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氮素后移施肥对大豆产量及品质的影响

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摘要: 在保持磷钾肥不变的前提下，控制氮肥总量，将适量的氮肥用作基肥和种肥，其余氮肥后移分期施用研究氮肥对大豆产量及品质含量的影响。结果表明：大豆氮肥后移分期施用增产效果显著，不同处理间差异达到了极显著水平，以N6处理（纯N量种肥15 kg?hm^{-2}、始花期追氮30 kg?hm^{-2}、始花期喷氮7.5 kg?hm^{-2}及鼓粒期喷氮7.5 kg?hm^{-2}）产量最高，产量为3 285.71 kg?hm^{-2}。大豆始花期追施氮肥的增产作用大于始花期、鼓粒期喷施氮肥，始花期和鼓粒期分期喷施氮肥增产效果好于始花期一次性喷施。氮肥后移分期施用对大豆的油分与蛋白质含量有较明显的影响。充足的底肥或种肥氮有利于提高大豆油分含量，而氮肥后移施用明显降低了油分含量，随着始花期追施氮肥量的增加，大豆油分含量呈递减趋势；对大豆的蛋白质含量影响作用与油分正好相反，氮肥后移分期施用使蛋白质含量显著提高，幅度为0.373 3%～1.323 3%；氮肥后移施用对大豆籽粒蛋脂总和的影响与蛋白质的变化趋势一致。

Abstract: On the premise of the phosphate and potash unchanged, controlling the total nitrogen and with the right amount of nitrogen fertilizer as basic fertilizer and seed manure, the rest of the nitrogen fertilizer were moved backward and split application was conducted to study the effects of nitrogen fertilizer on soybean yield and quality content.The results showed that the effects of yield increased was significantly with the nitrogen fertilizer backward and split application and reached extremely significant level between different treatments. The N6 treatment (pure N quantity of seeding fertilizer 15 kg?ha^{-1}, flowering 30 kg?ha^{-1}?and filling period 7.5 kg?ha^{-1}) has the highest yield with 3 285.71 kg?ha^{-1}, followed by treatment 5, 7, 8, 4, 3. The increasing yield of beginning flowering topdressing nitrogen stimulation effect was greater than the initial flowering, drum period of spraying nitrogen. The effect of spraying nitrogen stimulation on beginning flowering and drum installment was better than in the beginning of flowering one-time spraying. The nitrogen fertilizer backward and split application had a significant impact on soybean oil and protein content. Adequate base fertilizers or seed nitrogen was beneficial for improving soybean oil content. The nitrogen fertilizer backward application significantly decreased the content of oil content. With the increasing of topdressing nitrogen on beginning flowering, the soybean oil content showed a decline trend. The protein content had the opposite effect. The nitrogen fertilizer backward and split application increased the protein content significantly by 0.373 3%～1.323 3%. The soybean total content of oil and protein had accordance changing trends with the protein content.

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