

Current Seed Supply Situation of Nepal and Existing Seed Policy, Legislation and Guidelines for its Promotion

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Introduction

The virtual stagnation in agriculture has generated food security problems in Nepal. In fact, 43 of 75 districts are food deficit and 10 more are considered vulnerable. An estimated 60 percent of households cannot meet their own food needs, especially in mountainous areas, and agricultural production only meets food requirements for three to eight months per year (Action against Hunger, 2006). The food security situation of the country is becoming more challenging due to climate change, political and economical instability. Agriculture for food security is getting less priority however; its contribution is nearly one third on total GDP. Seed, fertilizer and irrigation are the major inputs to improve production and productivity. Quality seeds of improved and desire varieties is the most important and least expensive agricultural input but its availability and accessibility at right time and location is playing important role to determine the local productivity, production and food security. Public sector led (NARC, DOA, NSC etc), community led (DISSPRO, CBSP, CSB, Cooperatives), private agency led (SEAN, Agro vets, Seed Companies) and import led (SEAN, Agro vets, importers and distributors) are involving in seed sector development in Nepal. However, the seed sector is not strong enough and is still in infant stage in Nepal.

Methodology

Source seed production data from Seed Technology Division, Nepal Agriculture Research Council (NARC) and the certified/improved seeds produced from Government programs (District Seed Sufficiency Programs, Commercial Seed production programs, Community Seed Banks, Governments farms, Government supported National Seed Company and Corporation), commercial farmers groups, cooperatives and registered private companies were collected. The seed replacement data were collected from Seed Quality Control Section. Data were tabulated and analyzed to access the seed situation in Nepal.

Results and Discussions

1. Existing seed policy and legislation

Agriculture Enterprise Promotion Policy-2063, Agriculture Biodiversity Policy-2063, National Agricultural Policy 2061, National Seed Policy-2056, Seed Act- 2045 and Seed Regulation, 2054 and Community Seed Bank Guideline are the major policies and legislation related to seed sector development and regulation in Nepal. However, there are some gaps in existing policy and legislation where, the supply system is dominated by informal seed system, well equipped laboratories and qualified manpower are not sufficient, harmonization of acts and regulations with international agreements, effective enforcement of law and implementation of seed program is necessary.

2. Source seed (breeder and foundation) production

Nepal Agriculture Research Council (NARC) claimed to be sufficient in breeder and foundation seed to maintain seed cycle. Breeder seed production of major cereal crops of Nepal ie, rice, maize and wheat was 37.12 MT in the year 2010/011. NARC produced 855.8 MT foundation (rice 404, maize 103.6, wheat 328.1, millet 1.0, mung 0.9, lentil 10.1, mustard 4.8, jute 1.8 and cowpea 1.5 MT) seeds in the same year. This amount is sufficient in quantity if seed cycle will be maintained (Seed Technology Division, 2010; Seed balance sheet, 2011)

3. Certified/Improved Seed Production

All the produced breeder and foundation seed does not follow the seed cycle resulting insufficient quantity supply of certified/improved seed. Only 8% of the seed is supplied from the formal sector whereas 92 % of seed is supplied through farm saved seeds and local exchange (Fig. 1).

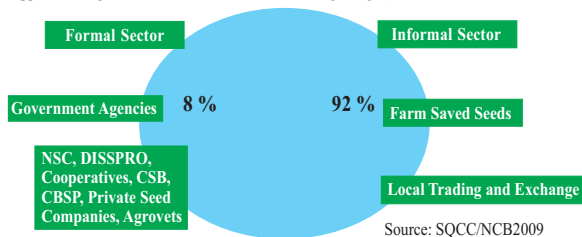


Fig. 1: Seed supply situation of main cereals in Nepal

Different seed production initiatives have been taken in Nepal. At present, all these efforts have been succeed to produce and distribute 17542.67 MT (2009/010) certified/improved seeds of major field crops in Nepal (Table 1).

Table 1: Certified/improved seed production

SN	Organization	Certified/improved seed production (MT)		
		2008/2009	2009/2010	2010/2011
1	DISSPRO/Groups/Coop.	4077.000	7040.810	12554
2	CBSP-HMRP (Maize)	555.000	664.000	830.000
3	CSB Bank	-	135.000	142
4	Sundarpur-Chandradangi farms	-	133.116	115.452
5	NICDP (Jute, Mustard)	1.500	2.740	3.4
6	National seed co.	3936.157	4522.422	NA
7	Private companies	4875.662	4183.746	NA
8	Salt Trading	580.900	607.610	610.0
9	NGO and others	166.280	244.228	NA
	Total	14192.499	17533.672	14254.852

Source: CDD, 2011

Highest amount of certified seed produced is wheat followed by rice and maize at present. DISSPRO/Groups/Cooperatives is a strong seed producing initiative in Nepal being able to produce about 40% (12554 MT) of total certified seed produced annually (Table 1). Community Based Seed Production Program (CBSP/HMRP) is being able to produce 664 MT, Community Seed Bank (CSB) 142 MT, Government farms (Sundarpur and Chandradangi) 115.452 MT, National Industrial Crop Development Program (NICDP) 3.4 MT, the government supported National Seed Company 4522.422 MT, Salt Training Corporation (government supported) 610 MT of certified seeds of different crops annually at present (Table 2).

Table 2: Certified/improved seed production in 2009/010

SN	Crop	Seed produced from different programs (MT)						
		DISSPRO*	HMRP	CSB	Go farms	NIDP	NSC	STC
1	Rice	3761.500		49.000	94.6		958.969	
2	Maize	788.130	664.000	42.000	1.12		0.050	
3	Wheat	2419.030		44.000	18.532		3554.500	607.610
4	Moong	3.600						
5	Lentil	41.500					6.245	
6	Rapeseed	20.360			1.2	1.200	1.538	
7	Rajma	2.200						
8	Cowpea	3.440						
9	Barley	1.050						
10	Jute					1.540	1.120	
	Total	7040.810	673.000	135.000	115.452	2.740	4522.422	607.610

Source: CDD, 2011 *12554.09 MT in 2010/011

4. Seed Replacement Rate (SRR) in Nepal

Total seed requirement of the major crops in Nepal is estimated 242408 MT annually, total seed supply and seed replacement rate in different years seems very low. The SRR is 8.7, 6.55 and 9.88 for the major cereals rice, maize and wheat; however, it is increasing throughout the years (Table 3).

Table 3: SRR Trend of Nepal

FY	2008/2009			2009/2010			2010/2011		
	TSR (mt)	TSS (mt)	SRR %	TSR (mt)	TSS (mt)	SRR %	TSR (mt)	TSS (mt)	SRR %
Paddy	77472	4643	5.99	77463	5071	6.55	77797	6768	8.7
Maize	17019	990	5.81	17403	1040	5.98	47508	1147	6.55
Wheat	80645	5531	6.85	84777	7007	8.27	83394	8245	9.88
Millet	NA	NA	NA	2655	3	0.11	2659	53.18	2
Lentil	NA	NA	NA	5685	32.96	0.58	7352	230.5	3.13
Rapeseed	NA	NA	NA	1533	17.36	1.13	1841	51.85	2.85
Vegetables	NA	NA	NA	1457	1036.7	71	1457*	1036.7*	71*
Others	NA	NA	NA	NA	NA	NA	20399.8*	1019.99*	5.0*
Total	175234	11164	6.3	190973	14208	7.44	242408	18579.4	7.66

Source: SQCC/NSB 2010 *Estimated

Problems and Challenges

There is only limited varietal option for remote areas (as maize in Karnali). Sometimes quality of seed is poor (without possessing, tagging, bagging, and underweight, etc). There is lack of sufficient Participatory Variety Selection (PVS) program to supply the appropriate variety/es. C1 and C2 production and distribution system is very weak to maintain the seed cycle because of miss use and low seed holding capacity of the poor rural farmers with limited storage and processing facilities. Private sector involvement is very limited. All these constraints are making inconsistent and insufficient investment in seed supply.

Lessons Learned

Community based seed production is key strategy of the Government of Nepal (GoN) to increase agricultural production and food security in the country. There is an immense potential to integrate District Seed Self Sufficiency Program (DISSPRO) of GoN and CBSP of HMRP CIMMYT for long term sustainability. Likewise, capacity building of executives of groups for professional management, marketing competencies and transparent accounting are essential. For improvement in the economic attractiveness of seed business there are prospects to make use of commercial opportunities such as intercropping maize with high value crops. To improve the efficiency of seed marketing, broader use of Truthful Labeling (TL), branding and developing small infrastructures are essential. Seed system should be backed up with the continuity of the varietal development including participatory agronomic research. Introduction of the partial prepayment system will provide opportunity to resource poor farmers to sell their seed. We should contribute to set up a seed system for Nepal based on a public private partnership (Policy support).

Conclusions and Recommendations

Due to challenge of food security in country, many organizations (government/ NGO/ INGO/CBO) work in food security and their priority work is in seed. The country could not get the better result if there is no strong coordination among different actors working in this field. So there is need of improving awareness of quality seed among general farmers, promote entrepreneurial skill among seed producers, coordination among different actors and need of single funnel seed output system in Nepal. Joint monitoring of different actors working in this field should be done for better implementation. Awareness about improved seed should be raised among general farmers so that seed cycle can be maintained. Similarly entrepreneurial mode in the seed production should be promoted.

References

MOAC. 2009/10. Nepalese Agriculture Statistics
Crop Development Directorate. 2010. Annual Report
Seed Quality Control Centre. 2010. Seed Balance Sheet 2010
Seed Technology Division, NARC. 2009.