播期与密度互作对直播棉产量及农艺性状的影响

张丽娟,陈俊英,秦宇坤

(江西省经济作物研究所,江西 九江 332105)

摘要:为明确油(麦)后直播条件下中早熟棉花品种不同播期的最适密度,为油(麦)后直播棉轻简栽培提供技术支撑。以赣杂棉 0906 为试验材料,于 2020—2022 年采用二因素裂区设计,主区为播期,设 3 个水平;副区为密度,设 4 个水平,研究不同播期和密度处理对棉花农艺性状和产量的影响。结果表明,播期推迟,会使棉花生育期缩短。在不同播期与密度组合中,5 月 15 日播种、密度为 6.75 万～9.75 万株·hm^{-2} 时,单位面积成铃数相对较高;播期与密度互作对铃重和衣分均没有显著影响;播期对棉纤维品质的影响因各年份气候不同而存在不确定性。在本试验的播期范围内,赣杂棉 0906 只要配合适宜的密度均可获得较高的产量。4 月底 5 月初播种,密度不宜超过 6.75 万株·hm^{-2};5 月中旬播种,最佳密度为 6.75 万～9.75 万株·hm^{-2};5 月下旬播种,收获密度至少为 8.25 万株·hm^{-2}。

关键词:播期;密度;棉花;产量;农艺性状

Effect of interaction between sowing date and density on yield and agronomic characters of direct-seeded cotton

Zhang Lijuan, Chen Junying, Qin Yukun

(*Jiangxi Institute of Economic Crops, Jiujiang, Jiangxi* 332105, *China*)

Abstract: The aim of this study is to clarify the optimum density of middle-early maturing varieties in different sowing dates under direct seeded conditions, so as to provide technical support for light and simple cultivation of cotton after rape (wheat). Ganzamian 0906 was used as the test material, and a two-factor split plot design was adopted in 2020—2022, with sowing date as the main plot (three levels), and density as the sub-area (four levels), to study the effects of different sowing dates and density treatments on cotton agronomic characters and yield. The results showed that delaying sowing date would shorten the growth period. In different combinations of sowing date and density, when sown on May 15th with the density of 67 500-97 500 plants·hm^{-2}, the number of bolls per unit area was relatively high. The interaction between sowing date and density had no significant effect on boll weight and lint percentage. The effect of sowing date on cotton fiber quality is uncertain because of the different climate in each year. In the sowing date range of this experiment, Ganzamian 0906 can obtain high yield as long as it is matched with suitable density. Sowing in late April and early May, the density should not exceed 67 500 plants·hm^{-2}; sowing in mid-May, the optimum density is 67 500-97 500 plants·hm^{-2}; sowing in late May, the harvesting density should be at least 82 500 plants·hm^{-2}.

Keywords: sowing date; density; cotton; yield; agronomic character