

草莓新品种‘京泉香’的选育

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摘要:‘京泉香’是由‘给维塔’与‘红颜’杂交选育出的中早熟草莓新品种。果实圆锥形或楔形,果面红色。果肉橙红,酸甜适中,香味浓。一、二级序果平均单果质量38.4 g,最大果质量90.0 g,果实纵径5.46 cm,横径4.32 cm。可溶性固形物含量(w,后同)9.4%,维生素C含量0.757 mg·g⁻¹,还原糖含量5.2%,可滴定酸含量0.46%,果实硬度2.12 kg·cm⁻²。北京地区日光温室条件下1月上旬成熟,连续开花结果能力强。通过田间观察,‘京泉香’对白粉病抗性差。适合在北京及生态条件相似区域栽培。

关键词:草莓;新品种;‘京泉香’

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Breeding report of a new strawberry cultivar ‘Jingquanxiang’

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Abstract: ‘Jingquanxiang’ is an early-mid season variety selected by Beijing Academy of Forestry and Pomology Sciences. More than 400 hybrid seeds were got from the artificial hybridization between ‘Gaviota’ and ‘Benihoppe’ in 2006. In the greenhouse, No. 06-56-6 was selected from 16 selections for its bright colors and big size fruit. After regional adaptability testing at Haidian, Tongzhou and Changping districts in Beijing from 2010 to 2012, No. 06-56-6 was finally selected and named ‘Jingquanxiang’ in 2012. The growth habit of plant was semi-upright and the height was 18.9 cm. The plant had strong vigorous with crown diameter of 32.5 cm and 29.6 cm. Leaves were round and sharply serrated. Petiole length was 12.9 cm. Hermaphrodite flowers were white and inflorescence was above foliage. Fruits were mainly conical or wedged shape with red peel and smooth surface. Its flesh was orange-red with intense aroma. The average fruit weight was 38.4 g and maximum fruit weight was 90 g. Longitudinal and horizontal diameters of the fruits were 5.46 and 4.32 cm. The contents of soluble solid, total sugar and acid, and vitamin C were 9.4%, 5.2%, 0.46% and 0.757 mg·g⁻¹, respectively. The firmness of fruit was 2.12 kg·cm⁻². It was resistant to gray mold and susceptible to powdery mildew in open field experiment. ‘Jingquanxiang’ was a cultivar suitable for cultivation in Beijing and other areas with the similar climatic conditions. Orchard should choose in sandy soil and had ability of moisture and fertilizer retention. In Beijing, the plantlets usually planted in late August or early September and harvested within the timespan of December through May. For the aim of harvesting big size fruit and commercial fruit, 4 to 6 fruits were acceptable for each plant. Plant management included removing old, disease leaves and runners were necessary. It was appropriate to harvest before 9 am or after 3 pm.

Key words: Strawberry; New cultivar; ‘Jingquanxiang’

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草莓种植容易,生产周期短,见效快,深受广大种植者和消费者的喜爱。近10 a(年),我国多省市科研院所、大专院校加大草莓育种力度,陆续推出了几十个国产品种^[1-5],力求打破国外品种在中国的垄断地位。北京市林业果树科学研究院以培育早熟、质优、风味浓、抗病的设施栽培品种为目标,推出“京香”和“公主”系列品种,以满足草莓生产对品种多元化的需求。

1 选育过程

2006年4月,北京市林业果树科学研究院以‘给维塔’为母本,‘红颜’为父本进行人工杂交,当年获得杂交种子400余粒。经冷藏处理后,2007年获得杂种实生苗312株。2007年6月下旬,温室培育的杂种苗达到四叶一心时,定植于北京市林业果树科学研究院草莓杂种圃。2008年5月露地初选,筛选优株16株,通过匍匐茎扩繁,2009年进行露地和温室复选,其中代号‘06-56-6’的单株表现果个大、色艳、风味浓、丰产,经过2010—2012年区试和田间试验,将该品系定名为‘京泉香’(图1)。2012年12月通过北京市林木品种审定委员会审定(良种编号:京S-SV-FA-016-2012)。

2 主要性状

2.1 植物学特征

植株生长势强,株态半开张,株高18.9 cm,冠径



图1 草莓新品种‘京泉香’

Fig. 1 A new strawberry cultivar ‘Jingquanxiang’

32.5 cm×29.6 cm。叶圆形,绿色,小叶纵径6.43 cm,横径4.85 cm,叶片厚度0.27 mm,叶柄长12.9 cm,叶柄粗度2.18 mm;花序分歧,高于叶面,两性花。

2.2 果实性状

果实长圆锥形或楔形,红色,有光泽,种子黄绿红色兼有,凹于果面,种子分布中等;果肉橙红;花萼单层双层兼有,主贴副离。一、二级序果平均单果质量38.4 g,果实纵横径5.46 cm×4.32 cm,最大果质量90 g。风味酸甜适中,香味浓。可溶性固形物含量为9.4%,维生素C含量为0.757 mg·g⁻¹,还原糖含量为5.2%,可滴定酸含量为0.46%,果实硬度为2.12 kg·cm⁻²。‘京泉香’与父母本主要果实性状对比见表1。

表1 主要果实性状比较

Table 1 Comparison of main fruit characteristics

品种 Cultivar	果形 Fruit shape	平均单果质量 The average fruit mass/g	果实颜色 Fruit color	果实硬度 Fruit firmness	风味 Flavor	果肉颜色 Flesh color	香气 Aroma	w(可溶性固形物) Soluble solids content/%
京泉香 Jingquanxiang	圆锥或楔形 Conical or wedged	38.4	红色 Red	中等 Medium	酸甜适中 Sweet-sour	橙红 Orange-red	浓 Intense	9.4
给维塔 Gaviota	圆锥或楔形 Conical or wedged	32.3	深红色 Dark-red	硬 Firm	酸 Sour	红 Red	稍有 Little	7.6
红颜 Benihoppe	圆锥 Conical	29.7	红色 Red	中等 Medium	甜 Sweet	橙红 Orange-red	浓 Intense	10.9

2.3 物候期

‘京泉香’在北京地区日光温室栽培现蕾期为11月上中旬,初花期为11月下旬,盛花期为12月上旬,果实转白期为12月中旬,果实始熟期为1月上旬。

2.4 适应性

该品种适合日光温室促成栽培。通过品种选育

过程中田间观察,‘京泉香’较抗灰霉病,但对白粉病抗性相对较差,应注意白粉病的早期防控。

3 栽培技术要点

3.1 定植

适宜在北京地区及生态条件相似区域栽培,一年一栽。在北京地区8月下旬或9月上旬定植,一般

采用高垄双行定植,株距 20~25 cm。整地前施足底肥,加强前期肥水管理,促进植株生长。为便于花果管理,定植时草莓茎的弓背要朝向垄沟的方向。定植后要滴透水,以保持土壤湿润。

3.2 定植后管理

草莓苗定植成活后,要及时中耕除草,清除病叶、老叶及匍匐茎。花前及时追施氮磷钾三元复合肥 300 kg·hm⁻²,花期采用蜜蜂授粉。草莓花序量大,依据植株生长势的强弱,一般每株上保留 4~6 个果,以提高大果率和商品果率。大棚栽培要注意花期温度不宜过高或过低,低温或光照不足会使畸形果增加,可采用补光措施减少畸形果的发生,同时疏花疏果合理负载,以提高果品质量。达到完全成熟时要及时采摘。

3.3 病虫害防治

重茬日光温室土壤采用石灰氮太阳能高温消毒。防治病虫害,首选物理防治方法及选用低残留生物药剂防治,花果期应尽量减少药剂的使用。

参考文献 References:

- [1] 万红,曾志伟,罗红,龙荣华,王连润,陶磅. 草莓新品种‘火焰’的选育[J]. 果树学报,2017,34(9):1225-1227.
WAN Hong, ZENG Zhiwei, LUO Hong, LONG Ronghua, WANG Lianrun, TAO Pang. Breeding report of a new strawberry cultivar ‘Flame’ [J]. Journal of Fruit Science, 2017, 34(9): 1225-1227.
- [2] 王庆莲,赵密珍,王壮伟,吴伟民,钱亚明. 红花草莓新品种‘紫金红’[J]. 园艺学报,2017,44(12):2425-2426.
WANG Qinglian, ZHAO Mizhen, WANG Zhuangwei, WU Weimin, QIAN Yaming. ‘Zijin hong’, a new red-flowered strawberry cultivar [J]. Acta Horticulturae Sinica, 2017, 44(12): 2425-2426.
- [3] 常琳琳,董静,钟传飞,孙健,孙瑞,石琨,王桂霞,张运涛. 中国育成草莓品种的系谱分析[J]. 果树学报,2018,35(2):158-167.
CHANG Linlin, DONG Jing, ZHONG Chuanfei, SUN Jian, SUN Rui, SHI Kun, WANG Guixia, ZHANG Yuntao. Pedigree analysis of strawberry cultivars released in China [J]. Journal of Fruit Science, 2018, 35(2): 158-167.
- [4] 高清华,段可,张丽勃,邹小花,杨静,田书华. 优质抗白粉病草莓新品种‘海丽甘’的选育[J]. 果树学报,2018,35(8):1027-1029.
GAO Qinghua, DUAN Ke, ZHANG Liqing, ZOU Xiaohua, YANG Jing, TIAN Shuhua. ‘Shanghai Sweet-Beauty’, a new strawberry cultivar with high quality and powdery mildew resistance [J]. Journal of Fruit Science, 2018, 35(8): 1027-1029.
- [5] 杨肖芳,苗立祥,张豫超,蒋桂华. 草莓新品种‘越珠’的选育[J]. 果树学报,2019,36(1):126-128.
YANG Xiaofang, MIAO Lixiang, ZHANG Yuchao, JIANG Guihua. Breeding report of a new strawberry cultivar ‘Yuezhu’ [J]. Journal of Fruit Science, 2019, 36(1): 126-128.