Present Seed System of Bangladesh

1. Introduction :

Bangladesh is an agrarian country and its economy depends more or less on agriculture. Her employment, export and almost all activities related to economic development depend on Agriculture. It contributes about 16.33% to the Gross Domestic Product (GDP). Agriculture employs about 50% of the labor force. Not only has it provided food but also raw materials to industry sector. Bangladesh agriculture has made enormous strides in the last 34 years, raising food grains production from 70 lakh mt. ton to 3 core 66 lakh mt. ton. In the process the country has progressed from a situation of food shortages and imports to one of surpluses and exports. Having achieved food sufficiency the aim is to achieve food and nutritional security at the house hold level.

Quality seed is one of the most important agricultural inputs to ensure food security. Quality seed can also enhance the utilization efficiency of others associated agricultural inputs such as fertilizers, irrigation etc. Use of quality seed only can enhance the productivity by 15-20 percent.

2. Status of Seed :

Seed is the most valuable and vital input for increasing agricultural product. But it has to go a long way to establish its importance. Several steps were taken for its development at different stages. Seeds in Bangladesh are procured from two different sources, locally produced seed and imported seed. The seed sector has made impressive progress over the last three decades. The quantum of quality seed supplied increased from 7000 mt. ton to 2 lakh mt. ton.

3. Present Organizational Structure :

Present organizational structure is broad-based involving public & private sector participation under the guided policy as adopted in the National Seed Policy. The stakeholders under the structure are:

- National Seed Board. i)
- Seed Wing of the Ministry of Agriculture. ii)
- Bangladesh Agriculture Development Corporation.
- iii) Seed Certification Agency. iv)
- National Agricultural Research System. v)
 - Bangladesh Agricultural Research Institute.
 - Bangladesh Rice Research Institute.
 - Bangladesh Jute Research Institute.
 - Bangladesh Institute of Nuclear Agriculture.
 - > All Public Agricultural University.
 - Department of Agriculture Extension. vi)
 - vii) Cotton Development Board.
 - viii) Agriculture Information Service.
 - Bangladesh Seed Association. ix)

4. Creation of Seed Wing and Seed Legislation :

Seed Wing has been created in 1992 in the Ministry of Agriculture to serve as a Secretariat of National Seed Board and to assist and implement seed related govt. policies. Seed Wing has been assisting and coordinating among different organization implementing for the National Seed Policy, 1993. The Ordinance, 1977 has been amended and Seed Rules have been formed in 1998 there under to keep pace with the National Seed Policy. Beside to protect Plant Varieties and Farmer's Rights and to comply with the WTO Rules, Draft Plant Variety and Farmer's Right Protection Act and Plant Quarantine Act (Amended) have been prepared.

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5. Role of different sectors of seed system

5.1 Pubic Sector

i) Ministry of Agriculture. (MOA) :

Ministry of Agriculture looks after all the activities related to seed management through its Seed Wing. Preparing, adopting & administrating policies, acts, rules & regulations related to seed activities are done by the Ministry. Different statutory organization and bodies such as National Seed Board, Seed Certificate Agency are the implementing organizations.

ii) National Seed Board (NSB) :

National Seed Board (NSB) established in 1974, is the statutory body comprising of concerned 19 officials and representative NSB advice Government on different seed management activities such as the application of seed, acts, rules, policy, variety release and registration, quality control fixation of seed standards etc.

NSB consist of (1) Technical Committee and (2) Seed promotion committee. Technical committee through meeting prepares recommendation on certain matter for consideration of the NSB and solely responsible to recommended about the release of a variety. Seed promotion committee is responsible for promoting use of quality seed and generally decides about quantity of seed to be supplied and variety to be promoted.

iii) Seed Certification Agency (SCA) :

It was established in 1974 is a statutory, which is authorized to undertake seed certification of released varieties. Seed fields of the intending organization or farmers are inspected and seed samples are collected by the field officer of the SCA. On the basis of this field inspection and testing certification tags are provided. Field officers have also been authorized to verify marketed seed for quality.

iv) Bangladesh Agricultural Development Corporation (BADC) :

Bangladesh Agricultural Development Corporation is a public corporation responsible for multiplication, processing, preservation and marketing of seeds of different crops. BADC has 32 seed multiplication farm, 9 Horticultural Development Centre, 13 Agro-Service Centre, 52 Seed Processing Centre, 18 Cold Storage and 100 Seed Sales Center & 7,050 Seed Dealer all over the country. BADC produces 1,40,000 mt. seed in last 2013-14 year.

v) National Agricultural Research System (NARS) :

Bangladesh Agricultural Research Institute (BARI), Bangladesh Rice Research Institute (BRRI), Bangladesh Jute Research Institute (BJRI), Bangladesh Sugarcane Research Institute(BSRI), Bangladesh Institute of Nuclear Agriculture (BINA), Research activities of Bangladesh Agriculture University (BAU) and Bangabandhu Sheikh Mujibur Rahman Agricultural University (BSMRAU) from the National Agriculture Research System (NARS). BARI, BRRI, BJRI have regional research centers in different parts of the country. The Research Activities of all organization are coordinated by Bangladesh Agricultural Research Council (BARC). All National Agricultural Research Institute is Responsible for Variety Release & Breeder Seed Production according to Seed Act. NARS supplies Breeder Seed to BADC & Private sector.

vi) Department of Agriculture Extension (DAE) :

It is the biggest organization under Ministry of Agriculture having its staff down to village level, Agricultural Technology Developed in the Research Institution of the NARS are taken to the farmers through this elaborate extension systems. Besides

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there are technical committee at national, regional and district level for determining requirement of some technology and to provide feed back to the NARS. DAE has started "farmers level seed production project in 1999". They produces 65820 mt. of different crops seed in 2012-13 by this project.

5.2 Private Sector

i) Bangladesh Seed Association (BSA) :

This is a registered organization formed by the seed merchants who are engaged mostly in procuring seed from home and abroad and marketing. It is managed through an executive committee having a president and a General Secretary. It has about 200 registered members. It has a representative in the National Seed Board.

ii) Traditional Marketing Network :

Like the marketing of consumable articles, there exist a very strong marketing network having wholesaling and retaining outlet, handle by the private seed business man.

iii) The private sector has already started variety development research. A couple of private seed companies and NGO's are importing parent lines of hybrid rice, hybrid maize etc. producing seeds and successfully marketing the seed under their respective level.

In case of vegetables seed, the situation is more encouraging. Besides the varieties developed in the public sector research institute BARI, the private has developed many varieties of red amaranthus, white amaranthus, Okra & long beans through selection process. The Private sector is still lacking behind in seed technology research, because accept 1 no other company could developed facilities required for carrying out seed technology research.

iv) Name of Leading Private Seed Industry in Bangladesh :

- 1) Advanced Chemical Industries (ACI)
- 2) Supreme Seed Company Ltd.
- 3) Lal Teer Seed Company Ltd.
- 4) Aftab Seed Ltd.
- 5) Isphahani Agro Ltd.
- 6) Metal Seed Ltd.
- 7) Bayer Crop Science Ltd.
- 8) Syngenta Bangladesh Ltd.
- 9) Getco-Agro Vision Ltd.
- 10) Petrochem Bangladesh Ltd.
- 11) Partex Agro Ltd.
- 12) Rahim Afroz Ltd.

v) Number of Seed Dealer Registered with Seed Wing, MoA : 20,000 Seed Dealer Registration Certificate already issued for seed business in all over Bangladesh.

vi) Bangladesh Society of Seed Technology (BSST) : Bangladesh Society of Seed Technology was established in the year 1996 with the following aims and objectives :

Aims and Objectives :

- Bangladesh Society of Seed Technology is a professionals, non-political and not for profit making organization and work for promotion of Seed Technology.
- Promote scientific, technological and professional jobs in the field of seed research, seed production, seed processing, seed storage, seed testing, seed certification, seed marketing, seed law enforcement and any other aspects related to seed technology.

- Works towards maintaining fullest cooperation, highest proficiency and professional standard among all seed technologists including personnel engaged in seed research, seed production, seed processing, seed storage, seed testing, seed certification, seed marketing, seed law enforcement and any other aspects related to seed technology.
- Encourage developing mutual understanding and professional interests among technologists involved in the field of seed technology.
- Encourage research on different aspects of seed technology.
- Accumulate educational training programme, national and international seminars, workshop, conferences, symposium etc for promotion of seed technology.
- Cooperate with government, universities, research institutes, seed associations, private seed companies, NGOs and all other others agencies interested in promotion of seed technology and the use of Quality Seed.
- Publication of technical books and journals, periodicals, booklets, pamphlets, print and electronic media materials on seed technology.
- Take up any other activities which necessary for promotion of seed technology.

Non Government Organization (NGO) : 5.3

There are many non-government organizations working in the country. Some NGO' like BRAC, Proshika, Gono Kalyan Trust, TMSS have been attending agricultural activities in an organized way. They have also started activities like seed research, multiplication, processing and marketing. BRAC is on of the pioneer NGO engaged in seed production. They produce hybrid rice seed locally by reducing import. RDRS is also engaged in seed production mainly in rice seed production for drought prone area.

Variety Registration : 6.

For registration of a variety of notified (namely rice, wheat, jute, potato, sugarcane, mesta & kenaf) crops, 2-3 years trail is conducted by SCA/ Research organization for approval by the Technical Committed. and for registration of varieties for non-notified crops the breeder or innovator has to apply to secretary, National Seed Board (DG, Seed Wing, Ministry of Agriculture) and NSB provides registration on the basis of the information given on the application.

Demand and Supply of Quality Seed : 7.

In the recent years supply of quality seed both from public and private sector has shown a very remarkable increase. The following table show the quantity of different seed supplied in the year 2009-10 to 2013-14.

The quantity of seed supply was 240475 mt. in 2009-10. Seed supply quantity has increased to 267777 mt. in 2012-13, which is 21 % of the total demand. Hopefully seed supply will reach to 314526 MT in 2014-15, which is 27% of seed demand.

Though the total supply of quality seed in 2012-13 was only 21% may indicate alarming. But in reality situation is much letter, became rice is our main crop and in case of rice the quantity of quality seed supply is almost 60%, incase of wheat it is 56%, maize 75%, Jute 83% etc. The total average goes down due to less supply of spices and oil seed. The quality is also less in case of Potato. Actually BADC supplies only 2-3% of quality potato seed, and the rest of the seed comes from the Farmers own production. If we can increase the supply up to 30% (which is projected in 2015) that will be a great success for the agriculture sector of the country.

Constraints in Seed sector : 8.

8.1 Capacity :

Seed supply was mainly constrained by seed processing and preservation facilities. BADC has some facility which can meet about 1,50,000 tons of seed. Private sector and NGOs have very limited facilities. Govt. has paid attention to increase capacity as quickly as possible. Govt. has already increased the seed preservation capacity of BADC from 44,000 MT to 1,50,000 MT.

8.2 Capability :

Availability of trained manpower was a problem. Now through continuous training with the help of universities and introducing seed technology course at post graduated level the problem is almost solved. About 400 agricultural graduates completed post graduation course on Seed Technology and contributing in different public and private seed sector to increase quality seed production. Besides, Seed Wing has organized Seed Dealers training on Seed Technology in different region of the country to upgrade the knowledge of the dealers about modern techniques of production. About 2100 dealers have already the training.

8.3 Development of suitable varieties :

Development of varieties are becoming more and more important. Farmers are now interested for climate resilient varieties. Governments has been taken initiative to develop hybrid and stress tolerance varieties of all crops.

BRRI has already developed salt and drought tolerant variety which will be very appropriate for our salient belt. Moreover BRRI has developed submerged tolerant variety which can tolerate flood water for more than 2 week. BSMRAU has already developed a short duration variety for Aman season to easy adjust the Cropping pattern.

8.4 Recent Development in Agriculture Research :

Recently Government of Bangladesh give more attention to develop varieties which will be biotic and a biotic stress tolerant with high yield within short duration. Some project are working in research system to gain this object. In the meantime-Bangladesh Rice Research Institute developed two-submerge tolerant variety name BRRI Dhan-51 and BRRI Dhan-52, saline tolerant variety BRRI Dhan-53, 54, 55, 61 & 67; and drought tolerant variety BRRI Dhan-62, 63, 65 & 66. BINA also developed BINA Dhan-7, 8, 9,10,11 & 12 which is also saline tolerant. BARI developed drought tolerant wheat variety like BARI Ghom-24, 25, 29 & 30. BARI Also Developed 4 (four) BT. Brinjal which is fruit fly resistant, they also developed late bright resistant potato BARI potato-47 & 53.

9. Seed Policy and legislation :

9.1 Impact of introduction of National Seed Policy :

With the introduction of National Seed Policy 1993, the seed industry formal has got a legal base and a momentum to emerge in a diversified way with dynamic approach. Private sector in seed system started to act as an integral part of seed industry development. The total seed system gradually started turning towards an organized system from unorganized one at private sector.

Participation of private entrepreneurs and NGO's in seed business started rising day by day following technologies at different stages of production, procurement, processing and marketing of seeds in the organized way.

Private seed companies established and started functioning with productions and marketing of both open pollinated and hybrid seeds of paddy, maize, vegetable etc. in using there own brand name. Joint venture with foreign company has also emerged.

High yielding varieties developed by research under NARS at public sector, suitable under existing agro-ecological environment gradually replacing traditional low yielding varieties.

BADC, at public sectors with its existing structural, functional and financial capabilities and limited logistic support producing, processing & marketing quality seeds of different crops. The quantity of supply is insignificant to the total national requirement of quality seeds. Seeds supplied by BADC used by Farmers as a replacement seed stock for next year's production.

Technical and financial assistance from the development partners is playing a vital role in developing seed system as well as the seed industry in the country.

The motivational approach and promotional activities with seed by DAE and quality control issues related to SCA is playing as essential element to accelerate the healthy growth of seed industry development.

In the meantime Government formed a Seed Regulatory Reform Committee for cope up with new dimension of Agro-biotechnology. Reform of the Seed Policy is almost finished and the Reform of Seed Act & Seed Rules is under process now.

9.2 Plant Variety Protection :

Bangladesh is a signatory to WTO. Act in the name Plant Variety and Farmers' Right Protection Act is under process of approval by the authority. Rules in this regard will be framed after the act is passed.

9.3 Plant Quarantine Act and Rules :

Bangladesh has a plant quarantine Act, 2011. The quarantine rules also made which is now under approval process from Government.

9.4 Present Scenario of Seed :

Seed System of Bangladesh has an elaborate structure built on the concept of Seed Technology. It has a Seed Policy and legislation to regulate the production and marketing of quality seed. It is constrained by capacity and capability but proper attention has been paid to overcome the constraints. Seed supply has been increasing steadily. Presently 20 percent of the requirement of seed has been met. Hopefully 30% of requirement will be met by the year 2020-2021.

Bangladesh at a Glance :

_		:	147570 sq. km
1.	Area	:	About 160 million
2.	Population	:	976
3.	Density of Population Fer Sqkin.	:	64
4.	No of District	:	545
5.	No of Thana/Upazila	:	87223
6.	No of Village	:	28695763
7.	No of Total Family	•	15183183
8.	No of Farm Family	•	50:50
9.	Male Female Ratio	:	Main contributor of GDP (16.33%)
10.	Agriculture	:	191%
11.	Cropping Intensity	:	1,20,000
12.	No of Contract Growers for Seed 1 roduction in Drib o	:	30000
13.	No of Growers in NGUS and Filvate Sector	:	2,44,0659.10 hectare
14.	Single Cropped Area	:	3,82,20,637.14 hectare
15.	Double Cropped Area	:	16,37,702.79 hectare
16.	Triple Cropped Area	:	79,08,771.50 hectare
17.	Net Cropped Area	:	1,50,34,071.60 hectare
18.	Total Cropped Area	:	
19.	Total Grain Production (Source . BBS, MIS, BMB)	•	3,38,33,603 mt.
	a) Rice		12,54,778 mt.
	b) Wheat		15,47,719 mt.
	c) Maize $T_{1} + V(D) = V(best + Maize)$:	36636100
	Total (Rice + wheat + Maize)	:	6.12%
20.	Actual Growth Rate		3.35%
21.	Growth Rate in Agriculture		1190 US\$
22.	Per Capita Income	•	

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List of Notified Crops

1) Paddy

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- 2) Wheat
- 3) Jute
- 4) Potato
- 5) Sugarcane
- 6) Kenaf and Mesta

List of Non-Notified Crops

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- 1. Maize (Zea mays L) Inbred Line
- 2. Maize (Zea mays L) Composites, Synthetics and Open Pollinated Varieties
- 3. Maize (Zea mays L) Single Cross
- 4. Maize (Zea mays L) Hybrids
- 5. Pearl Millet
- 6. Proso Millet
- 7. Foxtail Millet
- 8. Barley
- 9. Sorghum
- 10. Oats
- 11. True Potato Seed (TPS)
- 12. Cotton (Open Pollinated)
- 13. Mustard/Rape Seed
- 14. Sunflower
- 15. Sunflower F1
- 16. Soyabean
- 17. Groundnut
- 18. Sesame (Til)
- 19. Linseed
- 20. Safflower (Kosumful)
- 21. Castor
- 22. Lentil
- 23. Gram (Chickpea)
- 24. Peas (Field Pea & Garden Pea)
- 25. Bengal Gram (Mung Bean)
- 26. Black Gram (Maskalai)
- 27. Pigeon pea (Arhar)
- 28. Khesari
- 29. Tomato
- 30. Tomato F1
- 31. Brinjal
- 32. Brinjal F1
- 33. Radish
- 34. Radish F1
- 35. Indian Bean (Country Bean)

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- 36. Yard Long Bean
- 37. French Bean
- 38. Berseem
- 39. Cauliflower
- 40. Cabbage
- 41. Chinese Cabbage
- 42. Brocoli
- 43. Knol-Khol
- 44. Turnip
- 45. Carrot
- 46. Spinach & Spinach Beet
- 47. Amaranthus & Red Amaranthus
- 48. Indian Spinach
- 49. Kangkong
- 50. Parsley
- 51. Lettuce
- 52. Coriander
- 53. Femnugreek (Methi)
- 54. Onion
- 55. Chilli/Capsicum
- 56. Okra/Bhindi/Ladys Finger
- 57. Pumpkin/Sweet Gourd
- 58. Bottle Gourd
- 59. White Gourd/Wax Gourd
- 60. Squash
- 61. Water Melon
- 62. Water Melon F1
- 63. Musk Melon
- 64. Bitter Gourd
- 65. Bitter Gourd F1
- 66. Ridge Gourd
- 67. Snake Gourd
- 68. Sponge Gourd
- 69. Cucumber
- 70. Cucumber F1
- 71. Cesbania Aculata (Dhaincha)
- 72. Tobacco
- 73. Cowpea (Falon)

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Table-1. List of Number of Varieties of Different Crops Developed & Released by Different Research Institutes & Universities.

(a) Cereals :

	Dies	Wheat	Maize	Barley	Cheena	Kanon
Name of Crops	92	37	25 PARI	6 BARI	1 BARI	BARI
Name of Institute	BARI, BINA, BAU	BARI	DAIN			

(b) Pulses :

		Gram	Lentil	Blackgram	Khesari
Name of Crops No. of Varieties Name of Institute	10 BARI, BINA	9 BARI	7 BARI	3 BARI	BARI

(c) Oil seeds :

Name of Crops	Mustard	Groundnuts	Sesame 5	Soybean 6	Sunflower 2
No. of Varieties Name of Institute	18 BARI, BINA	BARI	BARI	BARI	BARI

(d) Vegetables :

									Courd	Ladies	Sweet	
F	Name of Crops	Tamata	Bringal	Bean	Pea	Radish	Cabbage	Laisak	Goura	Finger	gourd	
	Maine of Crops	Tomato	Dimgar			A	2	1	1	1	1	
ł	No. of Varieties	22	12	5	3	DADI	BARI	BARI	BARI	BARI	BARI	
	Name of Institute	BARI	BARI	BARI	BARI	DGM	Dinte		}			
1	Name of Institute	BINA			BSM	DALL]
					RAU	<u>KAU</u>	<u></u>		·			

Ric	ge Indian	Capsicum	Kangkong	Chinese cabhage	Ash Gourd	Bitter Gourd	Snake Gourd	Pointed Gourd	Lettuce	Long Bean
Cauliflower Gol	Ird spinach	1 BARI	1 BARI	1 BARI	1 BARI	1 BARI	1 BARI	1 BARI	1 BARI	1 BARI

(e) Tuber Crops :

	Deteto	TPS	Sweet Potato	Aroids
Name of Crops	<u> </u>	2	9	4
No. of Varieties	TCRC, BARI	TCRC, BARI	TCRC, BARI	ICKC, BARI
Name of Institute				

(f) Fruits :

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							T	Lamon	Coco	nut	Papaya	Ora	ange
	Name of	Crons	Mar	igo L	itchi	Guava	<u>a</u>	2	2000	, _	1		1
	No. of Va	rieties	10)	4	3	DALL	BARI	BA	RI	BARI	B	ARI
	Name of I	nstitute	BA	RI E	ARI	BARI, BSM	, KAU			Teels	 [
				Wax	Luimha	Golden	Caran	ⁿ Straw	berry	Jack fruit	Rambu	tan	Tamarine
Banana	Pummelo	Sapota	Longan	jumbo	Jujune	Apple	bola		1	2	1		1
		3	1	1	3	2	$\frac{1}{1}$			BARI	BAR	J	BARI
DADI	BARI	BARI	BARI	BARI	BARI	BARI	BAR		11(1				

BARI BARI DI HAL E:\Azim-Personal\Seed System of Bangladesh-2015 - (ICT).doc -

(g) Spices :

			Cor	iander	Blac	k Paper	Tu	rmeric
Name of Crops		phion		1		1		3
No. of Varieties		5					F	BARI
Name of Institute	E	BARI	В					
Chili	Fenugreek	Ging	er	Black C	umin	Betel l	eaf	Garne
	1	1		1		1		2
1	1		T	BAR	1	BAR	I	BARI
BARI	BARI	BAR			u			

(h) Cash Crops :

		Sugarcane	Cotton
Name of Crops	Jute	43	15
No. of Varieties		BSPL BINA	BARI
Name of Institute	BJRI, BINA	DSKI, DIWA	

Demand & Projected Seed Production Program of BADC from 2009-10 to 2014-15 & Vision 2020-21.

			Sood	<u></u>]	Projec	tion						Visio	<u>n</u>
SI.	Name	Area	Requi	2000_1		2010-1		2011-1	2	2012-1	13	2013-1	14	2014-1	15	2020-2	21
No ·	of Crops	(Lac. hec.)	rment (mt.)	Qua	%	Qua	%	Qua ntity	%	Qua ntity	%	Qua ntity	%	Qua ntity	%	Quan tity	%
	Aus	6.00	15000	1350	9	1350	9	1350	9	1350	9	1350	9	1350	9	1500	10
	(HYV) Aman	26.15	00275	2259	25	2710	29.	3163	35	3615	40	4066	44.9 9	4518 7	50	5400 0	59.7 5
2	(HYV)	36.15	90373	0	23	0	99	0	66	6400	68	6600		6800	72.	7000	74.6
3	Boro	37.50	93750	5979 9	63.7 9	6150 0	65. 60	6273 0	60. 91	0400	27	0	70.4	0	53	0	7
4	Boro	10.00	15000	508	3.38	1000	6.6 7	2000	13. 33	3500	23. 33	5000	33.3 3	5000	33. 33	7000	7
	Hybrid tal Rice	90.65	21412	8424	39.3	9095	42.	9771	45.	1050	49. 04	1130 10	52.7 8	1195 37	55. 83	1325 00	61.8 8_
	Seed	89.05	5	7	4	0	48	0	42	2000	45	3000	47.0	3100	48.	3500	54.9
4	Wheat	4.25	63750	2600 0	40.7 8	2700	42. 35	2800	43. 92	0	49	0	6	0	63	0	$\frac{0}{40.0}$
5	Maize	1.80	6250	191	3.05	500	8.0 0	1000	16. 00	1500	24. 00	2000	32.0 0	2200	35. 20	2500	0
Tot	al Cetreal		28412	1104	38.8	1184	41.	1267	44.	1355	47.	1450	51.0 4	1527	53.	1700 00	59.8 3
100	Seed	95.70	5	38	7	50	69	10	6	00	09	2800	1 66	3600	6.0	6000	10.0
Σ	Seed	4.25	60000	1800	3.00	2000	3.3	2200	3.6	2400	4.0	0	1.00	0	0	0	0
	Potato	4.25	0	0	4.27	1225	5.2	1550	6.6	2100	9.0	2510	10.8	2510	10.	6300	27.1
7	Seed	6.58	23184	1014	4.57	1225	8	1550	9		10		12.8		12.	4200	24.4
8	Oil	7.36	17578	1188	6.76	1275	7.2	1450	8.2	1900	81	2265	9	2265	89	4300	6
9	Jute	4.50	4000	1263	31.5	1440	36. 00	1600	40. 00	1720	43. 00	1850	46.2 5	2000	50. 00	2500	62.5
	Vegeta ble	7.50	2822	102	3.61	100	3.5	103	3.6	132	4.6 8	142	5.03	152	5.3 9	200	7.09
10	Seed Spices	4.70	15546	632	0.41	700	0.4	800	0.5	900	0.5	100	0.06	1100	0.7	2000	1.29
11	Seed	4.78	3	0.52	12.2	1421	12	1542	14	1662	15	1798	16.5	1967	18	. 2453	22.5
G	rand Tota	130.6 7	10871 10871	1326	12.2	90	13.	1342	18	52	29	77	5	64	10	00	6



Conclusion : Agriculture is for prosperity. Prosperity is to come out through quality agricultural inputs and managements practices. Quality seed is one of the first and foremost prerequisites for a healthy and vigorous crop. Seed is more than in agricultural input and a source of new technologies. A range of developmental, socio-economic, environmental and political issues are also covered by seed. So, for feeding the nations we need to come out with a holistic approach where the breeder, seed technologist, farmers and policy makers will appropriately play their role for making quality seed available.

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