

Research Note

'Aishenmeigui': An extremely early maturing seedless grape with muscat flavor

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Introduction: In northern China, the fresh market needs early maturing table grape cultivars, especially with the character of seedlessness and muscat flavor. The 'Aishenmeigui' grape (*Vitis vinifera* L.) is a seedless cultivar which matures extremely early. The purple reddish skin and sweet muscat flavor attract a lot of customers. The cultivar was released in 1995. Since then it has been spreading in some provinces in northern China, showing very competitive market potential when growing in high tunnels and greenhouses.

Material and Methods: The table grape breeding program is based at the Institute of Forestry and Pomology in Beijing (39°58' N and 116°13' E). 'Aishenmeigui' is the result of hybridization between 'Muscat Hamburg' and 'Jingzaojing' in spring of 1973. The traditional old cultivar 'Muscat Hamburg' was used as the seed parent, and the pollen parent was the early ripening cultivar 'Jingzaojing' (FAN 2004), which was crossed by 'Queen of Vineyard' and 'Thompson Seedless' released by the Institute of Botany, Chinese Academy of Science in 1984. The original plant was selected in 1982 and tested as '73-8-1'. From 1985 to 1990, the trial was taken at two places in the suburban area of Beijing; in each place 150 vines were planted. The plantings were spaced 2.0 x 1.5 m and trained in vertical system. The vines first produced fruit in 1987.

Results and Discussion: The cultivar resembles its pollen parent in the following characteristics, seedlessness and harvest time, but with larger berries and yielding capacity. The cultivar resembles its seed parent in the characteristics of Muscat flavor and skin color, but the skin is thinner and the berry rather juicy.

'Aishenmeigui' vines are moderate to vigorous on their own roots, and show good productivity, average yield is 6.4 kg per vine. Average date of bud break, bloom and harvest are April 13, May 25 and July 28, respectively. The average period from bud burst to harvest is 103 d, and the effective accumulated temperatures are 2219.4 °C during growth. The cluster is medium-sized, 14.5 cm in length and 10.1 cm in width on average, well-filled to loose and conical-shaped without shoulder. The average weight is 220.8 g. (Figure). The round to oval-shaped berry has an average weight of 3.9 g with a maximum weight of 5.2 g, the rudimentary seed weight is approximately 2.35 mg. The pedicel, with an average of 5.5 mm, is medium in length. The berries are purple reddish in color with light white bloom. The flesh is firm and crisp with an excellent muscat flavor. The average soluble solid content is 17.6 % and the titratable acidity is 0.71 % (Table). For commercial production, the inflorescence could be treated by 50 ppm gibberellin 10 days after flowering. The vine is early fruiting and easy to manage. Good resistance to bunch rot and gray mold was stated.

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Passport data on this cultivar can be found under "variety number vivc14660" in the Vitis International Variety Catalogue (<http://www.vivc.de>).

FAN, P. G.; YANG, M. R.; ZHANG, Y. Z.; LI, S. C.; 2004: Early-ripening seedless grape 'Jingzaojing'. *Acta Hort. Sin.* **31**, 415.

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Table

Phenophase and fruit characteristics of the two cultivars during 1987-1990 at the Institute of Forestry and Pomology, Beijing

Item	Aishenmeigui	Jingzaojing
Bud burst	April 13 - April 19	April 12 - April 18
Flowering begins	May 25 - May 31	May 27 - May 31
Maturing date	July 26 - July 28	August 4 - August 10
Growing days	103 ± 3.0	114.5 ± 5.5
Accumulated temperature above 10 °C	2119.6 ± 47.2 °C	2499.4 ± 82.8 °C
Fruiting shoot/ all shoots	59.8 %	38.5 %
Cluster numbers per vine	18.5	10.4
Yield per vine	6.4 kg	2.4 kg
Average bunch weight	220.3 g	210.0 g
Average berry weight	3.9 g	3.1 g
SSC	17.6 %	16.3 %



Figure: Cluster of 'Aishenmeigui' grape.

