



## DRAFT INDIAN STANDARD IN WIDE CIRCULATION

Reference : FAD 22/T

Date : 21 February 2024

TECHNICAL COMMITTEE : Agricultural Systems And Management, FAD 22

To,

All concerned

Dear Madam/Sir,

The following document has been prepared by the Agricultural Systems And Management Sectional Committee, FAD 22. Please [click here](#) to view the document.

**Document Number : FAD 22 (23576) WC**

**Title of the document : ARTIFICIAL LIGHTING SYSTEM FOR PROTECTED CULTIVATION ♦  
REQUIREMENTS**

**Document Type : New Indian Standard**

*This document has following salient features which may require specific attention for your valuable comments:*

- 1) Light is one of the key requirements for plant growth. Artificial Lighting is needed to grow plants in spaces where there is little or no natural light available or when the natural day length is artificially extended. Photosynthesis, germination, time of flowering and plant morphology are light dependent activities. These actions are highly related to the surrounding light quality from which the plant perceives signals of its environment. These responses are mediated by wavelengths within and beyond the Photosynthetically active radiation (PAR) area, including also UV and far-red irradiation. The ratios of blue to green ratio and red to far-red ratio determine how fast or slow the plant grows.*
- 2) The standard has been developed in order to provide guidelines and standards for the use of artificial lighting for plant growth in various applications, such as Controlled Environment Agriculture (CEA) and other related fields, in India. This standard will provide recommendations on requirements for lighting system, structures, safety, maintenance and also the basis for development of conformity assessment scheme in future in order to evaluate the artificial lighting system for protected cultivation.*
- 3) This standard provides guidelines for the design, installation, operation, and maintenance of artificial lighting systems used in protected cultivation, including but not limited to indoor facilities, vertical farms, greenhouses, and other controlled environments.*

Please examine the document and share your comments regarding further improvement in the document.

**Last date for sharing the comments is : 21 April 2024**

The comments should be shared in the prescribed template through this portal only; and the comments so received shall be taken up by the Sectional Committee for necessary action. For any other query, please write an email at fad@bis.gov.in to the undersigned at Bureau of Indian Standard, Manak Bhawan, 9, Bahadur Shah Zafar Marg, New Delhi.

In case no comments are received, we would presume your approval of the documents. However, in case we receive any comments on the document, the same shall be put up to the Sectional Committee for necessary action.

Thanking You,

**Yours faithfully,  
Suneeti Toteja  
Head (Food and Agriculture Department)  
Email: fad22@bis.gov.in**



## व्यापक परिचालन में मसौदा(दे)

हमारा सन्दर्भ : FAD 22/T

दिनांक : 21-02-2024

**तकनीकी समिति : Agricultural Systems And Management Sectional Committee, FAD 22**

प्राप्तकर्ता : रूचि रखने वाले सभी निकाय

महोदय/या,

निम्नलिखित मसौदा तैयार किया गया है :

प्रलेख संख्या : FAD 22 (23576) WC

शीर्षक : संरक्षित खेती के लिए कृत्रिम प्रकाश व्यवस्था — आवश्यकताएँ

कृपया इस/इन मानक(को)/संशोधन(नो) के मसौदे(दो) का अवलोकन करें और अपनी सम्मतियाँ यह बताते हुए भेजें कि यदि ये मानक(को) के संशोधन(नो) के रूप में प्रकाशित हो तो इन पर अमल करने में आपके व्यवसाय अथवा कारोबार में क्या कठिनाइयां आ सकती हैं।

**सम्मतियाँ भेजने की अंतिम तिथि : 21 April 2024**

सम्मतियाँ, यदि कोई हों तो, कृपया यहाँ क्लिक करके ऑनलाइन पोर्टल के माध्यम से ऊपर दी गयी अंतिम तिथि तक दर्ज कराएं।

यह/ये प्रलेख भारतीय मानक ब्यूरो की वेबसाइट [www.bis.gov.in](http://www.bis.gov.in) पर भी उपलब्ध है/हैं।

धन्यवाद।

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