

عنوان مقاله:

ALLEVIATION OF DROUGHT STRESS ON GERMINATION TRAITS AND FIELD PERFORMANCE OF SOYBEAN
BY SEED PRIMING

محل انتشار:

چهارمین کنفرانس بین المللی پژوهشهای کاربردی در علوم کشاورزی (سال: 1395)

تعداد صفحات اصل مقاله: 10

نویسنده:

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خلاصه مقاله:

Seed priming has the potential to improve water deficit tolerance in crops. The study, consisting of two experiments (in a controlled environment (growth chamber) and field condition), was conducted to evaluate the role of various seed priming methods in mitigating the adverse effect of water deficit on some physiological viz. seed germination, mean germination time and seedling vigour and biochemical parameters viz. membrane stability, dehydrogenase activity, lipid peroxidation, chlorophyll content, antioxidant enzymes, reserve mobilising enzymes, proline content and field performance of soybean cultivars (DPX, drought tolerant, and Williams, drought sensitive). Seeds were subjected to different seed priming methods, namely, hormonal priming, osmopriming, halopriming and hydropriming, comprising a total of 15 treatments of different priming combinations (P1–P14) along with control (P0). Crops were subjected to 2 and 3 different moisture regimes in growth chamber and field conditions, respectively. Hydropriming for 12 h and hormonal priming with gibberlic acid for 14 h significantly improved the seed germination, seedling vigour, mean germination time and seed yield in soybean cultivars. Hydropriming, being simple, economical and safe, is recommended which can be effective to increase the seed yield under both optimum as well as limited water conditions

کلمات کلیدی:

Biochemical parameters; Priming methods; Vigour index; Water deficit; Yield

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