Researches Regarding the *Eutypa Lata* Lignicole Fungus Manifestation in Vineyards from Blaj Wine Centre

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**Abstract.** The responses of vine to the eutipoze attack were analyzed, depending on the age of the plantation. Of the four varieties studied, regardless of the plantation age, the lowest degree of attack was registered at 'Fetească regală' (7.0%) and 'Sauvignon blanc' (7.3%), the differences between being insignificant. The results confirm the data from the literature according to which the eutipoza is more widespread in plantations for over 10 years.

**Keywords:** *Eutypa Lata,* lignicole pathogen, vines.

**Introduction.** *Eutypa lata* attack a number of over 80 plant species belonging to 27 botanical families in temperate and Mediterranean area. The most common hosts are apricot, peach, plum, apple, vine, currant, gooseberry, etc. (Tomoiagă et al., 2007). It is a well known species in terms of spreading and virulence of the attack (Stoica and Ulea, 2004) and plays an important role in biological decline at vine. The eutipoza symptoms appear at a distance of 3-8 years after infection of the vine (Comșa, 2014).

**Aims and objectives.** The research aims to assess the response of vine to the eutipoze attack, depending on the age of the plantation (young plantation – 6 years and old plantation – over 25 years).

**Materials and methods.** The experiments were conducted in vineyards of SCDVV Blaj on varieties 'Fetească regală,' 'Fetească albă,' 'Sauvignon blanc' and 'Muscat Ottonel'. For assessing the way of the vine block reaction to eutipoza were placed two experimental plots (with the same varieties), in the vine plantations with different ages. On vines were conducted observations and measurements of the frequency and intensity of eutipoze attacks. For this purpose in 2012, were included in the study both the young vineyards in the age of 6 years and vineyards over 25 years.

**Results and Discussion.** The two factors taken in the study (age of plantation and the variety) as well as their interaction have a very significant influence on the attack caused by *Eutypa lata* (Tab. 1). The greatest influence was exercised by the age of plantation ($F_{calc} = 1751.61 > F_{teor} = 8.86$), this influence being very significant.

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>SS</th>
<th>DF</th>
<th>$s^2$</th>
<th>$F$ Test</th>
<th>Versus $s^2_{AxB}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>1987.1</td>
<td>23</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Replications</td>
<td>0.5</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A (Variety)</td>
<td>249.2</td>
<td>3</td>
<td>83.1</td>
<td>95.70</td>
<td>&gt; 3.34; 5.56</td>
</tr>
<tr>
<td>B (The plantation age)</td>
<td>1520.0</td>
<td>1</td>
<td>1520.0</td>
<td>1751.61</td>
<td>&gt; 4.60; 8.86</td>
</tr>
<tr>
<td>A x B</td>
<td>205.2</td>
<td>3</td>
<td>68.4</td>
<td>78.83</td>
<td>&gt; 3.34; 5.56</td>
</tr>
<tr>
<td>Error</td>
<td>12.1</td>
<td>14</td>
<td>0.868</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Analyzing the attack degree, regardless
of the varieties included in the study (Tab. 2),
this has registered in young plantation a much
lower value (1.5%) compared with that recorded in
older plantations (18%).

Of the four varieties studied, regardless of
the plantation age, the lowest degree of attack
was registered at ‘Fetească regală’ (7.0%) and
‘Sauvignon blanc’ (7.3%), the differences between
being insignificant. At a significant distance from
them stood the ‘Fetească albă’ for this variety the
attack degree caused by the pathogen Eutypa lata
being 8.7%.

The highest value of the attack degree was
recorded at ‘Muscat Ottonel’, of 15%, this variety,
under condition of Blaj wine center, showing an
adequate sensitivity quite high to the destructive
action of this lignicol pathogen.

Between the eight experimental versions
resulting from the factors interaction (age of
plantation x variety), the all four varieties from
young plantation stand out with low values (below
2%) of the attack degree of pathogen Eutypa lata,
this values being equal from statistic point of view.

At significant difference of these older
plantations is classified: ‘Fetească regală’ (12.9%
GA) and ‘Sauvignon blanc’ (13.0%). In contrast,
the highest value of the attack was recorded in old
plantation, at ‘Muscat Ottonel’, this variety having
a value of 27.9% GA.

**Conclusion.** The results confirm the
data from the literature according to which the
eutipoza is more widespread in plantations for
over 10 years (Tomoiagă et al., 2007, Oprea and
Dumitru, 1988, Duthie et al., 1991). This does not
necessarily mean that young plantations are less
susceptible to attack of Eutypa lata, the absence
of symptoms is due to the slow evolution of the
pathogen in grapevine wood.

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