

中晚熟蟠桃新品种‘中蟠17号’的选育

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摘要:‘中蟠17号’是通过多代杂交聚合选育的中晚熟黄肉蟠桃新品种,其母本为单株‘98-2-1’,父本为优系‘砧1-3’油蟠。单果质量252 g,果实扁平,果皮茸毛短,底色黄色,果面全红;果肉黄色,硬溶质,黏核;肉质细腻,可溶性固形物含量14%。花为铃形,花粉多,自花可以结实,丰产稳产;在郑州地区果实8月上旬成熟,果实生育期129 d左右。

关键词:蟠桃;新品种;‘中蟠17号’;黄肉;硬溶质;中晚熟

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A new flat peach cultivar ‘Zhongpan 17’

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Abstract: ‘Zhongpan 17’ is a middle to late ripening flat peach. Its seeding was derived from a cross between ‘98-2-1’ and ‘Zhen 1-3’ in 2007. The female parent ‘98-2-1’ is an advanced seeding, and is an early-mid ripening yellow flesh peach covered by shining red. The male parent ‘Zhen 1-3’ is also a good seeding, and is flat nectarine with yellow flesh ripening in mid-to-late August. Hybrid working was started in middle March of 2006 and finished at end of this month. Seeds were extracted from fruit in middle July of 2006, and treated in temperature of 2-4 °C for about 80 days. After that, the seeds, germinated, were potted in sterile nutrient media. After growing out to 14 leaves, the hybrid seedlings were transferred into bigger nutrition bowls for about 150 days’ greenhouse cultivation. All seedlings were planted in experimental field with density of 0.5 m×4.0 m at the end April of 2007. A seeding numbered ‘Xiaohuang 06-4-11’ was selected in 2010 for its big flat fruit, bright color, good quality and middle to late ripening time. Then, leaf buds of this seeding were transplanted into rootstocks to obtain much more new seedlings. It was named ‘Zhongpan 17’ in 2015 and got license in 2018. ‘Zhongpan 17’ has feature of broad oblate shape, good symmetry, deep shallow in top and light shallow in bottom respectively. The flesh has best consistency in hardness during maturity periods. Average fruit size 252 grams and the biggest can reached 400 grams. The peel of fruit has short fluff, 80%-90% of bright red flush. Flavor of fruit is sweet and juicy, with a soluble solids content of 14%. The flesh texture is fine and cling stone. The maturity is later about 15 days than ‘Zhongpan 11’ which is planted widely in China. ‘Zhongpan 17’ has the ability of fruiting in all kinds of fruit branches. Mixed flower buds occupy by about 41.8%. Internode length is 2.2 cm, leaf length and width is 18.08 cm and 4.14 cm respectively. Leaf is yellow-greenish with 0.86 cm petiole length and sharp leaf base angle. Flower is pink, showy with numerous pollen and self pollination. In Zhengzhou, the early blooming date is about in late March and the blooming period can last 7 days. Fruit matures appear in early August, fruit growth periods is 129 days. ‘Zhongpan 17’ was planted in some counties to test its fruiting stability such as Xihua county

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of Henan province, Mengyin county of Shandong province and Fengxian county of Jiangsu province. In all those experiment station, fruit yields are relatively stable with 2 000 kg per 666.7 m² in Xihua and Mengyin, 2 500 kg per 666.7 m² in Fengxian. For young trees, it's better to strengthen the vigour by prevent pests and diseases. In addition, we must thin some flowers and young fruits to improve fruit quality. In general, we should keep 2-3 fruits in long fruit branch, 1 fruit in short fruit branch, and 1 fruit in bouquet-shaped fruit branch. Since 'Zhongpan 17' belong to late-maturing plants, it's necessary to bag during young fruits in hardcore period.

Key words: Flat peach; New cultivar; 'Zhongpan 17'; Yellow flesh; Firm texture; Middle to late ripening

果实类型多样化是世界桃育种的方向,蟠桃、油蟠桃作为重要的果实类型,在鲜食品种中的所占比例将会大幅度提高^[1]。在此背景下,国内多家桃育种单位展开了蟠桃育种工作,选育出了一系列蟠桃新品种,但这些品种多是以白肉及早中熟为主^[2-3],黄肉蟠桃甚是缺乏。以此,中国农业科学院郑州果树研究所于上世纪80年代开始进行蟠桃品种选育,通过多代聚合杂交,选育出了成熟期较晚、果个大、丰产、硬度及风味均表现良好的黄肉蟠桃‘中蟠17号’,可以满足中晚熟黄肉蟠桃种植及市场供应。

1 选育过程

中国农业科学院郑州果树研究所于2006年3月,选用自选的普通桃优株‘98-2-1’为母本,优系‘砧1-3’油蟠桃为父本,进行人工杂交(图1)。2006年7月从杂交果取出种胚,低温处理80 d后,播种于温室的营养钵中,苗木生长到14枚真叶左右移栽到大营养钵中,进行150 d的温室生长培养。2007年4

月29日将苗木带基质移栽到田间培养畦内,按0.5 m×4.0 m种植在所内基地。2010年杂交苗结果,调查发现单株‘小黄06-4-11’为蟠桃,果实外观漂亮,果较大,大果200 g,肉质较硬,风味甜,丰产。于当年8月下旬进行扩繁,2011年建立了优良株系试验园,并在河南郑州、西华、温县、新乡,山东蒙阴及江苏丰县等地种植,各地综合表现优良。于2015年命名为‘中蟠17号’(图2)。2017年获得植物新品种权,品种权号:CNA20151462.8;2018年通过河南省林木品种审定委员会审定,良种编号:豫S-SV-AP-022-2018。

2 主要性状

2.1 果实主要经济性状

‘中蟠17号’果实扁平,两半部较对称,果顶凹陷,梗洼深度浅,缝合线明显程度中,成熟状态一致;单果质量252 g,大果可达400 g,果肉厚;果皮茸毛短,底色黄,果面近全红,十分美观;果肉黄色,中部

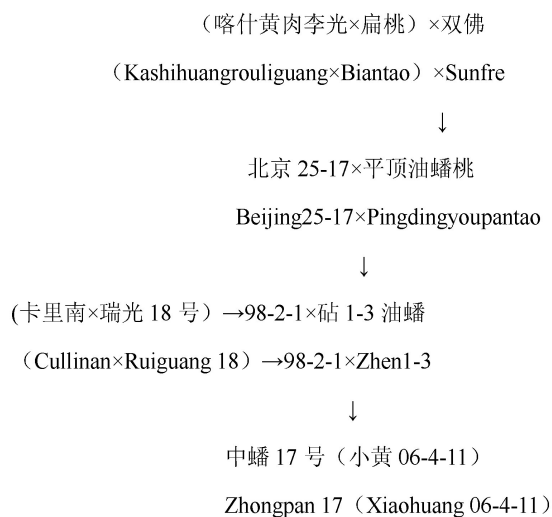


图1 ‘中蟠17号’的系谱关系

Fig. 1 The pedigree of flat peach ‘Zhongpan 17’



图2 蟠桃新品种‘中蟠17号’

Fig. 2 A new flat peach cultivar ‘Zhongpan 17’

果肉无花青苷,近核处有少量花青苷,肉质为硬溶质,较耐运输;汁液中等,纤维含量中等;果实风味甜,可溶性固形物含量14%,黏核。与当前黄肉蟠桃

主栽品种‘中蟠桃11号’相比,‘中蟠17号’成熟期晚15 d左右,果个大,可以作为其配套品种推广(表1、表2)。

表1 ‘中蟠17号’与‘中蟠桃11号’的比较

Table 1 Comparison of ‘Zhongpan 17’ and ‘Zhongpantao 11’

品种 Cultivar	成熟期 Maturing date	平均单果质量 Single fruit mass/g	核黏离性 Stone adherence to flesh	w(可溶性固形物) Soluble solid content/%	w(总糖) Total sugar content/%	w(维生素C) Vitamin C content/ (mg·100 g ⁻¹)
中蟠17号 Zhongpan 17	8月上旬 Early August	252	黏核 Cling stone	14	9.78	8.52
中蟠桃11号 Zhongpan 11	7月中下旬 Mid-to-late July	200	黏核 Cling stone	14	9.02	6.84

表2 ‘中蟠17号’在河南西华、山东蒙阴、江苏丰县的生产示范试验结果

Table 2 Production demonstration test results of ‘Zhongpan 17’ in Xihua county of Henan province, Mengyin county of Shandong province and Fengxian county of Jiangsu province

地点 Test area	成熟期 Maturing date	单果质量 Single fruit mass/g	肉质 Texture	果面着色 Fruit color	w(可溶性固形物) Soluble solid content/%	每666.7 m ² 产量 Yield per 666.7 m ² /kg
河南西华 Xihua county, Henan province	05-08	250	硬溶质 Firm texture	80%红 80% red flush	14	2 000
山东蒙阴 Mengyin county, Shandong province	10-08	270	硬溶质 Firm texture	80%红 80% red flush	14	2 000
江苏丰县 Fengxian county, Jiangsu province	01-08	300	硬溶质 Firm texture	80%红 80% red flush	15	2 500

2.2 生长结果习性

树势强,长、中、短果枝均能结果,其中长果枝占51.09%,中果枝占17.39%,短果枝占26.09%,徒长性结果枝5.43%。徒长性结果枝长放时仍能结果。复花芽居多,占41.58%,花芽起始节位为第1

节,采用2 m×4 m的株行距栽植,4 a生树平均株产30 kg。

2.3 植物学特征

树姿半开张;节间长度2.2 cm;叶片长18.08 cm,宽4.14 cm,呈长椭圆披针形,叶柄长0.86 cm,叶

片黄绿色,叶基角度锐尖,叶尖角度小;花为铃形,花冠颜色粉红,花粉多,萼筒内壁橙黄;自花可以结实。

2.4 生物学特性

郑州地区3月初叶芽膨大,3月中下旬开花,开花持续期约7 d。8月上旬果实成熟,果实生育期约129 d。落叶终止期11月10日左右,生育期近260 d。

3 栽培技术要点

3.1 疏花疏果

该品种坐果率高,需要进行严格的疏花疏果。第1次疏果在落花后25 d进行,第2次疏果在花后45 d进行,一般长果枝留果2~3个,中果枝留1个,短果枝、花束状枝留1个或不留。

3.2 肥水管理

该品种幼果期果顶有流胶现象和轻微裂果,应加强树势及病虫害防控。为提高果实品质,在秋季重施有机肥;果实成熟前30 d,每株施1 kg腐熟的饼肥,结合叶面喷施0.3%的硫酸钾2次。

3.3 果实套袋

该品种成熟较晚,易与雨季相逢,加上幼果期果顶有流胶现象和轻微裂果现象,须进行套袋栽培。套袋时间一般在定果后即硬核期进行,郑州地区一

般在5月15—20日。套袋前喷施杀虫与杀菌剂,采前7~10 d去袋,也可不去袋。果袋以内黑外黄双层纸袋为宜,否则果面有返红现象。

3.4 适时采摘

该品种肉质较硬,应适时采摘。蟠桃果柄与果肉接触面积大,采摘时应轻掰动果实,避免撕皮。

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