

**GOVERNMENT OF INDIA
AGRICULTURE
LOK SABHA**

UNSTARRED QUESTION NO:2192

ANSWERED ON:10.03.2015

USE OF HYDROPHILIC POLYMER IN AGRICULTURE

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Will the Minister of AGRICULTURE be pleased to state:

- (a) whether the Indian Agricultural Research Institute (IARI) has developed a novel hydrophilic super absorbent polymer to facilitate the farmers for the use of water with utmost efficiency in agricultural practices in arid and semi-arid regions in the country;
- (b) if so, the details thereof;
- (c) whether any field trial has been done to ascertain the effect of hydrophilic polymer on the crops, if so, the outcome thereof;
- (d) whether the Government proposes to commercialise such technology in the country, if so, the details thereof; and
- (e) the steps taken/being taken by the Government in this regard?

Answer

MINISTER OF STATE IN THE MINISTRY OF AGRICULTURE (DR. SANJEEV KUMAR BALYAN)

(a) & (b): Yes, Madam. Indian Agricultural Research Institute (IARI), New Delhi of Indian Council of Agricultural Research has developed a novel cellulosic super absorbent hydrogel, 'Pusa Hydrogel' that enables more efficient use of water in agriculture, particularly in areas of limited water availability.

Pusa hydrogel is a high water absorbing (hydrophilic) polymer which absorbs a minimum of 350 times its weight of pure water and is of particular significance in semi-arid and arid regions. The product, when applied at the time of sowing, absorbs and retains water in the soil for extended time and releases it slowly to the plant in root zone.

(c) A number of field trials have been conducted by IARI in crops like wheat, chickpea, mustard, soybean, groundnut, potato to evaluate the potential of Pusa hydrogel in improving water productivity. An average of 10-30% yield increase was recorded through use of Pusa Hydrogel under limited water availability conditions.

(d) & (e): The IARI has licensed the bench scale know-how of the technology to eight companies namely, (i) Carborundum Universal Ltd., Bangalore; (ii) Earth International (P)Ltd., Delhi; (iii) Huntin Organics Ltd., Faridabad; (iv) The Sarpanch Samaj, Delhi; (v) Madhusudan and Company Pvt. Ltd., Jaipur; (vi) Nagarjuna Fertilizers (P) Ltd, Hyderabad; (vii) Reliance Industries, Mumbai and (viii) Khemka Industries, Chennai.