

草莓新品种‘石莓9号’的选育

张建军¹, 李莉², 杨雷², 杨莉^{2*}, 董辉², 杨秋叶³, 史晓红⁴

(¹河北省农林科学院, 石家庄 050051; ²河北省农林科学院石家庄果树研究所, 石家庄 050041;

³行唐县农牧局, 河北行唐 050600; ⁴赵县食品药品检验检测中心, 河北赵县 051530)

摘要: ‘石莓9号’草莓以丰产、优质、抗病优系‘458-2’(‘栃乙女’×‘全明星’)为母本, 高硬度优系‘455-3’(‘卡姆罗莎’×‘石莓4号’)为父本杂交育成。果实圆锥形, 鲜红色, 光泽度强; 去萼较易; 一级序果平均单果质量48.2 g, 二级序果平均单果质量24.7 g; 果肉红色, 质地密且细腻, 香气浓, 风味酸甜; 可溶性固形物含量8.9%, 还原糖含量3.15%, 可滴定酸含量0.6%, 维生素C含量0.47 mg·g⁻¹; 果实硬度0.520 kg·cm⁻², 耐贮运性好; 丰产性好, 平均株产469.6 g, 适宜露地及保护地半促成栽培。一级序大果适宜鲜食、加工果汁果酱, 二级序及以上小果可单体速冻。通过田间观察, ‘石莓9号’抗叶斑病、革腐病、炭疽病、白粉病, 中抗灰霉病等。

关键词: 草莓; 新品种; ‘石莓9号’

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Breeding report of a new strawberry cultivar ‘Shimei 9’

ZHANG Jianjun¹, LI Li², YANG Lei², YANG Li^{2*}, DONG Hui², YANG Qiuye³, SHI Xiaohong⁴

(¹Hebei Academy of Agricultural and Forestry Sciences, Shijiazhuang 050051, Hebei, China; ²Shijiazhuang Pomology Institute, Hebei Academy of Agricultural and Forestry Sciences, Shijiazhuang 050041, Hebei, China; ³Forestry and Animal Husbandry Bureau of Xingtang County, Xingtang 050600, Hebei, China; ⁴The Food and Drug Inspection Testing Center of Zhaoxian County, Zhaoxian 051530, Hebei, China)

Abstract: ‘Shimei 9’ is a short daylight variety with excellent appearance. The seeding was derived from a cross between ‘458-2’ (‘Tochiotome’×‘Allstar’) and ‘455-3’ (‘Camarosa’×‘Shimei 4’) in 2007 in an experimental field. It was initially selected in 2009 for its bright colors, special flavor, high firmness, high yield and good disease resistance. 5 230 hybrid seeds were got through artificial hybridization pollination. After regional adaptability testing at three different regions in Hebei province (including Handan, Shijiazhuang and Zhangjiakou) over four years from 2010 to 2013, it was finally selected in 2013 with 27.0 cm high and 37.2 cm×33.8 cm spread. The plant is strong and vigorous with erect posture, whose leaves are light green color, 9.3 cm of length, 8.1 cm of width and 0.24 mm of thickness, petiole length and coarseness are 18.2 cm and 3.52 mm. Below the leaf surface is inflorescence, in which growth with white and hermaphrodite flowers of whose crown and calyx diameter are 4.2 cm and 5.18 cm. Pedicels are green color, with 6.0 cm of length and 2.7 mm of width. The stolons are green or red color, in which the length of internode is 21.0 cm. The fruit of ‘Shimei 9’ strawberry is conical, bright red and shiny, on which the sepals were comparatively easy to removed and the first and second grade fruit weight were 48.2 g and 24.7 g. The flesh of fruit is red and dense with fragrant sweet and sour. The contents of soluble solids, reducing sugar and titratable acid are 8.9%, 3.15% and 0.6%, respectively. The hardness is 0.520 kg·cm⁻², and the vitamin C content is 0.47 mg·g⁻¹. Quality is excellent. The fruit development period is 25-30 d and it matures at the early March in Shijiazhuang greenhouse or at the early May in Shijiazhuang opening cultivation. The ability of continuous blossom is well and the yield of per plant is up to 469.6 g. It is suit-

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作者简介: 张建军, 男, 研究员, 主要从事草莓新品种选育、新技术示范推广等工作。E-mail: nkyzjj@126.com

*通信作者 Author for correspondence. Tel: 0311-87659933, E-mail: caomeizu@126.com

able for open cultivation and semi-forcing culture. The first grade fruits are suitable for fresh and processing of fruit juice, jam, the small ones are suitable for quick-frozen. It is resistant to leaf spot (*Ramularia tulasnei*), leather rot (*Phytophthora cactorum*), anthracnose (*Colletotrichum acutatum*), powdery mildew (*Sphaerotheca macularis*), and it is moderate resistant to gray mold (*Botrytis cinerea*) in open field experiment. The firmness of fruit is high, making it has good shopping quality and its cold storage life is about 7 days under 0 °C. Suitable cultivation area is where the climate is similar to Shijiazhuang and orchard should choose sandy soil which is flat and having ability of moisture and fertilizer retention. The soil in addition to be deeply plowing and made in raised bed, the decomposed manure is used at 5 000 kg per 666.7 m². Two rows of plants were planted in Each raised bed, whose spacing was 18 cm. Plant management includes removing old leaves, disease leaves, thinning flower buds and runner. Fruits of ‘Shimei 9’ need to be harvested at nine mature when the fruits are red with sweet and sour taste. Harvest time is before 9:00 am or after 3:00 pm. The plants should be poured cold water before the soil frozen in opening cultivation, and the plants should be covered with the white plastic, which should be uncovered in the following spring.

Key words: Strawberry; New cultivar; ‘Shimei 9’

草莓是多年生常绿草本植物,果实色泽鲜艳,芳香多汁,酸甜适口,营养丰富,属高档水果,是果树中鲜果上市最早的水果^[1]。近几年中国的草莓产业发展十分迅速,栽培面积超过13万hm²,已成为世界第一生产大国^[2]。但目前生产中栽培的品种主要是从国外引进^[3],适宜露地栽培的自育加工品种较少。针对加工品种的育种目标,河北省农林科学院石家庄果树研究所近年来重点开展了露地加工品种的选育研究,2013年通过杂交选育出了鲜食加工兼用的草莓新品种‘石莓9号’,并通过河北省省林木良种审定委员会组织的审定,该品种综合性状优于‘达赛莱克特’,可作为河北露地栽培的优良品种大面积发展。

1 选育过程

2007年以丰产、优质、抗病优系‘458-2’(‘栃乙女’×‘全明星’)为母本,高硬度优系‘455-3’(‘卡姆罗莎’×‘石莓4号’)为父本进行杂交,组合编号为583。母本和父本均来源于河北省农林科学院石家庄果树研究所自育优系。杂交于4月9日完成,经过选株、择花、去雄、授粉、套袋、挂牌标记等程序,当年获取杂交种子5 230粒,将杂交种子阴干后存放于冰箱低温冷藏保存。于2007年10月1日播种于日光温室,2008年4月5日将实生苗定植于秧苗扩繁田,共成苗3 314株;经秧苗扩繁,2008年8月28日将扩繁杂交实生苗各4株定植于露地初选圃;2009年5月初果实成熟期初选出优株,代号为583-4。2010—2013年在河北省邯郸市、石家庄市、张家口市等地区连续4年复选,新品系均表现出品质优,个大,产量高,硬度大,抗病性好等特性。2013年12月通过河北省林木品种审定委员会审定,定名为‘石莓9号’(良种编号为:冀S-SV-FA-030-2013)(图1)。

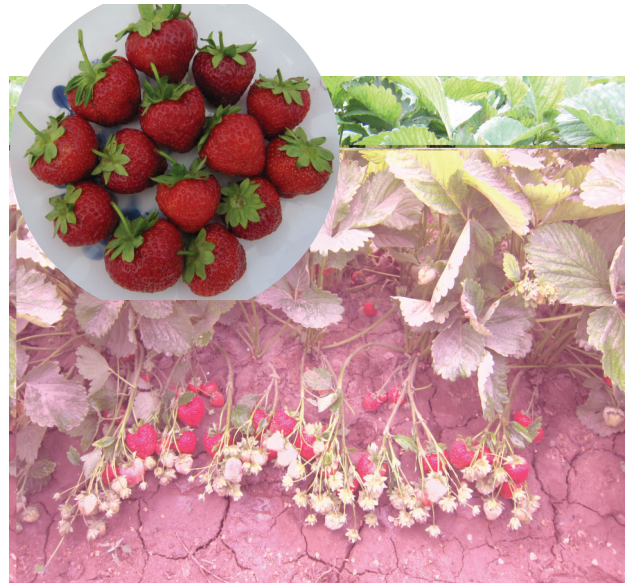


图1 草莓新品种‘石莓9号’

Fig. 1 A new strawberry cultivar ‘Shimei 9’

2 主要特性

2.1 植物学特征

在石家庄地区露地栽培植株长势强,株态直立,株高27.0 cm,冠径37.2 cm×33.8 cm。叶片纵径9.3 cm,横径8.1 cm,厚度2.4 mm,叶片浅绿色,中心小叶椭圆形,叶片革质较粗糙,叶柄长18.2 cm,粗3.52 mm,叶柄颜色红绿、茸毛多,托叶中大,耳叶漏斗形。花序低于叶面,花序二歧分枝,分枝较高。两性花,白色,花瓣6~8片,花冠径4.2 cm,花萼单层,萼片中等大,萼径5.18 cm,翻卷,花梗长6.0 cm左右,粗2.7 mm,花梗茸毛多、中粗、硬。匍匐茎颜色红绿,节间长21.0 cm,粗2.32