

## An Overview and Trends in Seed Production in Telangana, India

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### Introduction

It is well established universally that seed is the basic and most critical input for sustainable agriculture. Quality seed is the pivotal input for sustained growth of the agricultural sector and other inputs are contingent upon the quality of seed for being optimally effective. Adequate quantity of quality planting material at the appropriate time and affordable cost is the objective of the policymakers in order to bring radical changes in the agricultural scenario of our country. A robust seed can be the first and foremost step towards the food security of the country and acts as a driver of growth. There are two types of seed systems i.e., informal and formal, prevalent in India. A formal seed system involves a chain of activities leading to clear products. A formal system generally comprises public sector research institutions, public and private sector agencies producing and marketing seeds, agencies responsible for seed certification and quality control. The guiding principles in the formal system are maintenance of varietal identity, genetic purity and production of seed with optimal physical, physiological and sanitary quality (Reddy *et al.*, 2007). In India, presently the public sector comprises one national-level corporation *viz.*, National Seed Corporation (NSC), 15 State Seed Corporations (SSCs), 22 Seed Certification Agencies (SCAs), two Central Testing and 122 State Seed Testing Laboratories providing requisite strength in serving the seed industry and farmers. In the case of the informal system, farmers themselves produce, disseminate and access seed directly from their own harvest, through exchange among friends, relatives, neighbours through local grain markets.



Presently, the Indian seed industry is one of the mature and vibrant domains in the world seed market. The industry has been growing at the percent of 12 compared to the global growth of 6-7 percent (Anonymous, 2019). The Indian seed industry is the fifth largest seed market in the world, accounting for 4.4 percent of the global seed market after the US (27%), China (20%), France (8%), and Brazil (6%). India's market size is USD 2 billion, China is USD 9 billion, France is USD 3.6 billion and Brazil is USD 2.625 billion (Kumar *et al.*, 2018).

The Indian seed market has witnessed a major restructuring as a result of the implementation of some progressive policies by the government. New policy on seed development, 1988 and National Seed Policy, 2002 have helped in strengthening the Indian seed industry in the areas of R&D, product development, supply chain management and quality assurance. Some other growth-inducing forces such as growth in income levels, commercialization of agriculture, patent protection systems and intellectual right over plant varieties have given a great push to the market. Owing to these factors, the Indian seeds market is further expected to grow at a CAGR of 14.3 per cent during 2018-2023, reaching a value of more than USD 8 billion by 2023 (Anonymous, 2018). Telangana is endowed with excellent climatic conditions which are suitable for seed production of paddy varieties, pulses, oilseeds and hybrids of cotton, sorghum, maize, bajra, sunflower, fodder sorghum and vegetable crops. Best quality seed is produced due to congenial climate prevailing for seed production and the farmers have become experts in seed production of different crops over a period of four decades in the state. The expertise gained is also contributing to the production of quality seeds.

Telangana state is involved in the production and supply of good quality seed to farmers all over India and also to other countries. Around 40 percent of the hybrid seed market in the country is produced in Telangana, and therefore can be developed as the 'Seed Bowl' of the country. This will help to produce quality seeds of hybrids and varieties of various crops to meet the growing demand for quality seed within and outside the state (Seed Rolling Plan, Department of Agriculture, Govt. of Telangana, 2017-18 to 2020-21).

According to Food and Agriculture Organization (2017), the world rice area was around 165.3 million hectares, with a total production of 758.9 million tonnes. Rice is a staple food crop of India and occupies a pivotal place in Indian agriculture.



It is the staple food for two-third of the world's population. The annual production of rice in the country is around 112.91 million tonnes from an area of 44.5 million hectares (Agricultural Statistics, 2017-18). Rice is the most important food crop of Telangana state with a cultivated area of 18.28 lakh hectares and production of 65.99 million tonnes (Department of Agriculture, Govt. of Telangana report (2017-18)). Groundnut is cultivated globally on 26.4 million hectares with a total production of 37.1 million MT (Indian Oilseeds and Produce Export Promotion Council, Government of India, 2017). In India, an area of around 4.56 million hectares was under groundnut cultivation while production was 6.77 million tonnes during 2016-17 (Directorate of Economics and Statistics, Government of India report, 2017). In Telangana state, during the year 2016-17, the area under groundnut was 1.67 lakh hectares and the production was 341976 tonnes (Department of Agriculture, Government of Telangana report, 2017-18).

Globally, an area under soybean cultivation was around 121 million hectares and five major producing countries (USA, Brazil, Argentina, India and China) account for more than 85 percent of the global soybean area and 88.5 percent of production. The record production of soybean estimated during 2016-17 was 349 million tonnes. In India, soybean is predominantly grown as a *rainfed* crop covering 105.76 lakh hectares' area. Production of soybean during 2016-17 was 13.79 million tonnes (Indian Institute of Soybean Research, ICAR-IISR, 2017-18). In Telangana state, the total area under soybean was 2.77 lakh hectares and production was 322427 tonnes during the year 2016-17 (Department of Agriculture, Government of Telangana report, 2017-18).

In India, the total seed production of paddy, soybean and groundnut was 74.61, 27.19 and 17.95 lakh quintals respectively during the year 2016-17. (Ministry of Agriculture & Farmers Welfare, Govt. of India, 2017-18). In Telangana state, the total area registered under seed production was 179178 acres and the total quantity of certified seed produced was 1690732 quintals during the year 2017-18. Paddy seed production in the state was 1711070 quintals from 109091 acres, which indicates that 47.75 percent of the area registered was under paddy seed production during 2016-2017. The area registered under groundnut seed production was 18761 acres, which constitutes 8.21 percent of the total area with production of 86064 quintals certified seed. Similarly, the area registered under soybean seed production was 64730 acres, which contributes 28.33 percent to the total area and the quantity certified



was 74938 quintals in the year 2016-17 (TSSOCA, 2017-18). In Telangana state, the seed production chain is being strengthened by producing various classes of seed i.e., breeder seed, foundation seed and certified seed by different government and private institutions. The certified/quality and improved seed thus produced is being distributed to the farmers through the various central and state schemes. This is one of the most effective ways of increasing 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 an affordable price which will help in achieving a desirable increase in production and productivity. The main thrust while supplying the seed on subsidy is for varietal replacement and promotion of pulses and oilseed crops. In order to achieve the food production target of the future, a major effort is needed to enhance the seed replacement rate of various crops.

### **Conclusion**

The breeder and foundation seed production of paddy increased significantly. Certified seed production of paddy decreased significantly and the growth rate saw a negative trend. Decreased certified seed production because of lack of adequate trained staff and poor infrastructure which led to not being able to meet the growing certification demand, especially for non-hybrid crops, such as rice. The groundnut breeder, foundation and certified seed production showed high instability because the total area under quality seed fluctuated from year to year. Both breeder and foundation seed production in soybean were low, due to poor rainfall and adverse climatic conditions during the harvesting season. It is also concluded that the compound annual growth rate in seed production had increased over the years. Rising awareness among the farmers related to the benefits of using certified/quality seeds has led to an increase in demand.

### **References**

- Agricultural Statistics, 2017-18.
- Anonymous, (2019). Indian seed industry, [www.nuziveeduseeds.com](http://www.nuziveeduseeds.com)
- Anonymous. (2018a). Seed Industry in India. Market trends, structure, growth, key-players and forecast. 2018-2023.
- Department of Agriculture, Government of Telangana report, 2017-18.
- Department of Agriculture, Govt. of Telangana report, 2017-18.
- Directorate of Economics and Statistics, Government of India report, 2017.

Food and Agriculture Organization (2017)

Indian Institute of Soybean Research, ICAR-IISR, 2017-18.

Indian Oilseeds and Produce Export Promotion Council, Government of India, 2017.

Kumar,M.V,Bharathi,Y and Pradeep, T. (2018). The Journal of Research PJTSAU. 46 (4):1-12.

Ravinder Reddy Ch, Tonapi, V.A., Bezkorowajnyj, P.G., Navi, S.S and Seetharama, N. (2007). Seed system innovations in the semi-arid tropics of Andhra Pradesh, International Livestock Research Institute (ILRI), ICRISAT, Patancheru, ISBN 978-92-9066-502-1. 224.

