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NEWSLETTER 3

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Ampelography — an international course in San Michele/Italy

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Meanwhile the ampelographic training course took place in San Michele/Trento, Italy, in the first week of July, this year. The current activities of ampelography, presented in the scope of this course are summarized below:

The first paper gave a retrospect on the evolution of descriptive ampelographic methods from the early beginning until today (I. EYNARD). In the following, aspects for a switch over from one-dimensional classical ampelography relying solely on botanical descriptors to a future network of a three-dimensional ampelography, taking into consideration identification, viticultural and breeding purposes as well, were highlighted (G. ALLEWELDT).

DNA analysis, conducted by different laboratories, detected polymorphisms between cultivars. However, ampelometric methods will probably not be replaced by DNA analysis. Further years of concentrated research will be necessary to establish a solid basis of knowledge. But high costs for material and equipment make a routine application questionable (R. BLAICH). Two enzyme systems, GPI and PGM, showed an increased level of polymorphism, stability and repetitivity. Their application may not allow the identification of a single variety, but a grouping of cultivars, which will contribute to varietal classification. If there is any doubt about the identity of cultivars, comparison of GPI and PGM enzyme patterns may help to clarify (A. CALO; G. CALO). In the last years, two phenolic compounds of the berries were often utilized for taxonomic studies, hydrocinnamoyltartaric esters and anthocyanins. The analysis of both compounds will surely not solve identification problems, but may complete and confirm ampelographic data (F. MATTIVI). The valid contribution of aromatic compounds, especially monoterpenols, in berries, must and wine for varietal classification and recognition was explained (G. VERSINI).

Different methods offered by multivariate analysis are appropriate for ampelographic needs; their limits and problems were discussed, especially concerning clustering, classification and identification techniques (A. MONETTI). Advantages of ampelometric cultivar description, which are: increased objectivity, quantitative and contin-

uous numerical values, the possibility of computerized data acquisition, were explained. Application on leaves, berries and seeds with computerized assessment systems were described (A. SCHNEIDER). A complex computerized system for identification purposes was introduced, which includes automatic acquisition of leaf parameters, the creation of archives with leaf shapes and data, the computation and creation of the typical leaf shape of a cultivar and the comparison of an unknown leaf shape with those in the archives to find the cultivar to which the unknown specimen belongs (A. COSTACURTA). The use of data processing for collection management, description, identification of cultivars with qualitative and quantitative data, the registering of aptitudes and the genetic potential of cultivars and research on the evolution of cultivars at the Domaine Vassal and at the Ecole Nationale Supérieure Agronomique at Montpellier have been presented (J.-M. BOURSIQUOT). In the scope of the international ampelographic project, 72 cultivars were characterized at two or more sites with 15 visual-descriptors of the 'Preliminary Minimal Descriptor List for Grapevine Varieties'. 10 of these descriptors proved to be potentially suited for varietal recognition and identification. The usage of descriptor notations for a stepwise varietal recognition, supported by a computerized program, discriminate and biochemical analyses was proposed (E. DETTWEILER). The elliptic Fourier analysis was applied on 132 leaf samples of 34 cultivars. This analysis, tracing the leaf contour and recording even the form of the teeth, the form of the sinuses, etc., is considered as a complement to the usage of traditional ampelometric variables, characterizing only the leaf structures (G. DIAZ; M. SETZU). The computerized management of the grapevine collection at the Istituto Sperimentale per la Viticoltura di Conegliano includes cultivar information (clones, synonymes, utilization, parentage, etc.), phenological, productivity and sanitary data (M. GIUST). Filometric analysis was applied on 30 clones of the cultivar Chardonnay, coming from different countries and planted at San Michele. With the help of 21 filometric variables and multivariate analyses (cluster and discriminant analysis), the clones were classified into three groups (L. DE MICHELI). Diffusion and description (ecological characters, morphologic description of leaves, clusters, berries and seeds) of *Vitis vinifera* ssp. *silvestris* in Italy were reported. In order to preserve the wild grapevines, two collections have been established, with about 400 vines of 150 genotypes (O. FAILLA; R. ANZANI; A. SCIENZA).

The principal rootstocks were described in theory and in practice (P. GALET). Cultivars from northern, central and southern Italy were described by experts from the corresponding wine growing regions: Emilia-Romagna (M. BOSELLI; A. VENTURI), Val d'Aosta (R. GAUDIO), Piemonte and Liguria (L. CORINO), Veneto and Friuli Venezia-Giulia (S. CANCELLIER), Trentino-Alto Adige (F. CAMPOSTRINI; B. REIFER, I. RONCADOR), Toscana (G. SCALABRELLI), Lombardia (L. VALENTI; P. VIALLA), Lazio and Campania (B. IANNINI), Umbria, Marche, Abruzzo and Molise (G. MORETTI), Puglia (R. FORTI), Sicilia (B. PASTENA), Calabria and Basilicata (D. ANTONACCI), Sardegna (S. SPADA).

All papers will be published.

Considering the diversity of papers and the wide range of research to promote grapevine identification, one may wonder why there is not more cooperation between researchers, regarding the high number of existing cultivars.

Evaluation of grapevine aptitudes is carried out in very many grapevine collections. Even in this field, accordance should be found on methods and valuation, gath-

ered in descriptor lists for viticulture and breeding, in order to make evaluation results comparable.

The same is true for grapevine collections. Would it not be worthwhile to safeguard in international coordination the grapevine genetic resources more efficaciously?

Erratum

NEWSLETTER 2 - The Constitution of an *in vitro* collection of grapevine varieties by ROSE GALZY *et al.* in *Vitis* **30**, p. 46, line 17:
Instead of 'photoperiod 14 d', read 'photoperiod 14 h · d⁻¹'.