

早熟大果杏新品种‘玫硕’的选育

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摘要: ‘玫硕’杏是以我国地方品种‘蜜香’为母本, 以从国外引入的‘凯特’为父本杂交选育而成的早熟特大果杏新品种。该品种外形美观、果实近圆形, 果实特大、平均单果质量117.6 g。果皮金黄色, 阳面玫瑰红色。果肉金黄, 肉厚质细, 纤维少, 可食率达95.3%。汁液多, 甜美可口, 味浓芳香, 风味极佳, 可溶性固形物含量(w, 后同)15.1%。维生素C含量11.5 mg·100 mg⁻¹, 总糖7.35%, 还原糖2.84%, 总酸1.59%, 果胶1.46%。品质上乘, 离核。‘玫硕’杏树势强健, 树冠半圆形, 树姿较开张。3月上旬花芽萌动, 3月中下旬开花, 花期5~7 d, 5月下旬成熟, 果实发育期63 d; 3月下旬叶芽萌动, 4月上旬展叶, 11月中旬落叶, 树体营养生长期约220 d。成龄树以花束状枝、短果枝结果为主。嫁接苗第2年开始开花结果, 5 a(年)即可进入丰产期, 平均每666.7 m²产量2 400 kg。该品种自花结实率较低, 需配置授粉树。该品种适应性强, 早实、丰产稳产。在黄河和淮河流域、秦岭及以北地区均可种植。

关键词: 杏; 新品种; ‘玫硕’; 早熟; 大果

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‘Meishuo’, a new apricot cultivar with early-maturing and large fruit

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Abstract: ‘Meishuo’, an early-maturing apricot cultivar, was newly selected from hybrids of the cross between the sweet apricot cultivar ‘Mixiang’ (female parent) and the large-fruit apricot cultivar ‘Katy’ (male parent). The hybrid cross was made in 2005 and ‘Meishuo’ was registered by Henan province in January, 2018. The fruit shape of ‘Meishuo’ is near globose and is beautiful in appearance. The fruit of ‘Meishuo’ is extremely large in size, the average fruit weight is 117.6 g, and the maximum fruit weight is 184.3 g. The fruit ground color of ‘Meishuo’ is golden yellow and is covered with rosy red at the sunny side. The peel of ‘Meishuo’ fruit is covered with hair and mid-thick, which can be easily separated. The flesh of ‘Meishuo’ is yellow in color, thick and delicate in texture, with low fiber content, and the edible rate can reach up to 95.3%. ‘Meishuo’ is an attractive fruit with abundant juice, pleasant sweetness and sourness, and intense fruity aroma. The content of soluble solids is about 15.1%, the total soluble sugar content is 7.35%, the reducing sugar content is 2.84%, the total acid content is 1.59%, the pectin content is 1.46%, and the vitamin C content is 11.5 mg·100 g⁻¹. It has excellent flavor and quality. It is free stone and the stone is oblong in shape, the average dry stone weight is approximately 3.3 g. The kernel is bit in flavor, and the average dry kernel weight is about 0.4 g. The fruit can be stored at room temperature for about 5-7 days. In Zhengzhou, middle China, the flower bud of ‘Meishuo’ starts activities in early March, the initial-blossom date mostly appears in middle March, while the full-blossom date

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mostly appears in late March and the flowering period can last about 5-7 days. The leaf buds germinate in late March and expand in early April. The leaves start falling in early November and defoliation ends in mid-November, and the vegetative growth of the tree lasts about 220 days. The fruit setting rate, sprouting rate, and shooting rate is 26%, 52%, and 34%, respectively. The tree vigor of 'Meishuo' is strong with semicircle canopy and semi-opening posture. Initiation of floral bud is easy for 'Meishuo'. The results of self-pollination at flowering stage showed that the self-pollination rate of 'Meishuo' was very low and it was suggested to be a self-incompatible cultivar. Only by planting suitable pollinizers can it set fruits. The fruit development period is about 63 days. The maturity date is around last May in Zhengzhou, Henan province, China. Fruits are mainly bore on bouquet spurs and short fruiting branches. Flowering starts at the second year and high yield period usually comes at the fifth year after grafting, and the average yield reaches up to 2 400 kg per 666.7 m². This new early-maturing cultivar, exhibits strong suitability to adverse circumstances, is highly and stably productive for high quality fruits. It can be cultivated in the Yellow River and Huaihe River basins, as well as Qinling Mountain and its north area.

Key words: Apricot; New cultivar; 'Meishuo'; Early-maturing; Large fruit

杏原产我国,栽培历史悠久。随着人们生活质量的提高和膳食结构的优化,对果品多样化的要求不断增加。杏外观艳丽、风味独特,成熟期早,在初夏水果市场上占有重要的位置^[1]。杏果实营养丰富,含有多种有机成分和人体必需的维生素及无机盐类,是一种营养价值较高的水果。杏及其产品具有独特的保健功效,杏是抗癌、提高人体免疫力的最佳果品^[2-3]。传统栽培的乡土杏地方品种虽然风味好,但果偏小,丰产稳产性不强;引进的'金太阳'、'凯特杏'丰产性好,没有中国本土杏特有的浓甜芳香味,生产上优质大果品种较少,不能满足市场要求。因此我们按照鲜食杏果商品指标要求,从品质、风味、外观、贮藏、适应性、供应期等方面定位育种目标^[4],将口感好、品质优良、大果、早熟、丰产稳产、抗性强作为选育杏新品种的育种方向^[5-6]。

1 选育经过

2005年在中国农业科学院郑州果树研究所李杏资源圃从'蜜香'和'凯特'为亲本配置杂交组合,获得杂交种子137粒子。2006年春对种子催芽处理后播种,培育杂交苗68株。进行正常水、肥和树体管理,分别编号、调查。2009年杂种苗开花结果,对果实经济性状、丰产性能、结果习性等多方面调查观察、鉴定,其中编号为1~10的杂交单株,性状表现优良:果实特大,果形美观,果皮光亮、阳面红色,果肉黄色,肉厚质细,纤维极少。汁液多,可溶性固形物含量(w)为15.1%,具有芳香味、口感好、风味极佳,成熟较早。2010年选定为优良单株,并安排高接和繁育苗木进行区域试验。2011年高接树开花结果,各株间果实品质和经济性状未出现变异现象,具有一致性。2011

年在河南各地及周边省市布局中试和区域试验和引种栽培。2012—2016年对该优系的果实经济性状、丰产性能、生长结果习性、抗性等方面比较观察,结果表明,该品种农艺性状和果实经济性状稳定。在各试验区不同立地类型均表现为果实极大、外观亮丽,香甜可口,品质极优,结果早,丰产稳产,抗性强。2017年定名为'玫硕',2018年1月通过河南省林木良种审定委员会审定(编号:豫S-SV-AV-010-2017)(图1)。



图1 杏早熟大果新品种'玫硕'

Fig. 1 'Meishuo', a new apricot cultivar with early-maturing and large fruit

2 主要性状

2.1 果实经济性状

'玫硕'杏果实近圆形,平均单果质量117.6 g,最大果质量184.3 g;果顶平,缝合线浅,较明显,片肉对称;梗洼中深。果皮金黄色,阳面有玫瑰红色;果面有

茸毛;果皮中厚,易剥离。果肉金黄,肉质软细,纤维少,多汁,味浓甜、芳香。果实成熟时可溶性固形物含量(w,后同)为15.1%,pH值6.1,每100 g果实含维生素C 11.5 mg,总糖7.35%,还原糖2.84%,总酸1.59%,果

胶1.46%。离核,核椭圆形。核表面较粗;干核平均质量3.3 g;纵径3.4 cm,横径2.6 cm,侧径1.1 cm。仁苦、较扁平,干仁平均0.4 g;可食率95.3%;常温下可贮藏5~7 d(表1)。

表1 ‘玫硕’与对照品种果实经济性状比较

Table 1 Comparison of economic characters of fruits between ‘Meishuo’ apricot and the control cultivars

品种 Cultivar	成熟期 Maturity period	平均单果质量 Average fruit mass/g	果面 Fruit surface	风味 Flavor	品质 Quality	w(可溶性固形物) Soluble solids content/%	产量 Yield
玫硕 Meishuo	5月28日 May 28	117.6	光滑 Smooth	芳香浓甜 Fragrance sweet	优 Superior	15.1	很高 Very high
蜜香 Mixiang	6月3日 June 3	87.0	光滑 Smooth	甜 Sweet	优 Superior	13.6	高 High
凯特 Katy	6月8日 June 8	95.5	粗糙 Rough	甜 Sweet	中 Middle	12.7	很高 Very high

2.2 植物学特征

该品种树冠半圆形,树姿较开张。主干较粗,树皮灰褐色;多年生枝灰色,1 a生枝粗壮,斜生,枝条红褐色,光滑无毛。节间长1.9 cm,皮孔多、平,中大,灰白色,近圆形。花5瓣,粉白色;雌蕊1枚,雄蕊32~41枚。叶片近圆形,基部心形,先端短、渐尖,叶长8.34 cm,叶宽6.2 cm,厚0.03 cm,叶柄长3.6 cm,叶柄暗红色,蜜腺中大,圆形,3~4个,叶片深绿色,有光泽,叶缘较整齐,锯齿中、单锯齿;主脉黄色,侧脉黄绿色。

2.3 生长结果习性

‘玫硕’杏树势强健,萌芽力强,成枝低。萌芽率52%,成枝率34%。郑州地区10 a生树高3.55 m,冠幅3.3 m,干周65.8 cm。当年新梢平均长53.6 cm,枝条直径平均0.76 cm。幼树以中、长果枝结果为主,盛果期成龄树以花束状枝、短果枝结果为主。该品种嫁接苗第2年开始开花结果,3 a即可大量结果,平均株产10 kg,4 a生树平均株产22 kg,5 a即可达到盛果期,株产40 kg以上,平均每666.7 m²产量2 400 kg。该品种自花结实率较低,需配置‘早金艳’‘金太阳’等作授粉树,配置比例为4~6:1。

2.4 物候期

在郑州地区,3月上旬花芽萌动,3月中下旬开花,3月末盛花期,花期5~7 d,5月下旬成熟,果实发育期63 d。3月下旬叶芽萌动,4月上旬展叶,11月中旬落叶,树体营养生长期约220 d。

2.5 适生性与抗逆性

‘玫硕’杏适应性强,该品种对土壤要求不严,在黏壤土、壤土、砂壤土上栽培,均表现出优良的生长结果习性。该品种耐干旱、瘠薄,较抗早春霜冻,枝干、叶和果病害极少发生。在河南和周边省、黄淮流域及

适合杏的栽培区域均可种植。

3 栽培技术要点

3.1 建园

该品种适应性强,平地、丘陵均可种植,应选择土质疏松、排水良好的土壤建园。露地建园株行距可采取3 m×4 m、3 m×3 m、2.5 m×4 m、2.5 m×3 m、2 m×3 m,每666.7 m²定植56~110株;大棚设施栽培可采取1.5 m×2.5 m或1 m×2 m密度。

定植时间春季、秋季均可进行。栽植前挖宽、深各80~100 cm的定植穴或沟,沟内填施秸秆和有机肥。黏重土壤和降雨量较多的地区要起垄栽培。一般每666.7 m²施腐熟的优质有机肥4 000 kg。浇透水1次,待水渗下后,选用无病无伤根系良好的壮苗,栽后立即浇1次透水,随后覆盖黑色地膜。

3.2 整形修剪

树形根据立地条件和密度可采用主干分层形、自然开心形、自然圆头形或“Y”字形进行整枝。幼树修剪采用冬季短截、夏季摘心、扭梢,以形成树形、促进尽早结果。成龄树对过密枝、徒长枝、竞争枝进行疏除;利用拉枝、短截和回缩等手段培养和更新结果枝,防止结果枝外移,平衡树势,保证通风透光,合理负载,提高果实品质。

3.3 花果管理

为获得品质优良的大果,合理负载,及时进行疏花疏果,保证连年丰产。每666.7 m²产量控制在2 000~2 500 kg。对于过弱的花枝花前要短截,过长的花枝要回缩。疏果在花后15 d进行,疏去发育不良和拥挤的果实,间隔15 d进行第2次定果。短枝留单果、中果枝留2个果、长果枝留3~5个果,每个果间隔5~8 cm。

3.4 水肥管理

秋季(8—10月)早施基肥。结果幼树每666.7 m²施基肥5 000 kg。盛果期每株施优质有机肥(腐熟的牛粪、猪粪)60~100 kg,加磷酸二铵、氯化钾或硫酸钾各0.5~1.0 kg作基肥。花前追施氮肥,果实膨大期和采果后追施含磷钾较高的复合肥。

根据墒情合理灌水,防治土壤过于过湿。确保花前水、硬核水。灌水时,以湿透根系集中分布层为宜。果实接近成熟期时要进行控水,以增进果实品质。雨季注意及时排水。

3.5 病虫害防治

‘玫硕’杏抗性较强,病虫害相对较少。要做好病虫害预防和防治,冬季清园,发芽前喷施5度的石硫合剂和春季用吡虫啉或可立施,防治蚜虫;合理修剪,加强果园水肥管理,保持树体健壮。

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