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Analysis on the Yield Stability and High Yielding Characteristics of Super *Japonica* Rice Variety Nangeng 9108

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Abstract: Using the data of Jiangsu rice regional experiment in 2011 to 2012 and the yield data of machine-transplanted *japonica* rice on high-yielding demonstration field in 2013 and 2014, the yield stability and super-high-yielding characteristics of super rice variety Nangeng 9108 were analyzed in order to provide some references for super high yielding cultivation, large-area extension and application of this variety. The results indicated that the yielding ability, stability and adaptability of Nangeng 9108 were better than that of Huaidao 9. The grain yield was significantly increased by improving cultivation technology or the environment. Super-high-yielding rice had more population spikelets than the middle high-yielding rice, the high-yielding rice and higher-yielding rice. And the difference among them was significant. There was no significant difference in seed setting rate and 1 000-grain weight among the grain yield of four types of populations. In order to enlarge the population spikelets, it depended on enriching the effective panicles from middle-yielding to high-yielding, while increasing spikelets per panicle was the major factor from high-yielding to higher-yielding and super-high-yielding. Correlation analysis showed that the yield was significantly positively correlated with the population spikelets and spikelets per panicle, and was un-significantly positively correlated with the effective panicles, seed setting rate and 1 000-grain weight. Path analysis showed that the population spikelets had the greatest direct effect on the yield, followed by the spikelets per panicle and effective panicles. The seed setting rate and 1 000-grain weight had indirect effect on the yield by indirect negative influence on the spikelets per panicle, effective panicles and the population spikelets. The characteristics of super-high-yielding on Nanjing 9108 are enriching the population spikelets on the basis of sufficient effective panicles and larger panicle type. Therefore, stable 1 000-grain-weight and seed setting rate are needed for increasing total spikelets.

Key words: super rice; Nangeng 9108; yielding; stability; characteristics of super-high-yielding

·综合信息·

上海市 2016 年审定通过的水稻新品种

审定编号 (沪审稻)	品种名称	类型	选育单位	品种来源	全生育期 (d)	区试产量 (kg/667 m ²)	生试产量 (kg/667 m ²)
2016001	紫祥优 24	粳型三系杂交稻	上海弘辉种业有限公司、上海市农业科学院	紫祥 A × 申繁 24	162.3	684.2	690.4
2016002	交源优 1 号	粳型三系杂交稻	上海旗冰种业科技有限公司、上海弘辉种业有限公司	交源 3A × 交恢 1 号	163.1	701.5	696.8
2016003	浦优 201	籼粳交三系杂交稻	上海市浦东新区农业技术推广中心	浦粳 06A × T201	162.0	786.1	800.7
2016004	嘉优中科 1 号	籼粳交三系杂交稻	浙江省嘉兴市农业科学研究院(所)、中国科学院遗传与发育生物学研究所、上海崇明种子有限公司	嘉 66A × 中科嘉恢 1 号	157.5	789.1	742.9
2016005	沪旱 61	粳型常规稻	上海天谷生物科技股份有限公司、上海市农业生物基因中心	沪旱 3 号 / 沪旱 11 号 // 武育粳 3 号 / 秀水 128	161.6	646.2	644.8
2016006	金农香粳 1267	粳型常规稻	上海市金山区农业技术推广中心、上海市农业科学院	武运梗 19 号 / 扬粳 3118	157.3	701.9	702.2

(中稻宣)