

枇杷新品种早茂15号的选育

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摘要:早茂15号是以早钟6号为母本、粤引马可为父本杂交,从F₁代群体中通过单株优选而成。该品系为黄肉类型,早中熟,成熟期3月上旬至4月上旬,果实长倒卵形,果皮橙黄,易剥皮,果肉橙黄色,平均单果质量42.2 g,平均单果种子数3.3粒,果肉厚9.86 mm,可溶性固形物含量(w,后同)13.5%,维生素C含量1.51 mg·100 g⁻¹,总酸含量0.53%,可食率74.4%。该品系易成花,花量大,坐果率极高,丰产性能好,甜酸适口,品质优良,适宜在广东省枇杷种植区域种植,云南、贵州等其他枇杷产区也在试种中。

关键词:枇杷;新品种;早茂15号

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A new loquat cultivar Zaomao No.15

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Abstract: Zaomao No.15 was bred from a cross combination of Zaozhong No.6 as the female parent and Marc as the male parent. In 2004, the artificial hybridization was carried out. The hybrid seeds were obtained and sown in 2005. After the seedlings emerged, RAPD was used to identify the hybrid population, and then 51 true hybrid seedlings were obtained. In the winter of 2005, the scions of hybrid seedlings were grafted to the main or secondary branches of Zaozhong No.6 loquat tree (intermediate stock) under promoted cultivation. Some grafting seedlings began to bear fruits in 2009 and all trees entered the fruiting period in 2011. Important fruit traits such as fruit weight, seed number, TSS, total sugar and titratable acid contents were selected to evaluate for three consecutive years from 2012 to 2014. In the winter of 2014, superior strain ZM15 was finally selected for top-working grafting and planted in Conghua, Guangzhou and Shenzhen for variety adaptability test. From 2017 to 2019, field observation, investigation and quality assessment were conducted on the growth and fruit of ZM15 in three consecutive years. The results showed that ZM15 had stable genetic traits, top quality, good stress resistance and high fruit commodity rate, and its comprehensive quality traits were superior to Zaozhong No.6. In 2020, we applied and passed the examination and approval of Guangdong Crop Variety Approval Committee with official name Zaomao No.15. This cultivar belongs yellow fruit type, and the ripening stage is from mid-March to Mid-April. The fruit is long-round to pear-shaped, the peel is orange yellow and easy to peel, the flesh is orange-yellow, the average fruit weight is 42.2 g, the average number of seeds per fruit is 3.3, the flesh thickness is 9.86 mm, the soluble solid content is 13.5%, and vitamin C content is 1.51 mg·100 g⁻¹. The total acid content is 0.53%, and the edible rate is 74.4%. This cultivar is easy to initiate large amount of flower buds, and has high fruit setting rate, good yield performance, sweet and

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sour taste and good quality, which is suitable for growing in Guangdong and also has been tried in other loquat producing areas like Yunnan and Guizhou provinces.

Key words: Loquat; New cultivar; Zaomao No.15

枇杷(*Eriobotrya japonica* Lindl.)原产于中国,已有2000多年的栽培历史,是我国重要的早春水果之一。我国枇杷的栽培面积和总产量均居世界第一^[1],主要栽培区集中在长江流域及其以南各省份^[2]。广东气候温暖,雨水充沛,具有发展枇杷的优越条件,但长期以来,广东枇杷生产发展缓慢,至21世纪初,大部分地区表现为零星或小片栽培,而较集中连片种植的地区仅有广东的始兴、清远和从化等地。广东曾选出一批枇杷品种,如多宝2号(中山,20 g,最大31 g)、多宝3号(中山,27.1 g,最大30.8 g)、港口8号(中山,23.2 g,最大37.3 g)^[3],但都没有超过40 g的品种。20世纪90年代,黄金松等^[4]首先报道利用杂交育种技术育成了中国首个杂交枇杷品种早钟6号,并由此建立了枇杷有性杂交育种技术体系,而杂交育种也成为枇杷新品种选育的有效手段^[5-6]。针对广东省枇杷生产的现状,充分利用从西班牙引回的大果、少籽、品质中等以上的种质资源^[7],通过杂交育种的方式选育兼具不同亲本优质特征的枇杷新品种,以适应广东省等地枇杷产业的发展显得尤为重要。

1 选育过程

2004年,以国内优良早熟品种早钟6号为母本、西班牙大果品种Marc为父本进行了人工杂交,2005年获得杂交种子后进行了播种,出苗后利用RAPD分子标记技术对杂交群体进行了真假杂种鉴定,获得51株真杂种苗;2005年冬天将该批真杂种苗接穗高接到早钟6号枇杷(中间砧)的主枝或副主枝上,进行促成栽培。2009年开始陆续结果,2011年全部进入结果状态。2012—2014年,针对重要的果实性状,如单果质量、种子数以及可溶性固形物、总糖、可滴定酸含量,对单株进行了连续3 a的复选,最终确定株系ZM15为优株。2014年,在从化、广州、深圳三地,选择早钟6号为中间砧,以ZM15为接穗,全株嫁接,进行品种适应性试验试种。2017—2019年连续3 a对该优株高接树进行生长和结果的田间观察、调查和果实测定,表明ZM15枇杷遗传性状稳定,品质优良,抗逆性较强,果实商品率较高,其综合品质性状优于早钟6号。2020年3月通过广东省农作物品种审定委员会审定,定名为早茂15号(图1),审定



图1 枇杷新品种早茂15号

Fig. 1 A new loquat cultivar Zaomao No.15

编号:粤审果20200009。

2 主要性状

2.1 果实主要经济性状

早茂15号为早中熟品种。果实长倒卵形,果皮橙黄色,易剥皮;果肉橙黄色,果肉厚(9.86 mm);平均单果质量42.2 g,大果56.8 g;可溶性固形物含量

(w,后同)13.5%、总酸含量0.53%,可食率74.4%;平均单果种子数3.3粒。成熟期3月上旬至4月上旬,稍迟于早钟6号(表1)。

2.2 植物学特征

树冠圆头形、树姿开张、树势强健;主干粗壮且高、主干上有中密度的皮孔、侧枝数量多、侧枝长而粗;花序形状圆锥形、花序中等大小,侧序姿态平展,

表1 早茂15号与早钟6号的比较
Table 1 Comparison of Zaomao No.15 and Zaozhong No.6

品种 Cultivar	成熟期 Ripening date	单果质量 Single fruit mass/g	w(可溶性固形物) Soluble solid content/%	w(维生素C) Vitamin C content/(mg·100 g ⁻¹)	单果种子数 Seed number per fruit
早茂15号 Zaomao No.15	3月上旬至4月上旬 Mid Mar. to Mid Apr.	46.3	14.3	1.97	3.3
早钟6号 Zaozhong No.6	3月初至4月初 Early Mar. to Early Apr.	44.4	11.9	1.89	4.2

花瓣白色。在一般管理水平下,每666.7 m²种植40~42株为宜[(3.5~4) m×(4~5) m]。在广州、从化和深圳进行生产示范,常规管理,均进行疏花疏果,与对照早钟6号相比,果实表现果个大,可溶性固形物含量高,每666.7 m²平均产量696~728 kg。

2.3 生物学特性

春梢抽生时间为1月中旬至翌年3月中旬,春梢抽生次数2次;始花期11月上旬,盛花期11月下旬,终花期12月上旬;早茂15号属于早中熟品种类型,果实成熟期3月上旬至4月上旬。

3 栽培技术要点

3.1 整形与修剪

早茂15号树势较强,干高控制在0.7 m以下,留3~4个分枝为宜。修剪主要是在采果后剪去采果枝、弱枝等。

3.2 疏花、疏果和套袋

早茂15号结果枝率偏低,适度疏除花序,同时对花穗较长的第1~2级侧花序进行疏除,但初结果树一般不宜疏花。当幼果长至直径1.0~1.5 cm时,进行疏果,每穗果只保留2~4个外观好、果形较好和空间分布较合理的幼果。套袋时可用不同颜色或写上标识的果袋来标记果实成熟的批次,做到成熟一批采收一批。

3.3 病虫害防治

天牛是枇杷的主要虫害,以幼虫钻蛀危害,防治较难;如果植株遭受天牛危害,地面上出现散有黄褐色虫粪(枝上粪孔排出),宜用铁线勾出天牛幼虫或用3%啶虫脒300倍药液用针筒朝虫孔注入10~20 mL药液,然后用黄泥或棉球后塞住虫孔,毒杀幼虫。

3.4 采收

为确保果实品质,应待果实充分成熟时采收,成熟果可分2~3批适时采收。

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