Stem Rot of *Disporum sessile* Caused by *Sclerotium rolfsii* in Korea

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(Received on November 5, 2006)

From 2004 to 2005, the stem rot of *Disporum sessile* D. Don caused by *Sclerotium rolfsii* occurred sporadically in an herbs exhibition farm of Hamyang, Gyeongsangnam-do Agricultural Research and Extension Services, Korea. The typical symptom is water-soaking, dark brown on the stem and rotted, wilting. The infected plants were mostly died. White mycelial mats were spread over lesions, and then sclerotia were formed on stems and near soil line. The sclerotia were globoid in shape, 1–3 mm in size and white to brown in color. The optimum temperature and sclerotia on PDA was 30°C and the hylphal width was 3–10 μm. The typical clamp connections were observed in the hyphae of the fungus grown on PDA. Pathogenicity of the causal organism was proved on *D. sessile* according to Koch’s postulate. On the basis of mycological characteristics and pathogenicity to host plants, this fungus was identified as *Sclerotium rolfsii* Saccardo. This is the first report on the stem rot of *D. sessile* caused by *S. rolfsii* in Korea.

**Keywords**: *Disporum sessile*, *Sclerotium rolfsii*, Stem rot
Fig. 1. Symptoms of stem rot of *Disporum sessile* and mycological characteristics of the pathogenic fungus, *Sclerotium rolfsii*. A: Typical symptom occurred on stems and near soil line in the field, B: Infected plants were wilting, blighted and died eventually, C: Symptoms after artificial inoculation, D: Mycelial mat and sclerotia grown on PDA after 20 days, E: Scanning electron microscopy of clamp connection.

Table 1. Comparison of mycological characteristics between the present isolate obtained from *Disporum sessile* and *Sclerotium rolfsii* described previously

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Present isolate</th>
<th><em>S. rolfsii</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>Colony color</td>
<td>white</td>
<td>white</td>
</tr>
<tr>
<td>Hyphae diameter</td>
<td>3–10 μm</td>
<td>4.5–9 μm</td>
</tr>
<tr>
<td>clamp connection present</td>
<td></td>
<td>present</td>
</tr>
<tr>
<td>Sclerotium shape</td>
<td>globoid</td>
<td>spherical</td>
</tr>
<tr>
<td>diameter</td>
<td>1–3 mm</td>
<td>1–2 mm</td>
</tr>
<tr>
<td>color</td>
<td>white to brown</td>
<td>brown</td>
</tr>
</tbody>
</table>

*Described by Mordue (1974).*
요 약

2004년과 2005년 2년간 경남농업기술원 함양 약초 전식 포장에 제배중인 유통나물에서 S. rolfsii에 의한 환비단병이 발생되었다. 병증은 즐거리의 지체부위가 수포상으로 물러지고 부패하면서 암갈색으로 되고 시원히 말아 죽는다. 병발부위의 지체부위는 환비의 공명이가 손쉽게 생기고, 감자기 갑자기 부패로 인한 갈색의 등근 균형을 많이 형성하였으며 크기는 1~3 mm이다. 길이의 길이는 3~10 mm이며, 굵기는 식물성 30℃있으며 굵이는 식물성의 clamp connection이 관찰되었다.

유통나물에서 발생한 병증과 균질의 속성 및 병원성을 검정한 결과, 이 병을 Sclerotium rolfsii Saccardo에 의한 유통나물 환비단병으로 설명하고자 한다.

참고문헌


