 60 | 1.9 | 5.0 | 0.0 | 8.8 | 1.7 | 5 | yes |
| 2004 | CHA | 21.04 | 61 | 20.6 | 25.0 | 2.1 | 11.1 | 2.3 | 11 | yes |
| 2005 | CHA | 20.40 | 61 | 11.3 | 54.0 | 0.0 | 12.2 | 2.4 | 10 | yes |
| 2006 | CHA | 3.05 | 63 | 12.5 | 37.5 | 0.0 | 13.9 | 5.3 | 15 | yes |
| 2007 | CHA | 4.04 | 61 | 88.1 | 100.0 | 2.4 | 14.0 | 0 | 0 | yes |
| 2008 | CHA | 24.04 | 61 | 63.8 | 100.0 | 66.4 | 14.0 | 0.6 | 3 | no |
| 2008 | GIV | 30.04 | 61 | 50.6 | 95.0 | 6.0 | 14.0 | 1.0 | 6.0 | yes |
| 2009 | CHA | 17.04 | 61 | 10.0 | 32.5 | 0.0 | 11.7 | 0.7 | 4 | yes |
| 2010 | CHA | 22.04 | 61 | 1.9 | 7.5 | 0.0 | 12.9 | 2.4 | 9 | yes |
| 2011 | CHA | 8.04 | 61 | 10.6 | 25.0 | 0.0 | 13.9 | 0.1 | 3 | yes |
| 2012 | CHA | 11.04 | 61 | 7.5 | 40.0 | 0.0 | 9.6 | 4.6 | 13 | yes |

SS = *Sclerotinia sclerotiorum*

Outlook:

- we are still waiting for “the big infection one” to valid our disease prevision and forecasting model
- Temperature > 12°C ; rain or dew ; no or little wind during the fall of the petals (BBCH 65-70)
- Sclerotinia attacks are often regional

