

猕猴桃新品种汉美的选育

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摘要:汉美猕猴桃是十堰市经济作物研究所从野生猕猴桃优良实生播种群体中选育而成的绿肉美味猕猴桃新品种。果实端正均匀,呈长圆柱形,果喙微钝凸或平,果面覆黄褐色短硬毛,平均单果质量109.3 g,最大单果质量150.6 g。果肉浅绿色,中心柱黄白色,肉质细滑,多汁,风味浓郁,酸甜爽口,平均可溶性固形物含量(w ,后同)17.5%,干物质含量17.1%~21.5%,总糖含量10.7%~12.6%,可滴定酸含量1.2%~1.6%,果实维生素C含量1400.0 mg·kg⁻¹。萌芽率52.1%,成枝率94.5%,果枝率94.3%,以中果枝、短果枝的1~7节着生花序4~7个,以单花为主。果实生育期约150 d,在湖北十堰地区4月下旬开花、10月下旬成熟,无生理落果现象,果实耐贮藏,软熟后货架期较长。汉美长势强健,遗传性状稳定,果个大、丰产性强,中抗溃疡病,嫁接苗第4年每666.7 m²产量超过2000 kg,适宜在鄂西北等类似区域栽植。

关键词:猕猴桃;新品种;汉美;丰产

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A new kiwifruit cultivar Hanmei

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Abstract: Hanmei is a new cultivar of delicious green-fleshed kiwifruit bred by Shiyan Economic Crops Research Institute from the high-quality resources of wild kiwifruit populations. The seeds of high-quality resources were collected in autumn of 2007, and then sowed to culture the seedlings in spring of 2008. On February 25, 2009, 150 vigorous seedlings were selected and planted in the experimental field. A plant (07-6-5) which showed big sized, sustainable stability of good flavor, outstanding high yield was selected and named to Hanmei. Plants demonstrating superior characteristics both in cultivation and fruit were selected to test the adaptability of different environments. Throught regional adaptability test at three province with six experimental fields and productive trial planting from 2014 to 2017, it was finally selected. The plant variety of Hanmei was applied in 2015, and authorized by Ministry of Agriculture, China in 2018 (Variety Right Number CNA20160825.1). In general, the shape of the fruit is straight and uniform, showing a long cylindrical shape, the beak is slightly obtusely convex or flat, the fruit surface is covered with yellowish brown hispidulous hairs, the average weight of single fruit is 109.3 g, and the maximum weight of single fruit is 150.6 g. The flesh is light green, the central column is yellowish white, the meat is slippery, succulent, full-bodied, sour and sweet, aromatic taste, average soluble solids content is 17.5%, dry matter content is 17.1%-21.5%, total sugar content is 10.7%-12.6%, titratable acid content is 1.2%-1.6%, fruit vitamin C content is 1400 mg·kg⁻¹. The germination rate is 52.1%, the branching rate is 94.5%, and the fruit branch rate is 94.3%. There are 4-7 inflorescences of 1-7 nodes of medium fruit branch and short fruit branch, mainly single flower. The fruit growth period is about 150 days. In Shiyan city, it starts to bloom in late April, fruit matures in late October. The chromosome of Hanmei is sextuploid, with moderate to strong vigor. The cultivar has strong heat-tolerance, which has strong growth in high temperature area in summer and no physiological fruit

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drop. The fruit is resistant to storage and has a long shelf life after soft ripening. The inheritance character of Hanmei is stable, with the characteristics of large fruit, good yield, strong growth potential, moderately resistant to canker. Hanmei is less susceptible to bacterial canker of kiwifruit, and has better performance under canker of kiwifruit condition, heat and drought. Hanmei fruit have good storage quality and have a long shelf life: storage life 1-2 months at ambient temperature and more than 4-5 months at cool store; the shelf life at room temperature after softening to eating ripeness could be 10-15 days at ambient temperature. Orchard should choose sub-acidity and fertile soil which is flat and has ability of moisture and fertilizer retention. The grafted of this cultivar start fruiting at the second year, and the output is more than 2000 kg per 666.7 m² at the fourth year after grafting. Planting density could be 3 m×4 m or 3.5 m×4 m, using the pergola and T-bar systems, with a single trunk and two permanent leaders. The climatic region similar as northwest of Hubei or similar regions are suitable for cultivation.

Key words: Kiwifruit; New cultivar; Hanmei; Good yield

目前发现的猕猴桃属(*Actinidia* Lindl.)植物全世界共有54个种和21个变种,共75个分类群,其中中国拥有52个种,商业化栽植的种类主要是一个种的2个变种,约占80%左右^[1]。我国当前栽植的猕猴桃品种中,75.3%是绿肉美味系品种。绿肉的美味猕猴桃是目前和今后较长时期内的主要栽培类型,但目前的主栽品种需要调整,才能保障果园的综合经济效益^[2]。因此培育风味佳、果形正、产量高、抗病强、耐贮藏的美味猕猴桃新品种,对于促进猕猴桃品种结构调整、丰富猕猴桃品种格局、提高市场竞争力具有十分重要的意义。

1 选育过程

2007年9月,十堰市经济作物研究所猕猴桃团队在进行野生猕猴桃种质资源群体分布调查时,在武当山地区海拔800 m的一南北向山坡中发现1株混生于灌木、乔木丛中的野生大果型硬毛绿肉美味猕猴桃优株。取单果质量在100 g以上的果实20个,收集种子并沙藏处理,2008年3月9日实生播种。2009年2月25日,选取150株长势旺盛的实生

苗,定植于湖北省十堰市经济作物研究所猕猴桃试验示范基地(丹江口市六里坪镇)中;2013年春季,有15株实生苗开花结果,秋季调查果实时,编号为(07-6-5)的单株果形端正美观,当年可溶性固形物含量高达19%,初选编号为武当07-6-5。2014年对该优系进行高接扩繁,通过适应性区域试验及新品种比较试验,经连续3 a(年)观察,该优系具有单花结果为主、果形端正、品质优良、丰产性好、遗传性稳定等特点。2015年命名为汉美(图1),2018年4月获得农业农村部植物新品种权保护授权(品种权号CNA20160825.1)。

2 主要性状

2.1 植物学特征

与已知二倍体红阳猕猴桃品种进行对比,经流式细胞仪鉴定,汉美为六倍体。1年生枝褐色,2年生枝深褐色,皮孔椭圆形,灰白色。叶片大,质地厚实,呈阔倒卵形状,叶柄绿色,叶尖微凹,叶面平展,深绿色无毛,叶背叶脉凸起明显,叶背面被绿白色短茸毛。花多为单生,白色,花瓣6~8枚,雄蕊52~56



图1 绿肉新品种汉美果实

Fig. 1 Fruit of green-fleshed kiwifruit cultivar Hanmei

枚,花冠直径5.82~6.49 cm,花丝淡绿色,花药黄色,花柱直立或水平生长,花柱38~44枚,花柄长5.1~5.6 cm。

2.2 果实经济性状

汉美猕猴桃果实长圆柱形,端正整齐,果喙微钝凸或平,果面被覆黄褐色短硬毛;果皮浅褐色,果肉

浅绿色,果心黄白色、呈长椭圆形;成熟后果皮易剥离;果实肉质细腻,风味浓郁,酸甜可口。平均单果质量109.3 g,可溶性固形物含量(w ,后同)15.8%~19.3%,干物质含量17.1%~21.5%,总糖含量10.7%~12.6%,可滴定酸含量1.2%~1.6%,维生素C含量1 032.6~1 400.0 $\text{mg}\cdot\text{kg}^{-1}$ (表1)。

表1 汉美、海沃德和金魁的果实特性比较

Table 1 Comparison of fruit characteristics of Hanmei, Haiwod and Jinkui

品种 Cultivar	果形 Fruit shape	平均单果质量 Average single fruit mass/g	果肉颜色 Flesh color	w(维生素C) Vitamin C content/ ($\text{mg}\cdot\text{kg}^{-1}$)	w(可溶性固形物) Soluble solids content/%	w(总酸) Total acids content/%	口感 Taste
汉美 Hanmei	长圆柱形 Long cylinder	109.3	浅绿色 Light green	1 032.6~1 400.0	15.8~19.3	1.2~1.6	甜酸 Sweet and sour
海沃德 Haiwod	宽椭圆形 Wide elliptic	80.0	绿色 Green	480.0~1 200.0	12.0~18.0	1.0~1.6	甜酸 Sweet and sour
金魁 Jinkui	阔椭圆形 Broad elliptic	100.0	翠绿色 Emerald green	1 000.0~2 420.0	18.0~22.0	1.6~1.8	酸甜 Sour and sweet

果实耐贮藏,经常温和低温冷库贮藏试验:常温环境下,果实采后15~20 d即软熟可食用,食用期在10 d以上;1~2 $^{\circ}\text{C}$ 冷库贮藏下,可贮藏3~4个月,贮藏4个月好果率达95%。

2.3 生长结果习性与物候期

汉美树势强旺,萌芽率52.13%,成枝率94.53%,坐果率98%,以中果枝和短果枝结果为主,平均每果枝有7个花序,位于结果枝的1~6节,以1~4节为主,花有单花、二花和三花。幼龄期树有少量的二花和三花结果现象,分别占9.37%和8.63%;成龄树以单花结果为主,单花比率98.56%。

在鄂西北地区,汉美伤流期为3月上旬到4月中旬,3月中旬开始萌芽,3月下旬至4月上旬展叶现蕾,4月中下旬始花,盛花期5月初,花期4~7 d,5月中旬坐果,6月下旬至8月上旬为果实迅速膨大期,果实成熟期10月中下旬。

2.4 丰产性与抗病性

2018—2019年在湖北省十堰市、宜昌市以及河南省郑州市开展了品种的区域适应性试验。结果表明该品种树体表现生长势强,植物学和生物学性状稳定;该品种经十堰地区试验示范推广,每666.7 m^2 平均产量为2100 kg,表现出丰产、稳产、优质。进行了离体枝条鉴定及田间溃疡病抗性比较检测,汉美猕猴桃对溃疡病显示为中抗。

3 栽培技术要点

3.1 建园方法

选择土壤pH6.5~7.5、疏松肥沃、有机质丰富、排灌方便地方建园。采用全园深翻、起垄方式,一次性

施足有机肥。株行距3 m×4 m或3 m×4.5 m,即每666.7 m^2 栽植49~56株。需按照5~8:1配置雄性授粉品种;架式以棚架和“T”形架为宜,平地果园也可以采用大棚架栽培模式。

3.2 果园管理

该品种果园管理参照其他美味猕猴桃品种管理。生产中要求一年施肥3次,即2月下旬至3月上旬施萌芽肥,谢花后施壮果肥,采果后结合整地施足基肥。萌芽肥以氮肥为主、结合钾肥施用;采果后主要施有机肥,可适当掺入中微量元素复合肥,抽槽或在树盘周围挖环形或半环形沟施入。全年根据土壤墒情管理土壤水分含量,做到不早、不积水。

3.3 树体管理

树形管理可采用生产中常用的一干两蔓树形。成年树以冬季修剪为主,搭配夏季修剪。冬季修剪时,长枝留12~16个芽,中枝留8~12个芽,短枝留5~8个芽;宜采用少留枝、适当长放枝的方式。夏季注意除萌、抹芽和摘心。

花果管理时疏花主要在现蕾期疏掉侧花、病虫害花和畸形花。一般短果枝留1~2个果,中果枝留3~4个果,长果枝留4~5个果。

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