

早熟四倍体葡萄新品种‘玫香宝’的选育

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摘要:‘玫香宝’系‘阿登纳玫瑰’与‘巨峰’杂交培育而成的四倍体欧美种早熟葡萄新品种。果穗中大,圆柱形或圆锥形,平均穗质量230 g;果粒着生紧密,大小均匀,果粒大,为短椭圆形或近圆形,平均粒质量7 g;果皮紫红色,较厚、韧,果皮与果肉不分离;果肉较软,味甜、具玫瑰香味和草莓香味,品质上等,可溶性固形物含量为21.1%。在山西晋中地区,8月中旬果实完全成熟,属于早熟品种。外观与内在品质优异,抗病性强,适应性强,综合性状优良。

关键词:葡萄;新品种;‘玫香宝’

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A new early season tetraploid grape cultivar ‘Meixiangbao’

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Abstract: ‘Meixiangbao’ is a tetraploid, early season table grape cultivar with aromatic flavor and good eating quality. The original plant was selected from a cross between ‘Muscat Ottonel’ and ‘Kyoho’ at the vineyard in Pomology Institute Shanxi Academy of Agricultural Sciences in 1980. It was selected in 1991 for its good skin colour and big fruit grain. From 2010, it was evaluated again and selected as the final line. After several years of observation, it was finally released as ‘Meixiangbao’ after the validation by the Crop Variety Registration Committee of Shanxi Province. ‘Meixiangbao’ is a tetraploid Euro-American hybrids and bisexual flower. The vigour of the vine is medium. The shoot tip is half open with sparse hair, young shoots are half upright, green with purple red, medium tomentum on the under surface. The tendril is discontinuous and bifurcated, the color is near yellow-green. The bud is slightly pointed and slightly held out, anthocyanin coloration of buds is strong. The color of dorsal and ventral side of internodes is green with red strips. The upper surface of a young leaf is pea green color while the under surface of a young leaf is spinach green color. The shape of the mature leaves is pentagonal with undulate sides, medium thickness. The blade margin is pronounced in undulation. The petiole sinus is open and ‘U’ shape. The teeth are short with both convex and straight sides. Tooth at petiole sinus is absent and limited by veins, medium deep etching fissure. The upper surface is green with rugose texture and glossy appearance. Anthocyanin coloration of main veins on lower leaf surface is extremely weak. The average length of leaves is 12.2 cm, and the width is 18.1 cm, the average length of petiole is 9.6 cm. First inflorescence usually born in third, second in fourth. The color of the nodes and branches are dark red, the average length of the nodes is 7 cm. The cluster of ‘Meixiangbao’ is conical, has an average weight of 230 g, average length of 16.5 cm and average width of 10.5 cm. The cluster density is medium to tight. The berry is oval or elliptical shaped, 22.2 mm in diameter and 22.0 mm long, the average weight is 7 g with the maxi-

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imum of 9 g. The berries are uniform in shape and color, usually purplish red. The thickness of the skin is thin to medium. The flesh is juicy and softer, and the average soluble solid content is 21.1%. Flavour is muscat and strawberry. The number of seeds per berry is ranged from 2 to 3. In the Jinzhong area of Shanxi, the time of budburst is usually late April, and flowering at late May, the fruit ripens in early to middle August. The average rate of fruiting shoot is 45.1% and the yield is about 25 tones per hm². Vertical trellis system and fan shaped pruning were recommended in the northern area. The vine has medium resistance to powder and downy mildew. A spray program suitable for disease control with most Euro-American hybrids cultivars should be applied. Botrytis bunch rot and sour rots may cause losses if harvest is delayed, especially after rainfall. About commercial production, flower thinning and cluster trimming is unnecessary for its suitable grain size and fruit firmness, and potassium phosphate fertilizer should be supplemented after veraison.

Key words: Grape; New cultivar; ‘Meixiangbao’

优质、大粒、具有玫瑰香味的葡萄一直是鲜食葡萄的消费趋势,同时也是国内外葡萄育种家为之奋斗的重要育种目标,近几年也有多个优良鲜食品种育出^[1-2]。山西省农业科学院果树研究所葡萄育种团队从上世纪80年代开始就一直致力于大粒、玫瑰香型优良葡萄品种的选育研究,多年来已选育出‘早黑宝’‘秋黑宝’^[3]、‘晚黑宝’^[4]等多个优良四倍体葡萄品种。‘玫香宝’是该所选育的又一四倍体优良新品种(图1),1980年以‘阿登纳玫瑰’和‘巨峰’为亲本进行杂交,杂交后代‘80-2-101’于1991年初选为

优系,表现为成熟期早,果粒大,玫瑰香味和草莓香味浓郁,风味独特,但在当时因果穗小、产量低未能入选为复选优系。目前,随着人们生活水平的不断提高,葡萄产业发展已由原来的产量型向质量型转变,特别是适应葡萄标准化栽培发展要求,标准的小型果穗省去了繁杂的疏花整穗过程,可大大节约劳动成本。同时该优系成熟期早,可有效丰富早熟葡萄品种市场,因此2012年‘80-2-101’重新入选为优系,并进行了相关品种比较试验、区域试验、倍性结构鉴定、生物学特性、抗病性、丰产性等系统研究。



图1 早熟、四倍体葡萄新品种 ‘玫香宝’

Fig. 1 A new early season tetraploid grape cultivar ‘Meixiangbao’

1 选育经过

‘玫香宝’,原代号‘80-2-101’,系以‘阿登纳玫瑰’为母本、‘巨峰’为父本杂交培育而成的四倍体欧美杂种早熟葡萄新品系。1980年杂交,第2个杂交组合,第101株。该品系在多年初选的基础上,2012年入选为复选优系。2013年利用嫩枝嫁接和营养

袋苗进行扩繁和品系比较试验,同时在山西省中部清徐县、南部稷山县、北部大同市布点进行区域试验。在复选和区试的同时,对其植物学特征、果实经济性状、丰产性、抗病性、适应性进行了详细的调查和评估。调查结果表明,‘玫香宝’外观与内在品质优异,抗病性强,适应性强,丰产性中等,综合性状优良,是值得推广应用的早熟葡萄新品种。2015年12

月通过山西省农作物品种审定委员会审定,并命名为‘玫香宝’。

2 主要性状

2.1 植物学特征

‘玫香宝’属欧美杂种,嫩梢黄绿色带紫红,具稀疏茸毛;幼叶绿色带有红斑,花青素着色浅,有光泽,叶背具有中等密度的匍匐茸毛和直立茸毛,叶面具稀疏茸毛;叶片呈五角形,深绿色,中等大小,叶片平展,厚,五裂,上下裂刻中等深,叶柄洼为半开张呈U字形,叶缘锯齿锐,锯齿长宽比为0.9:1,叶表面无茸毛、光滑,叶背面有中等密度的直立茸毛,叶脉花青素着色程度极浅,叶片平均长度为12.2 cm,宽度为18.1 cm,叶柄平均长度为9.6 cm。第一卷须着生位置为新梢第六节,卷须为间隔性,单分叉。第一花序

一般着生在第三节,第二花序在第四节。枝条成熟时节间和节的颜色为暗红色,节间平均长度为7 cm,最长8 cm,最短6 cm。植株生长势中庸。花为两性花。

2.2 果实经济性状

‘玫香宝’果穗圆柱形或圆锥形,果穗中大,平均穗质量230 g,最大穗质量460 g,平均果穗长、宽为16.5 cm×10.5 cm;果粒着生紧密,大小均匀,果粒为短椭圆形或近圆形,大,平均纵径2.22 cm,横径2.00 cm,平均粒质量7 g,最大粒质量9 g;果皮紫红色,较厚、韧,果皮与果肉不分离;果肉较软,味甜、具玫瑰香味和草莓香味,品质上等,可溶性固形物含量为21.1%,总糖为17.28%,总酸为0.44%,每果粒种子数2~3粒,种子大。与亲本及对对照品种果实性状鉴评比较见表1。

表1 ‘玫香宝’与亲本及对对照品种果实外观、内在品质性状比较
Table 1 Main characteristics comparison among ‘Meixiangbao’, its parents and ‘Zaoheibao’

性状 Character	阿登纳玫瑰 Muscat Ottonel	巨峰 Kyoho	早黑宝 Zaoheibao	玫香宝 Meixiangbao
果穗形状 Cluster shape	圆柱形 Cylindrical	双歧肩圆锥形 Conical with shoulder	双歧肩圆锥形 Conical with two shoulder	圆锥形 Conical
平均穗质量 Average cluster mass/g	188	420	426	230
果粒形状 Berry shape	圆形 Circular	椭圆形 Elliptic	短椭圆形 Short elliptic	短椭圆形 Short elliptic
平均粒质量 Average berry mass/g	2.6	8.3	8.0	7.0
果皮颜色 Berry color	黄绿 Green-yellow	紫黑 Purple black	紫黑 Purple black	紫红 Purple red
果肉质地 Flesh texture	软 Soft	软 Soft	软 Soft	软 Soft
果肉香味 Fragrance	玫瑰香 Muscat	草莓香 Strawberry	玫瑰香 Muscat	玫瑰香+草莓香 Muscat +Strawberry
ω (可溶性固形物) Soluble solids content/%	20.4	18.1	19.6	21.1
ω (总糖) Total sugar content/%	17.04	15.14	16.20	17.28
ω (总酸) Total acidity content/%	0.34	0.52	0.55	0.44
糖酸比 Sugar-acid ratio	50:1	29:1	29:1	39:1

2.3 生长结果习性

‘玫香宝’生长势中庸,萌芽率60.4%,结果枝占萌芽芽眼总数的45.1%,每果枝平均花序数量为1.37个,自然授粉花序平均坐果率为31.2%。2013年用‘贝达’、SO4、5BB等砧木进行嫩枝嫁接,每个砧木各嫁接200株,2014年平均株产0.98 kg,2015年平均株产1.55 kg,单株产量高低顺序为5BB>

SO4>‘贝达’。2014年进行营养袋苗定植,定植159株,2015平均株产0.96 kg。

2.4 物候期

在山西晋中地区,‘玫香宝’4月下旬萌芽,5月下旬开花,7月上旬果实开始着色,8月中旬果实完全成熟,从萌芽到果实充分成熟需111 d左右,属于早熟品种。新梢开始成熟期为7月中旬。

2.5 抗逆性及栽培适应性

在山西南部、中部及北部地区多年的试验示范过程中,‘玫香宝’均未见严重的冻害和病害现象,总体表现为长势中庸,抗病性强,适应性强,可进行省力化栽培。适宜在西北、华北地区推广种植。

2.6 倍性结构鉴定

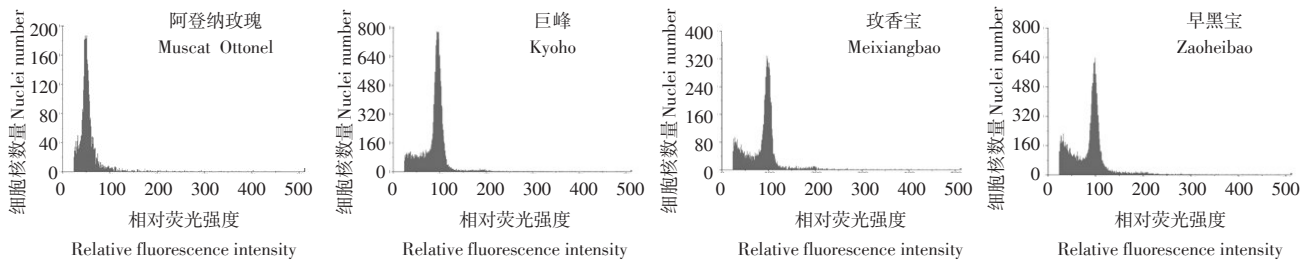


图 2 流式细胞仪分析结果

Fig. 2 The nucleolus DNA content by flow cytometry

利用流式细胞仪对‘玫香宝’及其亲本进行倍性鉴定,已知的‘阿登纳玫瑰’为二倍体,‘巨峰’为四倍体,对照品种‘早黑宝’为四倍体,确定‘阿登纳玫瑰’的G1期峰值位置,以此为对照,进行‘玫香宝’倍性的分析,‘玫香宝’的G1期峰值与‘巨峰’和‘早黑宝’一致,表明其为四倍体(图2)。

3 栽培技术要点

3.1 架式与整枝方式

‘玫香宝’长势中庸,成花容易,对修剪反应不敏感,在栽培上宜采用篱架或V形架。行距为2.5~2.8 m,株距为0.8~1.0 m,修剪以中、短梢修剪为主。

3.2 产量控制

根据气候、热量状况控制产量,山西南部地区产量以每666.7 m² 1 500 kg为宜,中部地区以每666.7 m² 1 000 kg为宜,北部地区以每666.7 m² 800 kg为宜。产量过高会造成品质下降、成熟期延后、枝条成熟度差等。

3.3 肥水管理

北方埋土地区,葡萄春季出土后,及时浇灌萌芽水,结合浇水追施尿素1次(每666.7 m² 15 kg),以利葡萄萌芽生长。开花前,结合浇水追施鸡粪1次(每666.7 m² 1 m³)、磷酸二铵(每666.7 m² 15 kg)。幼果期,结合浇灌果实膨大水,追施硫酸钾1次(每666.7 m² 15 kg)。在果实初着色期,结合浇水追施1次磷酸二氢钾或硫酸钾(每666.7 m² 15 kg),促进果实继续膨大着色和枝条成熟。果实采收后结合葡萄埋土开沟施入有机肥(施肥量为每666.7 m² 3 000~4 000 kg)。在葡萄修剪前后,浇足越冬水。

该品种穗形整齐,果粒大,果皮紫红色,果肉较

软,最主要的特点是可省力化栽培,并具有2种香味即玫瑰香味和草莓香味,风味独特,品质上等。为优良欧美杂种四倍体特异葡萄新品种,有望在生产中广泛种植。

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