

早熟油桃新品种‘中油13号’的选育

牛良, 鲁振华, 崔国朝, 曾文芳, 潘磊, 王志强*

(中国农业科学院郑州果树研究所·国家瓜果改良中心, 郑州 450009)

摘要: ‘中油13号’是利用我国地方油桃资源、从国外引进油桃品种与我国水蜜桃品种等,通过人工多代杂交培育的油桃新品种。该品种果实圆形,端正,平均单果质量210 g,大果270 g以上。果皮底色白,成熟时全面着鲜红色,有光泽。果肉白色,硬度中,汁液中多,风味浓甜,皮下花色苷较多。果实汁液可溶性固形物含量(ω ,下同)13.70%,总糖含量10.92%,总酸含量0.22%,品质优良。果核椭圆形,褐色,黏核。郑州地区3月下旬开花,果实6月下旬成熟,11月上中旬落叶。生长势中强,成花易,以中果枝结果为主;自花结实,丰产性好。适合秦岭、淮河以北地区栽培,其他地区需引种试验。

关键词: 油桃;新品种;‘中油13号’;早熟

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‘CN 13’, an early ripening nectarine cultivar

NIU Liang, LU Zhenhua, CUI Guochao, ZENG Wenfang, PAN Lei, WANG Zhiqiang*

(Zhengzhou Fruit Research Institute, Chinese Academy of Agricultural Sciences·National Fruits and Cucurbits Improvement Center, Zhengzhou 450009, Henan, China)

Abstract: ‘CN 13’ comes from multi-generation crosses between Chinese landrace nectarine, introduced foreign nectarine and Chinese white peach cultivars. 94-1-47, the female parent, is a middle-season, white-flesh, freestone nectarine with middle acid. ‘CN 4’, the pollen donation, is an early season, yellow-flesh nectarine with good flavor and keeping quality. The anthers from flowers of male parent were collected in bell stage and dried on clean paper in room. The corollas of female parent were removed in balloon stage in spring of 1999. Then, artificial pollination was followed and all the branches were bagged. Two weeks later, bags were removed. All the trees were managed as normal. In middle July, near maturing, all fruits from artificial pollination were harvested and cleaned in room. After that, the seeds were extracted under clean bench and stratified in temperature of 2-4 °C on 2 layer of moist filter paper in petri dishes. In December, when germinated, the seeds were potted in sterile nutrient media. The hybrid seedlings were cultured in greenhouse till transplanted to selective nursery in the next spring. In middle April of 2000, all the seedlings were planted with density of 1.0 m×4.0 m. Based on evaluation of main economic characters of fruits over 2 years, the seedling numbered ‘99-47-17’ was picked out for its’ big round fruit, bright color, good eating quality, and stable high yield. It was named ‘CN 13’ in 2014 and licensed in 2016. The matured fruit is round and most of the white background covered by shining red. The fruit flesh is white, melting, juicy, which tasted sweet. Anthocyanin below skin is middle. The contents of soluble solid, total sugar and total acid in flesh juicy are 13.70%, 10.92% and 0.22%, respectively. The eating quality is very good. The stone is oval, brown and cling to the flesh. The flower is showy and the anther is dark red with much pollen. It is fertile and very fruitful. In Zhengzhou, middle China, the first flower of ‘CN 13’ comes into bloom mostly appears in late March and the flowering period can last 5-7 days. The fruit matures in late June, about 90 days after blooming. The tree is middle vigorous and semi-opening in canopy. The sprout-

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作者简介:牛良,男,副研究员,博士,主要从事桃生物技术及遗传育种研究。E-mail: niuliang@caas.cn

*通信作者 Author for correspondence. Tel: 0371-65330988; E-mail: wangzhiqiang@caas.cn

ing and branching ability are moderate. The new branches are green and dark-red on sunny side. The average internode length is about 1.97 cm. The leaf is green and lanceolate in shape with 2-4 reniform glands along the petiole. The flower is pink, showy with 5 petals. The tree of 'CN 13' is middle or strong vigorous. The flower buds normally appear from the 1st-3rd internode, even in the first year after planted. 'CN 13' has strong early fruit ability. The yield of 3-years-old tree in middle density could reach over 22.5 tons per hm². The middle length flower branches are suggested to leave for fruit. 'CN 13' is fertile, so it is not necessary to bring in pollen donation. Previous testing is distributed mainly in the north China, more tests need to be done in south China. According to the soil fertile and local rainfall, select a suitable planting density. The V-shaping or quad-V shaping are recommended for the north and the south separately. For poor soil, base fertilizer is necessary before planted. In the beginning two years of planted, the shape pruning is the first priority so as to build a strong and manageable tree architecture. In full fruit period, stabilize the growth vigor in middle level through fertilizer and yield control. For the canopy, good light penetration is very important for the flower bud formation and fruit quality, so summer pruning must be done routinely to keep it free from water branch and let the lower and inner shoots get enough sun shine.

Key words: Nectarine; New cultivar; 'CN13'; Early ripening

油桃是桃的变种,上世纪70年代之后,我国从欧美引进了部分油桃栽培品种,开始进行油桃的栽培试验与推广,但由于这些品种风味偏酸,部分品种存在裂果等适应性问题,在生产上饱受诟病^[1-2]。之后,我国桃育种者利用引进油桃品种与现有栽培品种进行杂交,培育出风味以甜为主、适应性较强的油桃品种,如‘秦光’‘早红霞’‘曙光’‘霞光’和瑞光系列等^[1],使油桃栽培逐渐兴起,随着‘中油桃4号’^[3]、‘中油桃5号’^[4]、‘中农金辉’^[5]等品种的育成推广,形成了新一轮的油桃栽培热潮。据桃产业有关数据,我国油桃的栽培面积已占到桃栽培总面积的20%以上,并继续保持着旺盛的发展势头。我国油桃育种虽已取得不少进展,但育成品种的数量和质量仍无法满足市场需求。

‘中油13号’是中国农业科学院郑州果树研究所最新培育的油桃品种,与同期成熟品种相比,果个大,着色艳,品质优,经过生产试验,该品种各农艺性状表现稳定,经济性状较好,深受生产者和消费者的好评。

1 选育经过

选用中国农业科学院郑州果树研究所桃育种单株94-1-47(7月中旬成熟,果个大,离核)为母本,采集‘中油桃4号’花粉,于1999年3月21日大蕾期时对杂交母树进行了去雄和人工授粉,授粉后杂交母树按常规管理。7月中旬采收获得杂交种子214粒,低温沙藏后11月份温室播种,最终获得杂种实生苗84株。2000年4月中旬定植于桃育种圃,株行距1.0 m×4.0 m,按常规方法栽培管理。单株99-47-17由于综合性状优良且表现稳定,于2005年初选,并进行了高接观察,结果

后各株间表现没有明显差异,2009年复选并开始布置中试。2014年定名为‘中油13号’,2016年获植物新品种授权(图1,图2)。

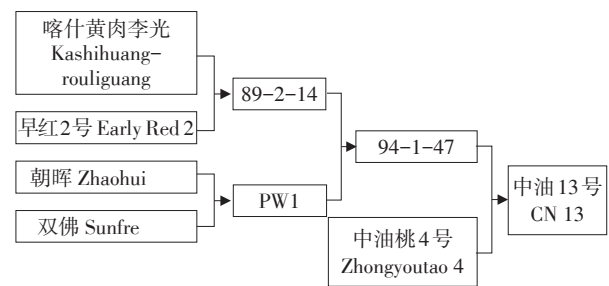


图1 ‘中油13号’油桃系谱图

Fig. 1 The pedigree of nectarine cultivar 'CN13'



图2 早熟油桃新品种‘中油13号’

Fig. 2 An early ripening nectarine cultivar 'CN13'

2 主要性状

2.1 果实主要经济性状

‘中油13号’果实圆形,端正,果顶平;果皮底色白,成熟时全面着鲜红色,有光泽,果实大,平均单果质量210 g,大果超过270 g(表1)。果肉白色,硬度中等,溶

表1 ‘中油13号’与对照品种果实主要经济性状比较

Table 1 Comparison of main economic characters between ‘CN 13’ and the control cultivars

品种 Cultivar	成熟期 Maturing date	果形 Fruit shape	平均单果质量 Average fruit mass/g	ω (可溶性固形物) Soluble solid content/%	风味 Flavor	品质 Eating quality	产量 Yield
中油13号 CN 13	6月26日 Jun. 26	圆 Round	210	12.4–14.7	甜浓 Very sweet	优 Excellent	很高 Very high
中油桃5号 CN 5	6月10日 Jun. 10	椭圆 Oval	135	11.3–12.5	甜 Sweet	良 Good	很高 Very high
中油桃9号 CN 9	6月8日 Jun. 8	圆 Round	187	14.2–16.7	甜浓 Very sweet	优 Excellent	中 Middle

质,肉质细,汁液中多,风味浓甜,皮下花色苷较多。农业部果品及苗木质量监督检验测试中心分析结果,‘中油13号’果实可溶性固形物含量(ω ,下同)13.70%,总糖含量10.92%,总酸含量0.22%,维生素C含量104.6 mg·kg⁻¹,品质优良。果核椭圆形,褐色,黏核。无裂核(表1)。

2.2 植物学特征

‘中油13号’树体生长势中强,树姿较开张,萌发力、成枝率中等。1 a生枝条绿色,阳面紫红色,中果枝节间平均长1.97 cm。叶片披针形,叶面呈绿色,叶背浅绿色,叶基钝尖,叶端渐尖,叶缘锯齿浅;叶背主脉淡绿色,叶片长宽中等,横截面呈水平状。叶柄腺体肾形,2~4个。花蔷薇型,粉红色,花瓣5瓣,宽椭圆形,中等大小,柱头略高于花药,花药紫红色,花粉多,萼筒内壁绿黄色。

2.3 物候期

郑州地区,‘中油13号’一般2月底叶芽萌动,3月下旬开花,花期5~7 d。果实6月下旬成熟,果实发育期90 d左右。10月下旬开始落叶,到11月上中旬完全落叶,全年生育期235 d左右。

2.4 生长结果习性

‘中油13号’新梢1年可抽生2次副梢,成花容易,花芽起始节位为1~3节,多为1~2节,以复花芽为主。早果能力较强,在一般条件下,速生苗或芽苗春天定植,当年即可形成较好花芽,第2年始果,第3年可进入丰产期,666.7 m²产量在1 500 kg以上。该品种各类果枝均能结果,以中果枝结果为佳。‘中油13号’花粉多,可不用配置授粉树,丰产稳产。

3 栽培技术要点

‘中油13号’在北方及山区、丘陵或较瘠薄的土地可采用:(1)株行距(1.5~2.0)m×4.0 m,V字形整枝;(2)株行距(1.2~1.5)m×(2.5~3.0)m,主干形整枝。南方及土壤条件较好的良田适当稀植,采用2.0 m×5.0 m或3.0 m×5.0 m的株行距,按V字形或多主枝V字形整枝。

按确定好的株行距,挖宽深各80 cm的定植穴或沟,用适量秸秆、腐熟粪肥与表土混匀回填,浇透水后准备定植。春季萌芽前,选择根系发达、地上部健壮、

无病虫害的优质苗木,挖小穴定植,浇透水,地面以上0.4~0.5 m饱满芽处定干。生长期按规划树形及时整形。

幼树期适当补充复合肥,后期适当控水控肥,避免树势过旺,盛果期后每年9—10月补施基肥;谢花后追施1次氮磷钾复合肥;成熟前1个月和采果后分别施1次磷钾肥。根据土壤墒情适时浇水,特别是萌芽期和硬核期,要保证充足的水分供应,同时也应避免旱涝交替。采收前10 d内不宜浇水,以免品质降低。

视坐果情况适当疏花疏果,保持合理负载。疏果应在花后40 d左右,大、小果区分明显时进行。疏除畸形果、病虫果和丛生果,666.7 m²产量控制在2 500 kg左右,以产定果。

冬季清园,萌芽期喷施5波美度石硫合剂,花前花后各喷施1遍吡虫啉、氯氰菊酯防治蚜虫,5月下旬麦收前后各喷施1遍哒螨灵防治红蜘蛛。其他主要病虫害按发生规律及时防治。

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