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### 氮肥运筹比例对稻田套播强筋小麦产量及花后旗叶衰老的影响

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中文关键词: [强筋小麦](#) [稻田套播](#) [氮肥运筹比例](#) [旗叶衰老](#) [产量](#)

英文关键词: [Strong gluten wheat](#) [Interplanting in paddy field](#) [Senescence of flag leaf](#) [Yield](#)

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中文摘要:

为给稻田套播小麦优质高产栽培提供理论依据,在江苏淮北地区通过大田试验,研究氮肥运筹比例对稻田套播强筋小麦花后旗叶叶绿素含量、超氧化物歧化酶(SOD)活性、丙二醛(MDA)含量和籽粒产量的影响。结果表明,在总施氮量(240 kg·hm<sup>-2</sup>)相同条件下,随拔节肥和孕穗肥施氮比例的上升,小麦产量、氮肥偏生产力(PFP)和氮肥农学效率(NAE)逐渐升高,但后期施肥比例过高,产量有所下降,以基肥:分蘖肥:拔节肥:孕穗肥为3:3:2:2的处理籽粒产量、PFP和NAE最高。随花后生育进程的推移,小麦旗叶叶绿素含量和SOD活性呈单峰曲线变化,MDA含量呈上升趋势。随拔节肥和孕穗肥施用比例的提高,旗叶叶绿素含量和SOD活性下降速率变缓,MDA含量上升速率也减缓。本试验条件下,基肥:分蘖肥:拔节肥:孕穗肥施用比例为3:3:2:2的氮肥运筹方式有利于减缓花后旗叶衰老,提升氮肥利用效率,提高粒重和产量。

英文摘要:

Wheat interplanted in paddyfield, which was a light and predigesting cultivation method, was applied widely in rice and wheat growing areas. The effects of different N application ratio on chlorophyll content, SOD activity, MDA content in flag leaves after anthesis and grain yield in strong gluten wheat interplanted in paddyfield were studied. Grain yield, partial factor productivity of applied N (PFP) and nitrogen agronomic efficiency (NAE) increased as the proportion of jointing and booting N fertilizer increased, but decreased when the ratio of jointing and booting N fertilizer was too high. Chlorophyll content and SOD activity in flag leaves showed a single peak curve, the maximum value appeared in the period from the 7th to the 14th day after anthesis, and MDA content in flag leaves increased after anthesis. The declining rate of chlorophyll content, SOD activity and the increasing rate of MDA content decreased when the ratio of nitrogen applied at elongation and booting stages increased. In order to get high grain yield and NUE, the suitable nitrogen application ratio(base: tillering: elongation: booting) was 3:3:2:2 for interplanted strong gluten wheat in paddy field.

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