

RESEARCH ARTICLE :

Static and Pulsed magnetic field exposure improves vigour and yield of cherry tomato

■ **MUKESH KUMAR GUPTA AND ANJALI ANAND**

ARTICLE CHRONICLE :

Received :

11.07.2017;

Accepted :

25.08.2017

SUMMARY : Cherry tomato seeds were magnetoprimed with various doses of static magnetic field (SMF) in the range of 50 – 150 mT for duration of 30 min and 1 h. SMF dose of 100 mT for 30 min gave maximum increase in germination characteristics and was selected and applied as pulsed dose. The seeds were exposed to pulsed magnetic field dose in the cycles of 2, 3, 5 and 6 min on and off and PMF dose of 3 min on and off cycle showed significant enhancement of 23% in seedling vigour compared to other treatments. These two doses were evaluated for their field performance. Yield increased by 17% in SMF and 27% in plants from PMF primed seeds. There was no significant change in the number of fruits and the increase in yield was due to a significant increase in weight per fruit which was 6.4 g in control compared to 7.76 and 8.55 g in SMF and PMF, respectively. Our results indicate that pulsed magnetopriming is more effective dry seed priming treatment that can be used for increasing productivity of cherry tomato.

KEY WORDS :

Cherry tomato,
Germination, Vigour
index, Yield,
Magnetopriming,
Rate of germination

How to cite this article : Gupta, Mukesh Kumar and Anand, Anjali (2017). Static and Pulsed magnetic field exposure improves vigour and yield of cherry tomato. *Agric. Update*, **12** (TECHSEAR-10) : 2918-2922.

Author for correspondence :

MUKESH KUMAR GUPTA

Division of Plant
Physiology, Indian
Agricultural Research
Institute, NEW DELHI
INDIA
Email : [ur.reshu@
gmail.com](mailto:ur.reshu@gmail.com)

See end of the article for
authors' affiliations