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摘要: 采用单因素随机区组试验设计,在滴灌条件下,对北疆复播大豆不同密度茎节性状、荚粒时空分布以及产量构成因素等进行了研究。结果表明:单株荚数、单株空荚数、单株粒数随密度的增大而降低;主要改变了荚粒在上层和下层的分布比例,而对中层荚粒所占比例影响很小。着粒密度则随着密度的增加而降低,最低密度处理较最高密度处理着粒密度提高了63.16%。随着密度的增大,株高增高,茎节间长度呈增大趋势,而茎粗呈现减小趋势。产量随着密度的增加呈现开口向下的抛物线变化趋势。试验设计条件下以52.5万株·hm⁻²密度处理的产量最高,为3 205.04 kg·hm⁻²,与其他处理差异均达到了极显著水平(P<0.01)

Abstract: The effects of planting density on the stem elongation, distribution of pod and seed, yield and yield components of summer soybean under drip irrigation were studied. Treatments were established following one factor and randomized block design. The result showed that the number of pods, seedless pods and seeds per plant declined with the increasing density. The effect of planting density on variations of the number of pods and seeds were significant in upper and lower layers, but not in middle layer. With the increasing of planting density, plant height and internode length increased, while the grain density and stem diameter decreased. The difference in grain density was up to 63.16% due to plant density. The yield showed a downward parabola against planting density. It found that 5.25×10⁵ plants per hectare had the highest yield of 3 205.04 kg·ha⁻¹, which reached a very significant difference (P<0.01) compared to the other treatments.

参考文献/References:

- [1] 杨庆凯, 桂明珠, 武天龙. 大豆品种抗倒伏能力与产量、植株形态、茎解剖性状的相关分析 [J]. 大豆科学, 1986, 5(2):113-116. (Yang Q K, Gui M Z, Wu T L. An analysis about relationship of lodging to agronomic characters and stem anatomy in soybean [J]. Soybean Science, 1986, 5(2):113-116.)
- [2] 孙卓韬, 董钻. 大豆株型、群体结构与产量关系的研究, 第二报, 大豆群体冠层的荚粒分布 [J]. 大豆科学, 1986, 5(2):91-102. (Sun Z T, Dong Z. Studies on the relationships between plant type, population structure and yield in soybean II. Seed distribution in soybean canopies [J]. Soybean Science, 1986, 5(2):91-102.)
- [3] 游明安, 盖均镞, 吴晓春, 等. 大豆产量空间分布特性的研究 [J]. 大豆科学, 1992, 12(1):64-69. (You M A, Gai J Y, Wu X C, et al. Preliminary study on soybean yield distribution in space [J]. Soybean Science, 1992, 12(1):64-69.)

- [4]林蔚刚,胡立成,董丽华,等.大豆群体冠层叶、粒与光照垂直分布的初步分析[J].中国油料,1996,18(3):42-46.(Lin W G,Hu L C,Dong L H,et al.Preliminary analysis on vertical distribution of leave,grain and light of colony canopy of soybean [J].Oil Crops of China,1996,18(3):42-46.)
- [5]李金霞,章建新,邢永锋,等.高产春大豆结实性垂直分布规律研究[J].新疆农业科学,2009,46(3):493-497.(Li J X,Zhang J X,Xing Y F,et al.Preliminary analysis on vertical distribution of fecundity of high-yield spring soybean[J].Xinjiang Agricultural Sciences,2009,46(3):493-497.)
- [6]董钻,孙卓韬.大豆株型群体结构与产量关系的研究,第二报,大豆群体冠层的荚粒分布[J].大豆科学,1984,3(2):110-120.(Dong Z,Sun Z T.Studies on the relationships between plant type population structure and yield in soybean II.Seed distribution in soybean canopies[J].Soybean Science,1984,3(2):110-120.)
- [7]赵荣琛.杭州早大豆行株距试验[J].农业学报,1957,8(2):185-195.(Zhao R C.Experiment of soybean row planting in Hangzhou city[J].Agricultural Journal,1957,8(2):185-195.)
- [8]常耀中.大豆群体合理摆布与产量关系的研究[J].大豆科学,1983,2(2):132-139.(Chang Y Z.Studies on the relationship between optimum population and yield of soybean[J].Soybean Science,1983,2(2):132-139.)
- [9]Purcell L C,Ball R A,Reaper J D,et al.Radiation use and bio-mass production in soybean at different plant population densities[J].Crop Science,2002,42:172-177.
- [10]Board J E,Harville B G.Growth dynamic during the vegetative period affects yield of narrow-row,late-planted soybean[J].Agronomy Journal,1996,88:575-579.
- [11]Haile F J,Higley L G,Specht J E.Soybean leaf morphology and defoliation tolerance[J].Agronomy Journal,1998,90:353-362.
- [12]林蔚刚,许忠仁,胡立成,等.不同株型大豆品种叶荚粒垂直分布规律的初步研究[J].大豆科学,1995,14(1):53-59.(Lin W G,Xu Z R,Hu L C,et al.Preliminary analysis on vertical distribution of leave,pod,and grain of different plant types of soybean[J].Soybean Science,1995,14(1):53-59.)
- [13]张伟,张惠君,王海英,等.株行距和种植密度对高油大豆农艺性状及产量的影响[J].大豆科学,2006,25(3):283-287.(Zhang W,Zhang H J,Wang H Y,et al.Effects of spacing and planting densities on agronomic traits and yield in high-oil soybean [J].Soybean Science,2006,25(3):283-287.)
- [14]王程,刘兵,金剑,等.密度对大豆农艺性状及产量构成因素空间分布特征的影响[J].大豆科学,2008,27(6):936-942.(Wang C,Liu B,Jin J,et al.Influences of planting density on agronomic traits and spatial distribution of yield components across main stem in soybean[J].Soybean Science,2008,27(6):936-942.)
- [15]于洪久.种植密度对大豆光合生理及产量的影响[J].大豆科学,2009,28(6):1115-1118.(Yu H J.Effects of plant density on photosynthetic characteristics and yield of soybean[J].Soybean Science,2009,28(6):1115-1118.)
- [16]杜吉到,蔡纯意.不同密度下大豆根部性状的研究[J].干旱地区农业研究,2011,29(4):219-222.(Du J D,Cai C Y.Research of soybean root traits in different densities[J].Agricultural Research in the Arid Areas,2011,29(4):219-222.)
- [17]章建新,沈融,李宏琪,等.施氮对高产大豆结实性垂直分布的影响[J].大豆科学,2011,30(3):424-427.(Zhang J X,Shen R,Li H Q,et al.Nitrogen effects vertical distribution of yield components of high-yield soybean[J].Soybean Science,2011,30(3):424-427.)
- [18]焦浩,纪永民,张存岭.种植方式和密度对大豆产量和单株性状的影响[J].作物杂志,2008(5):50-53.(Jiao H,ji Y M,Zhang C L.Effect of planting pattern and density on soybean yield and other traits[J].Crops,2008(5):50-53.)
- [19]张晓艳,杜吉到,郑殿峰,等.大豆不同群体叶面积指数及干物质积累与产量的关系[J].中国农学通报,2006,22(11):161-163.(Zhang X Y,Du J D,Zheng D F,et al.Studies on the relationship between yield and leaf area index and their dry matter accumulation dynamic on the different population[J].Chinese Agricultural Science Bulletin,2006,22(11):161-163.)
- [20]章建新,翟云龙,薛丽华.密度对高产春大豆生长动态及干物质积累分配的影响[J].大豆科学,2006,25(1):1-5.(Zhang J X,Zhai Y L,Xue L H.Effect of plant density on growth tendency,dry matter accumulation and distribution in high yield spring soybean[J].Soybean Science,2006,25(1):1-5.)
- [21]杜吉到,丁希武,郑殿峰,等.不同密度下大豆叶部性状生长发育规律的研究[J].黑龙江农业科学,2006(5):40-42.(Du J D,Ding X W,Zheng D F,et al.Studies on the regulation of growth and development for soybean leaf characters under different densities[J].Heilongjiang Agricultural Sciences,2006(5):40-42.)
- [22]刘玉平,李瑞平,李志刚.栽培模式与密度对大豆冠层结构及产量的影响[J].大豆科学,2010,29(5):796-799.(Liu Y P,Li R P,Li Z G.Effects of cultivation pattern and density on canopy structure and yield of soybean[J].Soybean Science,2010,29(5):796-799.)
- [23]苗以农,朱长甫,石连旋,等.从大豆产量形成生理特点探索特异高产株型的创新[J].大豆科学,1999,18(4):342-346.(Miao Y N,Zhu C P,Shi L X,et al.From soybean yield formation physiology characteristic explore specific high-yield plant-type innovation[J].Soybean Science,1999,18(4):342-346.)
- [24]高成芳,张光耀,王孟孟,等.麦收后复种夏大豆密度与施肥试验初报[J].甘肃农业科技,2009(11):17-18.(Gao C F,Zhang G Y,Wang M M,et al.Report for plant density and fertilization experiment of summer soybean after wheat harvest[J].Gansu Agricultural Sciences and Technology,2009(11):17-18.)
- [25]方志刚,马富裕,崔静,等.加工番茄膜下滴灌根系分布规律的研究[J].新疆农业科学,2008,45(1):15-20.(Fang Z G,Ma F Y,Cui J,et al.A study on root system distribution of processing tomato under film drip irrigation[J].Xinjiang Agricultural Sciences,2008,45(1):15-20.)

相似文献/References:

- [1]章建新,朱倩倩,王维俊.不同滴水量对大豆根系生长和花荚形成的影响[J].(darticle.aspx?type=view&id=201305007)大豆科学,2013,32(05):609.[doi:10.11861/j.issn.1000-9841.2013.05.0609]
ZHANG Jian-xin,ZHU Qian-qian,WANG Wei-jun.Effect of Drip Irrigation Quantities on Roots Growth and Formation of Flowers and Pods in Soybean[J].Soybean Science,2013,32(05):609.[doi:10.11861/j.issn.1000-9841.2013.05.0609]
- [2]毛洪霞.不同水分处理对滴灌大豆干物质积累及生理参数的影响[J].(darticle.aspx?type=view&id=200902015)大豆科学,2009,28(02):247.[doi:10.11861/j.issn.1000-9841.2009.02.0247]
MAO Hong-xia.Effect of Different Drip Irrigation Treatments on Dry Matter Accumulation and Physiological Parameters in Soybean[J].Soybean Science,2009,28(02):247.[doi:10.11861/j.issn.1000-9841.2009.02.0247]

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