

FORM IV
(See Rule 8)

**Statement about the ownership and other particulars of the Journal of
Cotton Research and Development**

Place of publication : Hisar

Periodicity of its publication : Half yearly

Publisher's name : Dr. R. S. Sangwan

Nationality : Indian

Address : Head, Cotton Section
Department of Genetic and Plant Breeding
CCS Haryana Agricultural University,
Hisar 125 004

Printer's name and address : Ridhi Sidhi Offset Press,
Katla Ramlila Ground
Hisar 125 001

Editor's name : Dr. R. S. Sangwan

Nationality : Indian

Address : Head, Cotton Section
Department of Genetic and Plant Breeding
CCS Haryana Agricultural University,
Hisar-125 004

Name and address of individuals who : Dr. R. S. Sangwan
own the newspapers and partners or
Head, Cotton Section
shareholders holding more than one
Department of Genetic and Plant Breeding
per cent of the total capital
CCS Haryana Agricultural University,
Hisar 125 004

I, Dr. R. S. Sangwan, hereby declare that the particulars given above are true to the best of my knowledge and belief.

1 January, 2018

Sd/-
(R. S. Sangwan)
Signature of Publisher

PATRONS OF THE ASSOCIATION

1. Sh. V. P. Ahuja
GTM, Synthetics Ltd., 33, Additional
Anaj Mandi, Sirsa-I25 055.
2. Sh. Salil Singhal
Pesticide India Ltd., 503-505, Tower-A,
Millennium Plaza, Sector-27
Gurgaon-I22 002.
3. Sh. R. G Agarwal
Dhanuka Agritech. Limited
14th Floor Building 5A
DLF Cyber Terrace, Ciber City
DLF Phase -III, Gurugram - 122 002
4. M/s. Ankur Seeds Pvt. Ltd.
27, New Cotton Market Layout,
Nagpur-440 018.
5. Sh. N. P. Patel
Western Agri Seeds Pvt. Ltd.
802/11, Western Road, GIDC
(Engg. Estate) Sector-28, Gandhi Nagar,
Ahmedabad-382 028.
6. Dr. G S. Raju
Vijay Laxshmi Insecticides and Pesticides Ltd.
Plot No. 61, 1st floor, Nagarjuna Hills,
Punjagatta, Hyderabad- 500 082.
7. Sh. Babubhai S. Patel
Vikram Seeds Pvt. Ltd., 209, Ashwa Megh Avenue,
Near Mithakhali Under Bridge, Mayur Colony,
Navrangpura, Ahmedabad-380 009.
8. Mr. R. D. Shroff
M/s United Phosphorus Ltd.
Uni Phos House, Madhu Park
C. D. Marg, 11th Road, Khar (W)
Mumbai-400 052.
9. M/s Indofil Industries (P) Ltd.
Kalpatru Square 4th Floor, Condivila Road,
Off Andheri Kurla Road Andheri East, Mumbai
10. M/s Monsanto India Ltd.
Ahura Centre, 5th Floor, 96, Mahakali Caves Road,
Andheri(E), Mumbai-400 093.
11. M/s Bayer Crop Science Limited
Bayer House, Central Avenue, Hiranandani Gardens,
P. B. No. 8420, Powal, Mumbai-400 076.
12. M/s Syngenta Crop Protection Ltd.
Amar Paradigm, Survey No. 110-11/3, Baner Road,
Baner, PUNE- 411 045
13. M/s Meghmani Industries
H. NO. 279/2, Sector-45-A, Chandigarh-I60 047

JOURNAL OF COTTON RESEARCH AND DEVELOPMENT

(Founded 1986, Regd. No. 1967 of 2016)

An international journal, official organ of Cotton Research and Development Association, devoted to original research in cotton related agriculture and technology, its by products and allied products. It is published twice a year in January and July. Matters of general policy are the responsibilities of the Executive Council. The authors are solely responsible for the contents of the papers compiled in this volume. The publishers or editors do not take any responsibility for the same in any manner.

EXECUTIVE COUNCIL (2015-2018)

<i>President</i>	D. P. Biradar
<i>Vice Presidents</i>	S. S. Siwach
	M. Ramasami
<i>Secretary</i>	M. S. Chauhan
<i>Joint Secretary</i>	S. S. Patil
<i>Treasurer</i>	Shiwani Mandhania

CORPORATE ADVISORS

M. Prabhkar Rao

R. D. Shroff

R. K. Malhotra

EDITORIAL BOARD

<i>Editor-in-Chief</i>	<i>Editor</i>	<i>Editor</i>	<i>Editor</i>	<i>Editor</i>	<i>Secretary</i>
R. S. Sangwan	Pankaj Rathor	G S. Buttar	D. Monga	A. R. Reddy	M. S. Chauhan

MEMBERS

Suman Bala Singh , <i>Plant Breeding</i>	S. S. Udikeri , <i>Entomology</i>
R. Ravikesavan , <i>Biotechnology</i>	Rishi Kumar , <i>Entomology</i>
S. Bharati , <i>Agronomy</i>	Anita Beniwal , <i>Social Science</i>
Devraj , <i>Soil Science</i>	P. S. Sekhon , <i>Plant Pathology</i>

COUNCILLORS

O. Sangwan , <i>Hisar</i>	Punit Mohan , <i>Nagpur</i>
P. Pundhir , <i>Sriganganagar</i>	S. Venilla , <i>New Delhi</i>
P. Amalabalu , <i>Coimbatore</i>	H. V. S. Chauhan , <i>Mumbai</i>
P. P. Shastri , <i>Khandwa</i>	V. S. Dagaonkar , <i>Hyderabad</i>

TECHNICAL ADVISORS

M. S. Kairon , <i>Nagpur</i>	P. Vidhya Sagar , <i>Hyderabad</i>
Sheoraj , <i>Nagpur</i>	N. Gopalakrishnan , <i>New Delhi</i>
B. M. Khadi , <i>Dharward</i>	K. R. Kranthi , <i>Nagpur</i>
C. D. Mayee , <i>Nagpur</i>	S. S. Mehetre , <i>Rahuri</i>
R. P. Bhardwaj , <i>Sriganganagar</i>	T. H. Singh , <i>Ludhiana</i>

Category	University/Govt. Scientists/Officers (Rs.)	Companies/Firms and their Scientists/Officers (Rs.)	Other Countries (US \$)
Ordinary member	500	800	100
Life member	5,000	8,000	800
Institutional member/libraries	2,000	3,000	400
Patron	50,000	50,000	5000

Payments : Membership fee/subscription should be sent to Secretary/Treasurer, Cotton Research and Development Association, CCS Haryana Agricultural University, Hisar through demand draft only payable at Hisar -125 004.

CRDA JOURNAL NAAS RATINGS : 4.69

**JOURNAL
OF
COTTON RESEARCH AND DEVELOPMENT**

Vol. 32**January, 2018****No. 1**

Crop Improvement

- Molecular characterisation of cotton genotypes using SSR, ISSR and RAPD markers in relation to fiber quality traits
- **S. B. Ghuge, S. S. Mehetre, V. P. Chimote, B. D. Pawar and R. M. Naik** 1
- Characterization, diversity studies and clustering of tetraploid *Bt* cotton hybrids using morphological markers
- **K.Rathinavel, C.Priyadharshini and H.Kavitha** 13
- Impact of genotype × environment interaction and stability for seed cotton yield and its component traits in Asiatic cotton (*Gossypium arboreum* L.)
- **Sunayana, R.S. Sangwan, Sombir Nimbai, V.S. Mor and Pinki** 23
- Elucidation of genetic divergence in upland cotton employing simple sequence repeat markers
- **Pankaj Sharma, R. S.Sohu and Dharminder Pathak** 30
- Genetic variability, correlation and path coefficient analysis for yield and its attributing traits in cotton (*Gossypium hirsutum* L.)
- **K. D. Dahiphale and J. D. Deshmukh** 38
- Estimation of heterosis in F1 generation for morphological and yield contributing characters in *desi* cotton
- **Anil Kumar, H. V. Kalpande, Kuldeep Singh Chandrawat and P. U. Dhone** 47
- Stability analysis of elite breeding lines of upland cotton (*Gossypium hirsutum* L.) for seed cotton yield and its component traits
- **Aashima Batheja, S. R. Pundir and Omender Sangwan** 58
- Heterosis for seed cotton yield and attributing traits in American cotton (*Gossypium hirsutum* L.)
- **Ankit Kumar, Omender Sangwan, K. S. Nirania and A.H. Bankar** 63

Crop Production

- Validation of soil test crop response based fertilizer recommendations for targeted yields of *Bt* cotton in semi arid south western zone of Haryana
- **V. Goyal and Mohinder Singh** 68

**Printed and Published by Dr. R. S. Sangwan, Editor-in-Chief, on behalf of Cotton Research and Development Association, CCS Haryana Agricultural University, Hisar-125 004 and printed by Ridhi Sidhi Offset Printers, Katla Ramlila Ground, Hisar - 125 001
Ph. : 92157-31663 (Date of Publication : 1 January, 2018)**

**Website : www.crdaindia.com
e-mail : crda1987india@gmail.com**

Enhancing productivity of <i>Bt</i> cotton through foliar fertilization under humid southern plain zone of Rajasthan	
- Harphool Meena, P.K.P. Meena and B.L. Kumhar	77
Identification of suitable high density planting system genotypes its response to different levels of fertilizers compared with <i>Bt</i> cotton	
- K.Sankaranarayanan, Jagvir Singh and K.Rajendran	84
Nutrient and irrigation water on leaf reddening in <i>Bt</i> hybrid 6 cotton in calcareous substrata soils	
- A. R. Raju and Rachana Deshmukh	97
Performance of <i>Bt</i> cotton hybrids under varying plant spacing's and nutrient levels	
- Hargilas and D. P. Saini	106
Response of upland cotton (<i>Gossypium hirsutum</i> L.) varieties to spacing and fertilizer levels under rainfed conditions of Rayalaseema region of Andhra Pradesh	
- D. Lakshmi Kalyani, A. Sitha Rama Sarma and Y. Rama Reddy	112
Dose dependent response of different defoliant on per cent defoliation in high density cotton	
- Kancheti Mrunalini and M. Sree Rekha	116
Thermal and radiation use efficiency of <i>Bt</i> cotton under varying irrigations and nutrient management practices	
- M. Ratnam, S. Bharathi and S. Rajamani	122
<i>Crop Protection</i>	
Determination of economic injury level for <i>Helicoverpa armigera</i> Hubner on <i>Bt</i> cotton	
- Anil V. Kolhe and D. B.Undirwade	127
Terminal residues of propaquizafop in cotton seed, lint and soil	
- Anil Duhan and Samunder Singh	133
<i>Miscellaneous</i>	
Economic analysis of input output prices, their parity and income from cotton in Maharashtra	
- T.B. Deokate	139
Adoption of drip irrigation and impact on cotton productivity of Aurangabad district of Maharashtra	
- S. S. Ajgaonkar and S. S. Patil	146
Impact of famers field school in knowledge of cotton production technology in western Rajasthan	
- M.L. Meena and Dheeraj Singh	153
Naturally coloured cotton : A brief review	
- Pooja Bhatt and Anita Rani	161