

早熟梨新品种蜀都翠的选育

张勇, 桂瑞, 雷迪雅, 赵兵, 罗娅, 陈清, 王燕,
王小蓉, 王浩, 张云婷, 林源秀, 刘泽静, 何文, 汤浩茹*

(四川农业大学园艺学院, 成都 611130)

摘要:蜀都翠是由二宫白×早酥杂选育出的早熟鲜食砂梨新品种。该品种生长势强,枝条半开张,一年生枝黄褐色。叶片卵圆形,绿色,叶尖长尾尖,叶基圆形,叶缘锐锯齿。果实长圆形,果面光滑,黄绿色,平均单果质量243.3 g。果肉白色,果心小,肉质细、脆,汁液多,石细胞少,味甜。可溶性固形物含量(w,后同)14.7%,可滴定酸含量0.19%,综合性状优良。在四川雅安地区初花期3月上旬,成熟期7月上旬,果实发育期120 d左右。抗黑斑病、黑星病和轮纹病,耐高温多湿。适宜在四川、重庆等平原和丘陵砂梨生态区种植。

关键词:梨;新品种;蜀都翠;早熟;鲜食

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Breeding report of a new pear cultivar Shuducui

ZHANG Yong, GUI Rui, LEI Diya, ZHAO Bing, LUO Ya, CHEN Qing, WANG Yan, WANG Xiaorong, WANG Hao, ZHANG Yunting, LIN Yuanxiu, LIU Zejing, HE Wen, TANG Haoru*

(Department of Horticulture, Sichuan Agriculture University, Chengdu 611130, Sichuan, China)

Abstract: Shuducui is a new early-ripening pear cultivar with excellent appearance bred by Sichuan Agriculture University. The seedling was derived from a cross between Ninomiyahuri and Zaosu in 1990s in the experimental field. By artificial cross pollination, 105 hybrid seedlings flowered in 1997. The hybrid seedling 90-3-4 was initially selected as a superior individual in 2000 for its perfect appearance and high quality. The field trials were carried out at three sites of Sichuan province (including Ya'an city, Chengdu city and Guangyuan city) from 2014 to 2019. It was finally named as Shuducui in 2022. The young trees are vigorous, and the posture of the tree is open. The color of annual shoots is yellow-brown. The mature leaves are green in color and oval with long tail tip and round base. The leaf margin is sharp serrate. Each cluster has 5-7 flowers. The flowers are pink and the petals are spaced relatively to each other. The fruit is nearly oblong in shape, and the ground color of the fruit is yellow-green. The average fruit weight is 243.3 g. The longitudinal diameter of the fruit is 7.97 cm, and the transverse diameter is 7.87 cm. The flesh is white, crispy and juicy. The fruit texture is fine with few stone cells. The content of total soluble solids (TSS) is 14.7%, and total acid (TA) is 0.19%. The flesh firmness is 6.94 kg·cm⁻². The fruit core is small and fruit quality is excellent. The cold storage life of the fruit is more than 150 days. The trees are precocious. Its full bloom occurs in early March, and the fruits mature in early July in Ya'an, Sichuan province. The fruits bear mainly on spurs. The sixth-year yield is 1667 kg·666.7 m⁻² with a planting density of 3 m×4 m. The development period of fruit is about 120 days, and the vegetative growth period is about 240 days. The fruit surface is smooth, and the fruit rust is less, which can be considered as non-bagging cultivation. It is suitable to be planted in similar ecological areas of plains and hills such as Sichuan and Chongqing. Orchards should be established on flat neutral

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作者简介:张勇,男,教授,主要从事梨种质资源与遗传育种研究。Tel:18080599069, E-mail:zhyong@sicau.edu.cn

*通信作者 Author for correspondence. Tel:13608264028, E-mail:htang@sicau.edu.cn

sand soil, with good soil moisture and fertilizer retentivity. The spacing between trees and rows was 3 m×4 m, and the appropriate pollinizer cultivars are Hosui and Cuiguan. Orchard drainage should be strengthened during production, tree canopy ventilation should be improved, fungicide should be sprayed in time after harvest, and disease control should be strengthened. Premature defoliation and secondary leaf growth and flower must be avoided.

Key words: Pear; New cultivar; Shuducui; Early ripening; Fresh-eating

四川是全国梨栽培的主要区域之一,栽培历史悠久,且梨产区分布较广,省内各地(市、州)均有栽培^[1]。四川早熟梨的熟期较长江中游的江西、湖北和安徽等省相同品种提早 10~15 d,较长江下游的浙江、上海和江苏等省(市)提早 15~20 d,较日本、韩国的梨成熟期提早 25 d 左右,较我国北方早熟梨成熟更早。因此,四川形成了独具优势的早熟梨生产区^[2]。近年来,国内从事梨育种的科研工作者先后育成翠冠、中梨1号、翠玉等早熟梨新品种,有效改善了我国梨栽培品种结构^[3],但适应四川高温寡日照生态条件的早熟梨品种相对缺乏,限制了四川早熟梨产业的发展。为进一步优化四川早熟梨品种结构,不断提高良种化、区域化水平^[4],四川农业大学梨育种团队以早熟优质、果面绿色光洁、抗病性强、免套袋省力化栽培为育种目标开展梨优质新品种选育,以期为

四川省梨产业健康稳定发展提供品种保障。

1 选育经过

四川农业大学梨育种团队在 20 世纪 90 年代选用二宫白母本,早酥为父本进行杂交,获得杂种实生苗 105 株。1997 年杂种苗开始开花结果,经在育种地(雅安雨城区)多年观察,代号 90-3-4 单株表现早熟(比早酥早 15 d,与二宫白相近),品质优,果皮光滑、翠绿,暂定名蜀都翠。2012 年开始分别在雅安雨城区、成都崇州市和广元苍溪县通过高接换种开展区域性试验,经多年观察鉴定,该品种经济性状等各项指标表现较好且一致,适应性和抗病性也较强。2021 年申请了农业农村部非主要农作物品种登记,2022 年 6 月通过登记,登记编号 GPD 梨(2022)510010,命名为蜀都翠(图 1)。



图 1 梨新品种蜀都翠

Fig. 1 A new pear cultivar Shuducui

2 主要性状

2.1 植物学特征

蜀都翠生长势强,枝条半开张。一年生枝向阳面黄褐色,枝条节间长,休眠芽顶端钝尖、斜生。叶片长椭圆形,长 13.26 cm,宽 7.08 cm,叶柄长 5.21 cm,叶面平展,绿色,叶尖长尾尖,叶基圆形,叶缘锐锯齿。花芽顶生,长度中等。每个花序有 5~7 枚花朵,幼蕾淡粉红色,花瓣分离,椭圆形;花药浅粉

红色,花粉量大;雌蕊高于雄蕊。

2.2 果实经济性状

蜀都翠果实形状为葫芦形,果皮底色黄绿色,平均单果质量 243.3 g。果面光滑,具蜡质,果锈较少,果点小、少。果肉白色,果心小,口感细、脆,汁液丰富,石细胞少,味甜。可溶性固形物含量 14.7%,可滴定酸含量 0.19%,果肉硬度 6.94 kg·cm²(表 1)。

2.3 生长结果习性

蜀都翠丰产性好,主要以短果枝结果,无采前落

表1 蜀都翠与对照早酥的果实经济性状比较

Table 1 Comparison of fruit economic characteristics of Shuducui and Zaosu

品种 Cultivar	单果质量 Fruit mass/g	横径 Diameter/ cm	纵径 Length/ cm	果形 Fruit shape	果皮颜色 Ground color	果锈多少 Amount of russeting	萼片状态 Persisi	萼洼深度 Depth of eye basin
蜀都翠 Shuducui	243.30	7.87	7.97	葫芦形 Gourd	黄绿色 Yellow green	少 Few	残存 Epibiotic	中 Medium
早酥 Zaosu	250.00	7.61	8.49	圆锥形 Cone	黄绿色 Yellow green	少 Few	残存 Epibiotic	中 Medium
品种 Cultivar	果心 Core size	硬度 Firmness/ (kg·cm ⁻²)	果肉颜色 Flesh color	果肉质地 Flesh texture	石细胞多少 Amount of stone cells	风味 Flavor	w(可溶性固形物) Souble solids content/%	w(可滴定酸) Total acid content/%
蜀都翠 Shuducui	小 Small	6.94	白色 White	细到中 Fine to medium	中 Medium	酸甜 Sour-sweet	14.7	0.19
早酥 Zaosu	中 Medium	7.06	白色 White	细到中 Fine to medium	中 Medium	淡酸甜 Light sour-sweet	11.4	0.25

果和裂果现象。幼树生长较快,容易成花,白花不结实,需配置授粉树。定植第3年开始结果,连续结果能力强,第5年进入稳产期,株行距为3 m × 4 m时平均每666.7 m²产量约为1667 kg。

2.4 物候期

蜀都翠在四川雅安地区2月下旬花芽萌动,3月上旬盛花期,花期持续1周左右。7月上中旬果实成熟,果实发育期120 d左右,11月中下旬落叶,营养生长期240 d左右。

2.5 抗逆性及抗病虫性

多年多点区试结果表明,蜀都翠对四川雅安、成都、苍溪等地夏季高温高湿、冬季寒冷气候适应性较强。幼树抗寒性较强,枝干和花芽无冻害发生。抗病虫性强,在正常田间管理条件下,较少发生梨黑斑病、黑星病和轮纹病,梨木虱和梨茎蜂发生较轻。

3 栽培技术要点

3.1 高标准建园

定植前利用机械采取聚土起垄的方式整地调形,每666.7 m²施用充分腐熟有机肥2000~2500 kg,定植株行距(2.0~3.0) m × 4.0 m,栽植深度与苗木原来的土壤稍高于畦面为宜,避免栽植过深。

3.2 合理配置授粉树

蜀都翠自花不结实,生产上需配置授粉树,授粉树比例为25%~30%。可选择丰水、翠冠、鄂梨1号等品种作为授粉树。

3.3 整形修剪

按疏散分层形或开心形整枝。幼树轻剪,多拉枝,适度短截,培养牢固骨架和结果枝组;盛果期注意更新复壮。

3.4 花果管理

花芽极易形成,生产中除加大疏果力度外,还要加强肥水管理,花后可追一次肥,秋后施足基肥,以腐熟有机肥为主,加入适量复合肥,施肥后结合深翻。

3.5 病虫害防治

生产中应加强果园排水,改善树体通风透光条件,采后及时喷布杀菌剂,加强病虫害防治。防止过早落叶及二次叶和二次花。

3.6 适宜区域

适宜在四川、重庆等平原和丘陵砂梨相似生态区种植。

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