

## Final Report

# Study of Seed Replacement Rate Enhancement Program in Gujarat



**Gujarat State Seeds Corporation Limited**

**Funded by GURABINI**



**Agro-Economic Research Centre**

(Ministry of Agriculture & Farmers Welfare, GoI)

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## Foreword

The Indian seed industry is vibrant and has attained its targets to a larger extent. Keeping the projection of future requirement as an outcome of increasing population, much more needs to be done. Seed being the most vital input and carrier of all agro-technologies, ensuring availability of good quality seeds at appropriate time and affordable prices is the sole responsibility of Indian seed industry. For making of New India with doubled farmers income, science-based decisions need to be implemented. Involvement of social scientists for keeping realistic statistics of seed and impact assessment of varietal technology is need of the hour, which will help in setting the breeding goals, product profiles and targets of seed production.

Gujarat has been a leading state in technology led growth in agriculture. Technology development and diffusion is a key driver of agricultural growth, fuelling cotton production, other farm output and raising the farmers' income substantially. The technological intervention in terms of adoption of more high yielding variety seeds (HYVs) of crops has undoubtedly increased the yield levels in the state. The rapid adoption of these HYV crops was mainly facilitated by increase in irrigation coverage and more fertilizer application. Due to technology intervention, the share of cash crops like cotton and horticultural crops has increased substantially during the last two decades. During 2000s, *Bt* cotton seeds and hybrid maize seeds have shown spectacular results in the state. The volume growth has come through increased Seed Replacement Rate (SRR) of major crops like cotton, groundnut and other important crops in the state. To complement with good agricultural growth in the state, the availability of quality/certified seeds has been made available as required in various part of Gujarat. Both private and public seed sector have contributed to the agricultural growth story in the state. While the public sector has played a role in production and distribution of HYV seeds of cereals crops like wheat, paddy, bajra, jowar and maize, the private seed sector has played a pivotal role in developing and promoting the use of *Bt* cotton and vegetable seeds.

Government is implementing various schemes to strengthen the seed production chain & to enhance availability of quality seeds and planting material of crops to farmers across the country through various schemes. The certified/quality and improved seed is being distributed to the farmers through the various Central and State schemes. This is one of the most effective ways of increasing the production and productivity at the field level. Supply of seed on subsidy means the average farmers are able to purchase the most critical input in agriculture i.e. seed at affordable price which will help in achieving desirable increase in production and productivity. The main thrust while supplying the seed on subsidy is for varietal replacement and availability of quality seed to farming community. In order to achieve the food production target of the future, a major effort will be required to enhance the seed replacement rate of various crops. It would require a major increase in the production of certified/quality seed.

Government of Gujarat has provided the subsidy to farmers on purchase of seeds of different crops from the Seed Corporation. Distribution of good quality seeds at

subsidized rates will encourage the farmers to use certified good quality seeds in place of farm saved seeds which will enhance the Seed Replacement Rate & ultimately increase the productivity & production and income of the farmers of the state. The distribution of subsidized seeds done through authorized seed dealers and subsidy is given at sourced after collecting all the required land records. The scheme is targeted to encourage the farmers to use high quality and authentic seed instead of using own farm saved seed which will increase the SRR and ultimately production and will also increase the productivity of the different crops. Total 45127 quintals of certified seed were distributed during 2022-23 to total 23583 farmers.

This report provides the field survey research out put on reach and benefit of seed replacement rate enhancement program in the state of Gujarat. The study is primarily based on primary data. The study covers six crops grown agriculture year 2022-23, covering Kharif 2022 season [viz. Paddy, Soyabean, Arhar, Groundnut (Kernel), Groundnut (Pod), and Hy. Castor]. Total 540 beneficiary households and 180 non-beneficiary households were selected from twelve districts of Gujarat and data were collected through personal interview (recall) method.

The study observed that SRR Enhancement scheme has successfully implemented in the study area and has achieved the target of desirable SRR, increase in production and productivity. The study has come out with the suitable policy implications.

I would like to congratulate the entire project team for preparing this excellent research report. I hope findings of the study would be useful for academicians, policy makers and researchers.

**Agro-Economic Research Centre**  
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We also thank the Officers at regional/district headquarters of GSSCL, viz. **Shri S. L. Patel**, Branch Manager and **Shri. Dharmesh Chaudhary**, Seed officer (Tapi, Valsad, Navsari); **Shri R. R. Malivad**, Branch Manager and **Shri S. D. Devaliya**, Seed Officer (Dahod); **Shri M.M. Bamrotiya**, Branch Manager and **Smt. Anmol Balwani** Seed Officer (Junagadh/ Rajkot); **Shri Devendra Solanki**, Branch Manager and **Shri Chintan Kumar H. Modi**, Seed Officer (Banaskantha); **Shri Asif Chaudhary**, Branch Manager and **Shri H. P. Virani**, Seed Officer (Devbhumi Dwarka, Rajkot); **Shri A. P. Pandya**, Branch Manager and **Smt Hinal Baldhiya, Shri Gauravsingh Makwana**, Seed Officer (Bharuch) and all other officers of GSSCL for providing the necessary data and support in completion of this study. We also thank all of them who have directly and indirectly helped in conducting this study.

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## List of Abbreviations

AICRP	: All India Coordinated Research Project
ASMO	: Area Sown More Than Once
Av.	: Average
BEN	: Beneficiary
Bt	: <i>Bacillus thuringiensis</i>
Bk	: Banaskantha
C.I.	: Cropping Intensity
CACP	: Commission for Agricultural Cost and Prices
CAGR	: Compound Annual Growth Rate
CAUs	: Central Agricultural Universities
Co-op	: Cooperative
DA&FW	: Department of Agriculture and Farmers Welfare
DD	: Devbhumi Dwarka
DES	: Directorate of Economics and Statistics
EFC	: Expenditure Finance Committee
FYP	: Five Year Plan
GCA	: Gross Cropped Area
GDP	: Gross Domestic Product
GIA	: Gross Irrigated Area
GOG	: Government of Gujarat
GOI	: Government of India
GSDP	: Gross State Domestic Product
GSSCL	: Gujarat State Seed Corporation Limited
ha	: hectare
HVYs	: High Yielding Varieties Seeds
HYVP	: High Yielding Variety Programme
I.I.	: Irrigation Intensity
ICAR	: Indian Council of Agricultural Research
IISS	: Indian Institute of Seed Science
Irri	: Irrigated
KCC	: Kisan Credit Card
kg	: kilograms
LF	: Large Farmer
LYVs	: Local Yielding Varieties Seeds
MDF	: Medium Farmer
MF	: Marginal Farmer
mha	: Million hectares
MNC	: Multi-national Company
MSP	: Minimum Support Price
mt	: Million tonnes
NCA	: Net Cropped Area
NFSM	: National Food Security Mission
NIA	: Net Irrigated Area
NMOOP	: National Mission on Edible Oils - Oil Palm
NMSA	: <i>National Mission for Sustainable Agriculture</i>
Non-BEN	: Non-Beneficiary
NSA	: Net Sown Area
NSC	: National Seeds Corporation

NSC	: National Seeds Corporation
NSDP	: Net State Domestic Product
R&D	: Research & Development
Rf	: Rainfed
RKVY	: Rashtriya Krishi Vikas Yojana
RKVY-	: Rashtriya Krishi Vikas Yojana - Remunerative Approaches for
RAFTAAR	: Agriculture and Allied sector Rejuvenation
SAUs	: State Agricultural Universities
SC	: Scheduled Caste
SCB	: Scheduled Commercial Bank
SEBC	: Socially and Economic Backward Class
SF	: Small Farmer
SFCI	: State Farms Corporation of India
SFCI	: State Farms Corporation of India Limited
SMF	: Semi-Medium Farmer
SMR	: Seed Multiplication Rate
SMSP	: Sub-Mission on Seeds and Planting Materials
SRR	: Seed Replacement Rate
ST	: Scheduled Tribe
TE	: Triennium Endings

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