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New cultivars

NEW HOP (*HUMULUS LUPULUS* L.) CULTIVARS FROM ROMANIA

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Abstract:

SALONTAI AL., ROMAN A., FELECAN V., MUNTEAN L., CERNEA S., 1985
New hop (*Humulus lupulus* L.) cultivars from Romania. Not. bot.
hort. agrobot., Cluj, XV, 5-7. The research staff of the Agronomy
Institute of Cluj-Napoca breded the first Romanian hop cultivars,
officially approved in 1984 by the State Commission for the Testing
and Approval of Plant Varieties. The new *Humulus lupulus* varieties
are cv. 'Napoca 1', cv. 'Aroma' and cv. 'Transilvania'. The se-
lection method, origin, biological characteristics, productivity
and some technological qualities of the new cultivars are discussed
in the paper.

Key words: *Humulus lupulus*, cultivars, breeding, evolution

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The research staff of the Agronomy Institute of Cluj-Napoca
created, between 1973 and 1984, the first Romanian hop (*Humulus lupulus*
L.) cultivars officially approved by the State Commission for the Testing
and Approval of Plant Varieties (CIOS): cv. 'Napoca 1', cv. 'Aroma' and
cv. 'Transilvania' (SALONTAI et al. 1984).

The main goals of the breeding process were the creation of new
clones and hybrids of higher productivity, increased alfa- and beta acid
content and highly agreeable fragrance, shorter periods of technical
maturity, increased disease resistance and better fitness for mecha-
nical harvesting.

Biological material: *Humulus lupulus* L. ssp. *europaeus* Ryb., (con)
var. *culta* Ryb., cultivars 'Northern Brewer', cv. 'Hüller Bitterer', cv.
'Record' and cv. 'Brewers Gold'.

Breeding method: clonal selection. Between 1973-1978, there were
selected and studied over 5000 clones from the four most cultivated hop

varieties cv. 'Northern Brewer', cv. 'Huller Bitterer', cv. 'Record' and cv. 'Brewers Gold'. 45 clones proved to be highly superior in respect of the above mentioned goals of the breeding process. These were introduced in comparative cultures between 1978-1981. In 1981 14 of the best clones were introduced in a trial organized in two traditional and one newly emerged hop cultivation zones of Transilvania: Sighişoara, Simeria and Cluj-Napoca. Three of the best clones were approved in 1984 as new, superior varieties.

Results

1. Cv. 'Napoca 1'

1.1. Origin: clonal selection from cv. 'Northern Brewer' (England)

1.2. Morphology: cf. SALONTAI et al. 1984 (see in references)

1.3. Biology: - improved tolerance against downy mildew, powdery mildew and strobile blight;
- shorter period of technological maturity (126-128 days).

1.4. Production:

- strobile yield between 1981-1984: 20-31,1 q/ha;
- average strobile yield 27,3 q/ha; 36 % better than cv. 'Northern Brewer' for the same period;

1.5. Quality: - alpha acid contents: 9,07 - 11,53 %
- beta acid contents: 9,12 - 10,57 %
- fragrance agreeable

1.6. Recommended for every hop growing region of Romania

2. Cv. 'Aroma'

2.1. Origin: clonal selection from cv. 'Huller Bitterer' (Germany)

2.2. Morphology: cf. SALONTAI et al. 1984

2.3. Biology: - improved tolerance to downy mildew, powdery mildew, strobile blight and viruses;
- improved drought resistance and winter hardiness;
- period of technological maturity: 134 - 135 days

2.4. Production:

- strobile yield between 1981 - 1984: 31,6 - 47,4 q/ha
- average production: 40,72 q/ha surpassing the cv. 'Huller Bitterer' by 33,4 %

2.5. Quality: - alpha acid content: 6,82 - 7,22 %
- beta acid content: 8,0 - 10,0 %
- fragrance highly agreeable

2.6. Fitness for mechanical harvest: better than cv. 'Huller Bitterer'

2.7. Recommended for cultivation instead of cv. 'Huller Bitterer' in order to improve the quantity, quality and stability of productions.

3. Cv. 'Transilvania'

3.1. Origin: clonal selection from cv. 'Brewers Gold' (England)

3.2. Morphology: cf. SALONTAI et al. 1984

3.3. Biology: - improved tolerance against unfavorable environmental conditions and diseases (downy mildew, powdery mildew)
- period of technological maturity: 142-146 days

3.4. Production:

- average strobile yield (1981-1984): 40,7 q/ha;
34,7 % better than cv. 'Brewers Gold';

3.5. Quality: - alpha acid contents: 8,46 - 9,25 %
- beta acid contents: 9,30 - 10,1 %
- fragrance agreeable;

3.6. Recommended for every hop growing region of Romania instead of 'Brewers Gold'.

Rezumat

SALONTAI AL., ROMAN, A., FELECAN V., MUNTEAN L., CERNEA S., 1985
Soiuri noi de hamei (Humulus lupulus L.) din România. (in engleză).
Not. bot. hort. agrobot., Cluj., XV, 5 - 7. Colectivul de autori de la disciplina de Fitotehnie a Institutului Agronomic "Dr. Petru Groza" din Cluj-Napoca a ameliorat primele soiuri româneşti de hamei omologate de CIOS în 1984. Cele trei soiuri noi sînt cv. 'Napoca - 1', cv. 'Aroma' și cv. 'Transilvania'. Metoda de selecție aplicată, originea, caracterele biologice, producțiile și unele caractere tehnologice ale soiurilor sînt prezentate în lucrare.

References

1. SALONTAI AL., MUNTEAN L. (Ed.), 1984, Lucrările seminarului "Cultura hameiului în România" (IV), Tipo Agronomia, Cluj-Napoca.
2. SALONTAI AL., ROMAN A., FELECAN V., MUNTEAN L., CERNEA S., 1984, Soiurile de hamei 'Napoca 1', 'Aroma' și 'Transilvania'. In: SALONTAI et MUNTEAN (Ed.), 1984, pg. 59 - 68.

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