

晚熟梨新品种‘甘梨3号’的选育

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摘要:‘甘梨3号’是以‘锦丰’梨为母本,‘巴梨’为父本杂交培育而成的晚熟梨新品种。果实粗颈葫芦形,平均单果质量279.4 g,果皮黄绿色,阳面有红晕,贮后黄色;果面光洁,果点中小、隐密;果肉乳白色,肉质细脆,后熟后柔软,易溶于口,石细胞及残渣少,多汁,酸甜爽口,具洋梨清香,果心中,可溶性固形物含量12.8%~13.7%,含可溶性糖7.1 g·100 g⁻¹,有机酸0.20 g·100 g⁻¹,维生素C8.0 mg·100 g⁻¹,品质上。果实发育时间150 d,营养生长期220 d,甘肃白银地区9月下旬成熟;该品种为白梨和西洋梨的杂交种,丰产稳产,生态适宜性、抗病性强;适宜在甘肃省东部矮山丘陵区、中部沿黄灌区和河西绿洲灌区推广种植。

关键词:梨;新品种;‘甘梨3号’;晚熟

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A new late ripening pear cultivar ‘Ganli 3’

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Abstract: ‘Ganli 3’ is a late ripening pear cultivar by artificial pollination, its pedigree is ‘Jinfeng (♀)’ × ‘Bartlett(♂)’. The fruit is thick neck and gourd shaped, the average fruit weight is 279.4 g, pericarp is yellow green and red on the sunny side, yellow after storage; the fruit surface is smooth and clean, fruit dots are small, hidden; the color of pulp is milky white, flesh is exquisite and crisp, after post-ripening, it becomes soft and easy to dissolve in the mouth, fewer stone cells and residues, juicy, pleasant sweetness and sourness, with delicate fragrance of European Pear (*Pyrus communis* L.), the size of fruit core is medium, soluble solid content at 12.8%-13.7%, soluble sugars of 7.1 g·100 g⁻¹, organic acid of 0.20 g·100 g⁻¹, vitamin C of 8.0 mg·100 g⁻¹, quality superior. The tree crown is conical at shape. The branch’s color is gray brown, the one year branches are brown, more lenticels, there are fuzz on the burgeon. Leaf buds are small and slanting, flower buds are conical, larger. Young leaves are light red, the oval leaf shape, the shape of leaf surface is clasp, the posture of the leaf is horizontal, leaf tip is gradually sharpening, leaves is wedge-like at the base, leaves edge has sharp sawtooth with prickle awn, mature leaves is dark green, stipulate at the base. There are 7-8 flowers in each inflorescence, pink buds, white corolla, pink anther, petal is overlapping, round in shape, and the number is 5, stigma of flower is higher than anther, 23-24 stamens; the fruit has 5 chambers; 6-10 seeds per fruit, dark brown and oval. The growth potential of young trees is stronger, that tends to be moderation after fructifying, the tree’s posture is semi open; the one year branch is substantial that is easy to form flowers in non-pruning; strong branching ability, high germination rate, the middle and short fruit branches are the main fruit branch types; the fruit setting rate is high, 2-4 for each inflorescence, 1-3 bourse shoot; high grafted trees begin fruiting in 2nd years, the planted seedling trees begin fruiting in 3rd years, the average yield at 5th year is 1 871.5 kg·666.7 m⁻² and in the 6th year it increased to 2 500 kg·666.7 m⁻². The continuous fruiting capacity of branches is strong, and light abscission of fruit before maturing, without

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obvious alternate bearing. Initial flowering in late April in Baiyin District, Gansu, about 10 d flowering period; fruit ripening in late September; the fruit development last about 150 d, and vegetative growth last about 220 d. This cultivar is a hybrid of Chinese Pear and European Pear, with high and stable yield, ecological suitability and disease resistance. It is suitable for planting in the hilly area of the eastern part of Gansu Province, the irrigation area along the Yellow River, the cold and shady area in the middle, and the oasis irrigation area of Hexi. It can be introduced, demonstrated and popularized in the same type of area outside the province. Orchards are located in warm, semi-humid, semi-arid, arid or cold and cool areas of river valley, platform, terraces with well irrigation and convenient transportation conditions, the soils are sandy loam, loam and irrigated with deep soil layer.

Key words: Pear; New cultivar; ‘Ganli 3’; Late-ripe

晚熟梨‘鸭梨’‘雪花梨’‘砀山酥’‘锦丰’‘黄花’‘苹果梨’等品种在我国北方地区大面积栽培^[1],近年来又相继育成‘冀玉’^[2]、‘金丰’^[3]等新品种,丰富了晚熟梨品种组成。但目前生产中主栽晚熟梨品种存在的风味淡、果形外观差、果心大、石细胞多、不抗黑星病、贮期“心腐病”、货架期短等缺点日益突显。因此,培育食用品质佳、综合性状优良的晚熟品种一直是梨育种工作者常抓不懈的重要工作。20世纪80年代以来,甘肃省农业科学院林果花卉研究所梨课题组以对‘锦丰’梨进行品质改良为目的,培育出晚熟优质梨‘甘梨3号’,并经多年试验,可作为特色梨品种在适宜梨产区推广种植。

1 选育经过

1980年甘肃省农业科学院果树研究所在兰州西园五队及崔家庄1队进行人工杂交,亲本组合:‘锦丰’(♀,‘苹果梨’×‘慈梨’,‘白梨’)×‘巴梨’(♂,西洋梨),共杂交38个花序,当年收到杂交种子340粒,1981年经层积处理后播种,获得杂交实生苗243株,1982年春定植于本所选种圃中,编号80-9-31。1989年开始结果,1994年选为优系。后于本所试验地进行高接鉴定及中间试验,确认了其相关特征、特性,2008年至2016年以甘肃省主栽品种早酥梨为对照进行比较试验,并在省内天水、静宁、白银、武威、张掖等不同生态区开展多点区试及生产试验,观察、调查该品种生长结果特性、果实主要经济性状和主要病虫害抗性、生态适应性等,确认了80-9-31果实晚熟、品质佳、风味浓、丰产稳产、抗逆性强、适应性广等优良性状。2016年9月邀请省内有关专家完成现场测试,并于2017年12月15日通过甘肃省林木良种审定委员会审定(良种编号:甘S-SV-P1-008-2017),定名为‘甘梨3号’(图1)。

2 主要性状

2.1 果实主要经济性状

果实粗颈葫芦形,平均单果质量279.4 g,果面光



图1 梨新品种‘甘梨3号’

Fig. 1 A new pear cultivar ‘Ganli 3’

洁,锈斑无或极少,果点中小、隐密,底色黄绿、贮后变为黄色,果实阳面着红晕,果皮中等厚度;萼片宿存,萼洼浅、广;果柄直生或斜生,长4.6 cm、粗2.9 mm。果肉乳白色,肉质细脆,后熟后柔软,易溶于口,石细胞及残渣少,多汁,酸甜爽口,具洋梨清香;果心中等大;可溶性固形物含量(w,后同)12.8%~13.7%,可溶性糖含量7.1 g·100 g⁻¹,有机酸含量0.20 g·100 g⁻¹,维生素C含量8.0 mg·100 g⁻¹,品质上。采前落果轻,无裂果;较耐贮藏,常温下可存放20 d左右,恒温冷库0~1℃条件下可存放120 d以上(表1)。

2.2 植物学特征及生长结果习性

树冠圆锥形,6 a生树高(砧木为杜梨)3.6 m,冠径3.2~3.0 m,干周31.0 cm。枝干灰褐色,一年生枝褐色,皮孔多,嫩枝有茸毛。叶芽小、斜生,花芽圆锥形,长度9.39 mm,较大。幼叶淡红,叶片卵圆形,叶面抱合,叶姿水平,叶尖渐尖,叶基楔形,叶缘锐锯齿有刺芒;成熟叶片深绿色,叶片平均长8.9 cm,宽5.6 cm,叶柄长1.4 cm,有托叶。每花序有花7~8朵,花蕾粉红,花冠白色,直径3.1 cm,花药粉色,花瓣重叠、圆形,5枚,柱头高于花药,雄蕊23~24枚;果实5心室,

表1 ‘甘梨3号’与‘苹果梨’果实主要经济性状比较

Table 1 Comparison of main fruit characters of ‘Ganli 3’ and ‘Apple-pear’

Cultivar	平均单果质量 Average fruit mass/g	果形 Fruit shape	果皮颜色 Fruit skin color	肉质 Flesh texture	风味 Flavor	w(可溶性固形物) Soluble solids content/%	果实发育期 Days of fruit developing/d	成熟期 Ripening date	落果、裂果情况 Abscission of fruits and dehiscent fruit
甘梨3号 Ganli 3	279.4	粗颈葫芦形 Thick neck and gourd shaped	黄绿、有红晕 Yellowish-green, sunny side-flush	细脆 Fine, tender	酸甜 Sour and sweet	12.8-13.7	150	9月25日 Sept. 25	无,少量 No crack, Little
苹果梨 Apple-pear	264.8	扁圆 Oblate	黄绿、有红晕 Yellowish-green, sunny side-flush	细脆 Fine, tender	甘甜 Sweet	12.6-14.0	155	9月28日 Sept. 28	无,少量 Little, Little

单果种子数6~10粒,黑褐色,椭圆形。

幼树生长势偏强,结果后趋于中庸,干性较强,树姿半开张;1年生枝条充实,长放易成花,平均长68.3 cm,粗0.73 cm,节间长3.3 cm;成枝力强,萌芽率高,以中、短果枝结果为主(6 a生,74.7%);坐果率高,每花序2~4个,抽生果台副梢1~3个;大树高接2 a结果,成苗定植第3年结果,第5年进入盛果期,平均每666.7 m² 1 871.5 kg,第6年可达2 500 kg以上。连续结果能力强,采前落果轻,大小年结果现象不明显。

2.3 物候期

在甘肃白银地区4月上旬花芽萌动,4月中旬叶芽萌动,4月下旬初花,4月底盛花,花期10 d左右;9月下旬果实成熟,11月上、中旬落叶;果实发育时间约150 d,营养生长时间约220 d。

2.4 栽培适宜性及抗逆性

‘甘梨3号’在甘肃省内海拔1 200~1 900 m各生态区均能正常生长结果,且生长健壮,对河西走廊高温严寒、土壤贫瘠、高pH值、高盐碱的生境条件适应性强,未发生枝干、叶片和花芽等器官伤损现象。一般栽培管理条件下,对梨树腐烂病抗性强,较主栽品种‘早酥’梨对黑斑病、白粉病有较高抗性。

3 栽培技术要点

3.1 园地选择、整地及土壤改良

选择暖温半湿润、半干旱区、干旱区或高寒冷凉二阴地区的川地、台地、梯田,土壤为沙壤土、壤土、灌淤土,土层深厚,有灌溉条件,交通便利的地块。

栽植前一年秋季,按行向开宽深为80 cm×80 cm的定植沟,将表土和底土分开放置。沟底垫20 cm麦草、玉米秸秆后,将腐熟农家肥与表土混匀回填至距地面20 cm处,再将底土回填,每666.7 m²施腐熟有机肥5 000~6 000 kg,灌水沉实后,整平耙细,松土保墒。

3.2 栽植时间、方法

以春季土壤解冻后定植为最佳时期。栽植密度以株行距3 m×4 m为宜,每666.7 m²栽植56株,水肥条件差的台、梯田可调整为4 m×4 m,每666.7 m²栽植42株。

选用‘早酥’‘黄冠’‘中梨1号’‘苹果梨’等花粉

量足、花期相同或稍早的品种,配置比例为4~5:1。采用行内隔株或隔行定植,呈“T”字形或棋盘分布,上风向布置数量稍多于下风向。

3.3 肥水管理

该品种果实生育期长,秋施基肥必须足量,萌芽前后每666.7 m²追施氮磷复合肥120 kg,6、7月结合灌水,追施1~2次氮、磷、钾三元复合肥,结合病虫害防治,叶面喷施磷酸二氢钾、氨基酸肥2~3次。果实成熟前半月停止灌水。

3.4 病虫害防治

病害主要为梨腐烂病、黑斑病,虫害主要有梨木虱、梨小食心虫、梨茎蜂、蚜虫、红蜘蛛等,应注意加强防治。

4 综合评价与应用前景

‘甘梨3号’梨为具洋梨香型的晚熟梨新品种,且果实阳面有红晕、果形美观、整齐度高,综合品质优良,并兼具丰产稳产、生态适应性、抗病虫能力强等优良特性,具备较高的商品价值和巨大的市场潜能,对优化我国梨品种结构、满足市场多元化需求及促进特色晚熟梨发展具有重要作用。可在甘肃省东部矮山丘陵区、中部沿黄灌区和河西绿洲灌区推广种植,其他梨产区可与上述生态环境相似地区引种示范。

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