



भारतीय कृषि एवं खाद्य परिषद्
INDIAN COUNCIL OF FOOD AND AGRICULTURE

INDIAN SEED MARKET



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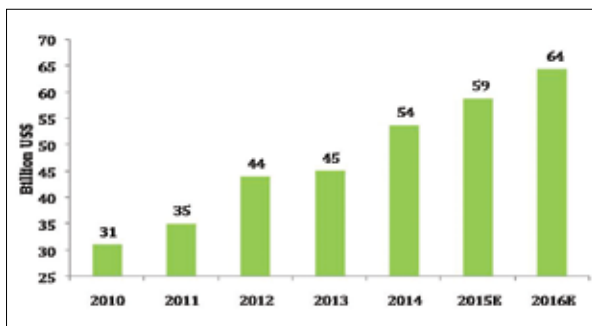
Indian Seed Market

The seed industry has witnessed a substantial change in the past century, with farmers relying on purchasing seeds from market with better traits rather than relying on seeds from previous season's harvest. Developments in seed technology have increased the momentum of the industry's growth, and the introduction of genetically modified crops has further boosted the seed market. The value of global seed market has tripled since 2000 and reached US\$ 54 billion in 2014.

GLOBAL AND INDIAN SEED MARKET

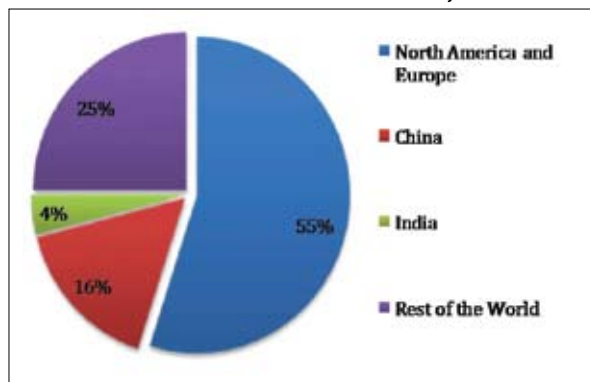
The global seed market is segmented into North America, Europe, Asia-Pacific, South America, and Africa by Geography. North America occupies the largest market share and together with Europe it constitutes 55% of the global

GLOBAL SEED MARKET



Source: NSAI, Company Reports and ICFA

GLOBAL SEED MARKET BY REGION; 2015



Source: NSAI, Company Reports and ICFA

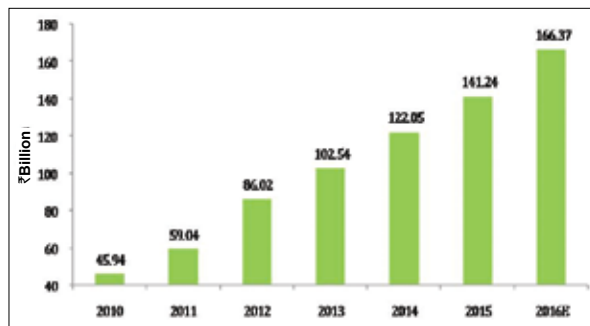
seed market. Asia-Pacific is seen as the fastest growing segment with a CAGR of 7.9%, followed by South America during 2015-2020. China is the second biggest seed market in the world, right behind the United States. However, India also has a significant share of 4% in the global seed market.

INDIAN SEED MARKET

The Indian seed industry, over the years, has evolved by adopting and innovating upon scientific advancements in variety development and quality seed production. The industry has grown at a rapid pace of 20.59% over the period 2010-2015 and reached Rs. 141.24 billion in 2015 on account of rapid adoption of Bt cotton hybrids, single cross corn hybrids and hybrid vegetables.

Rising awareness among the farmers related to the benefits of using certified/ quality seeds has led to an increase in the demand for seeds over the past few years. This has resulted in an increasing willingness among the farmers to pay higher price for quality seeds.

INDIAN SEED MARKET

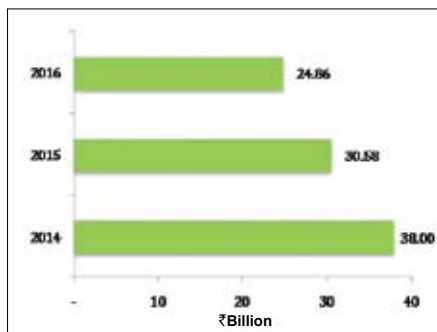


Source: NSAI and ICFA





INDIAN COTTON SEED MARKET



Source: NSAI and ICFA

INDIAN COTTON SEED MARKET

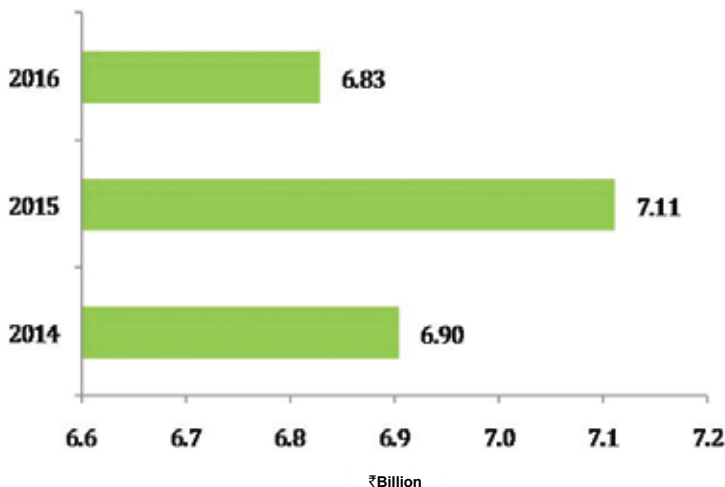
Cotton is one of the most cultivated crops in India, with great economic importance attached to it. The cotton seed market was valued at Rs.24.86 billion in India in 2016. India is also the second largest producer of Cotton worldwide. Since 2002, Bt Cotton has steadily prevailed over India's Cotton fields raising overall cotton production. Today, over 90% of Cotton grown in India is cultivated by using Bt Cotton seeds.

There are very few countries in Asia and Africa which allows commercial cultivation of GM crops and hence Cotton seed export has not been picked up in last decade. Now with more countries opening up for GM cultivation, there exists huge potential to export Cotton seeds from India.

commercial seed, accounting for Rs.14.91 billion of revenue in 2016. The growth in maize is attributed to its increased use as livestock feed and in ethanol production.

Presently, approximately 25% of maize is used as food grain, while remaining 75% is used to meet non-food demand, viz. bio-fuels, poultry

INDIAN MAIZE SEED MARKET



feed, animal feed, brewing alcohol, starch based wet milling industries and other industrial uses. However, the enhanced investment in maize by global seed companies would flow into India through technology transfer and Public-Private Partnerships in the next fifty years to develop maize.

INDIAN HYBRID RICE SEED MARKET

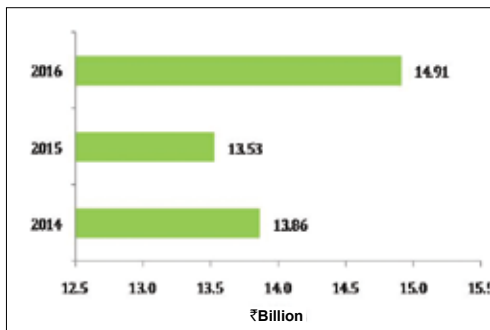
Government of India has not fixed any target for increasing acreage of hybrid rice in the country. However, efforts are being made to promote cultivation of hybrid rice through various crop development programmes such as National Food Security Mission (NFSM), Bringing Green Revolution to Eastern India (BGREI) and Rashtriya Krishi Vikas Yojana (RKVY).

With private sector playing a ma-

INDIAN MAIZE SEED MARKET

Maize is one of the largest consumed

INDIAN MAIZE SEED MARKET REVENUE

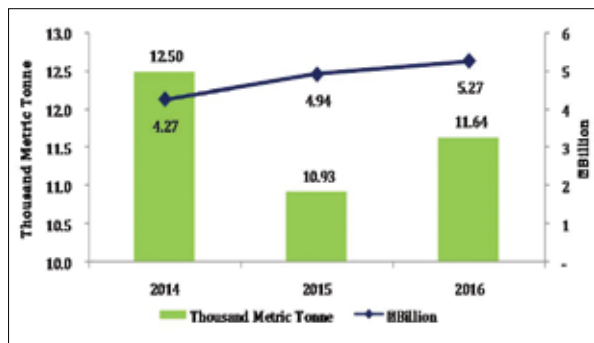


Source: NSAI and ICFA



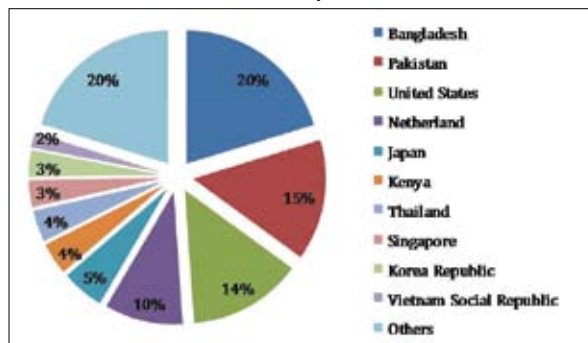
For its major role in Hybridization of Rice, the hybrid rice seed market has touched more than 45 thousand metric tonnes volume sale in 2016. The growth in 2016 can be attributed to significant increase under Kharif acreage of rice due to abundant rainfall, after a consecutive two years of drought and growers shift from Inbred to Hybrid due to problems faced last year with OPV's.

INDIAN FRUITS AND VEGETABLE SEED MARKET EXPORTS

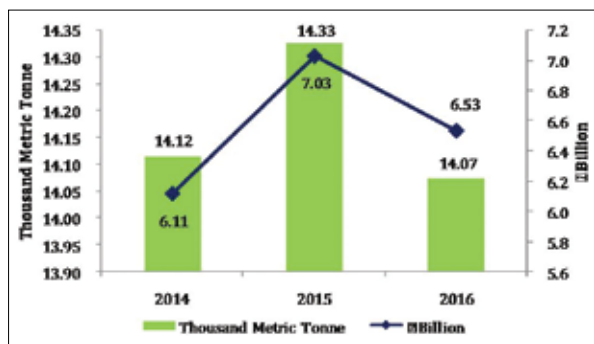


Source: APEDA

INDIAN FRUITS AND VEGETABLE SEED MARKET EXPORTS BY COUNTRIES; 2016

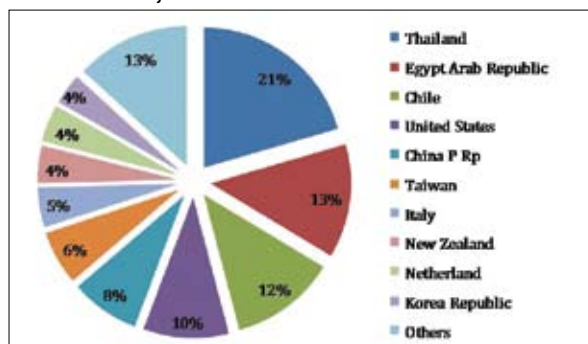


FRUITS AND VEGETABLE SEED IMPORTS



Source: APEDA

FRUITS AND VEGETABLE SEED IMPORTS BY COUNTRIES; 2016



INDIAN SEED MARKET TRADE

Being agriculture based country; India is probably best placed to cater to not only domestic but also global seed requirements. Its importance is also reflected by its overall position in the global seed trade. In case of fruits and vegetables, India ranks at number 16 in the global fruits and vegetable seed exports with only 1.68% share of the global trade in 2014-15.

Although, there is a substantial increase in India's export of fruits and

vegetable seeds in value, India has already started to lose a large share of such exports over the past few years.

Lack of appropriate policy reform in Indian seed sector can be one missing element, which are discouraging exporters and producers to engage more in export of fruits and vegetable seeds. It is also needed to see whether the bargaining positions of other countries have improved or they have taken any competitive advantage or market imperfections of India has increased in recent years. However, India's im-

ports of the fruits and vegetable seeds have depicted a declining trend in 2016, when compared to 2015. This decline is reflected not only in quantity but also in value terms.

The major countries exporting fruits and vegetable seeds to India in 2016 included Thailand, Egypt, Chile, United States and China, accounting 64% of the total imports of fruits and vegetable seeds, amounting to Rs.4.16 billion in India.

The Indian seeds market is anticipated to grow at a considerable CAGR rate due to improvement of seed replacement rate, production and distribution of quality seeds appropriate to agro-climatic zone at affordable prices along with a determined effort to address region specific constraints. Moreover, several factors, including increased subsidies and renewed government thrust on the use of high yielding varieties, will lead to an increased productivity in the seed market. ■



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