



Improved seeds and seedlings play critical role in increasing agricultural productivity

Key Observations

Vegetable Seeds and Seedlings:

- Farm Production (FP) has produced a total of **18** different types of vegetable seeds and seedlings during the FY 2018-19. The Registered Seed Growers (RSG), on the other hand also produced about **9** different varieties of vegetable seeds and seedlings for the same period.
- FP produced a total of **2.5 MT** of vegetable seeds and seedlings while RSG produced slightly more than **6 MT**.
- Apart from domestic farm production, NSC also import seeds and seedlings from rest of the world to meet the domestic demand. For vegetable seeds and seedlings, the commonly imported are **Pea Arkel**, **Carrot New Kuroda** and **Cauliflower Snow Mystique Hybrid**.

Sub-Tropical Fruit Plants:

- In terms of the subtropical fruit plants, a total of **11 varieties** were produced by FP and **4 varieties** were produced by RSG.
- A total of **71,479 plants** were sold during the reporting year by FP while about **144,015 plants** were sold by RSG.



Photo courtesy- NSC face-book page

About the release

The improved seeds and plants play critical role in increasing agricultural productivity, increased cash income generation for rural farmers and contributes food self-sufficiency at the macro level.

Recognizing this critical role, the Royal Government of Bhutan (RGoB) has focused on the development of seed system in the early 1961. Today, the National Seed Centre (NSC), the then the Druk Seed Corporation produces and supply certified seeds and fruit plants of improved varieties to the farming communities. Further, there are also a number of registered seed growers (RSG) in the country fortifying the role of NSC through production and distribution of improved seeds and seedlings to the farmers.

The statistical release provided herein on seeds and seedlings are based on the information received from NSC. The information on the varieties of seeds and seedlings are important to growers (farmers) for ensuring improved and sustainable crop production. Food security, therefore, is also dependent on the seed security of farming communities.

The details of the seeds and seedlings produced by the National Seed Centre (NSC) and also by the Registered Seed Growers (RSG) in the country are presented.

Temperate Fruit Plants:

- FP produced a total of **12** different types of temperate fruit plants during the FY 2018-19 while RSG produced only **2** different varieties for the same period.
- FP sold a total of **27,105 numbers** of temperate fruit plants while RSG sold about **76,575 numbers** of plants.

Potato:

- FP produced **5** different types of potato during the FY 2019-20 while RSG produced only **1** type during the same period.
- The top three potatoes produced by FP were **Potato-Desiree** (about **80%**), **Potato Chipsona** (about **3%**) and **Potato-Desiree (under size)** (about **1.6%**). For RSG, the potato type produced was **Potato-Desiree** (about **149 MT**).
- FP sold a total of **86.05 MT** of potatoes.

Cereal Seeds and Seedlings:

- FP produced **2** different varieties of maize, **4** different varieties of paddy and **1** variety of wheat during the FY 2019-19. RSG, on the other hand produced **2** varieties of maize, **7** varieties of paddy and **1** variety of wheat during the same period.
- FP sold a total of **23.76 MT** of cereal seeds and seedlings while RSG sold a total of **120.21 MT**.

Key observation (cont.)

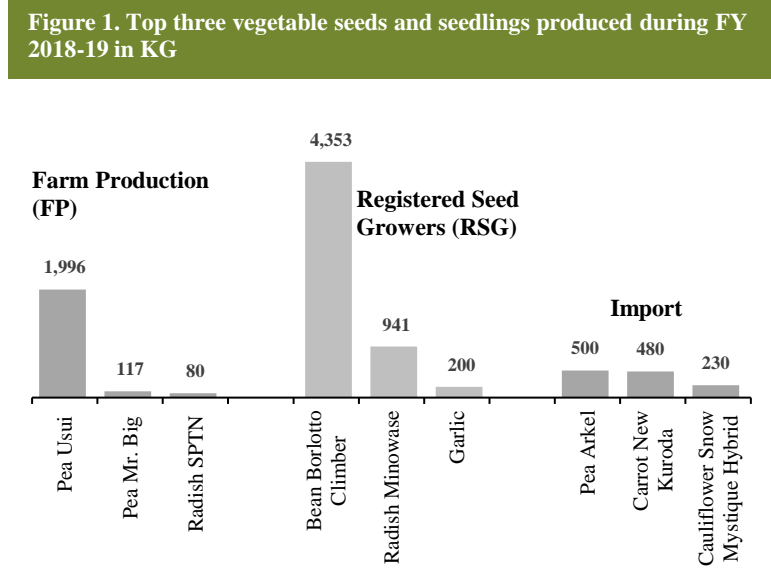


Figure 1 shows the top three vegetable seeds and seedlings produced by Farm Production (FP) and Registered Seed Growers (RSG) during the FY 2018-19. **Peas Usui** (about **80%**), **Pea Mr. Big** (about **5%**) and **Radish SPTN** (about **3%**) were the top three produced by FP while for RSG, **Bean Borlotto Climber** (about **72%**), **Radish Minowase** (about **15%**) and **Garlic** (about **3%**) were the top three produced.

Figure 2. Top three sub-tropical fruit plants sold during FY 2018-19 in number

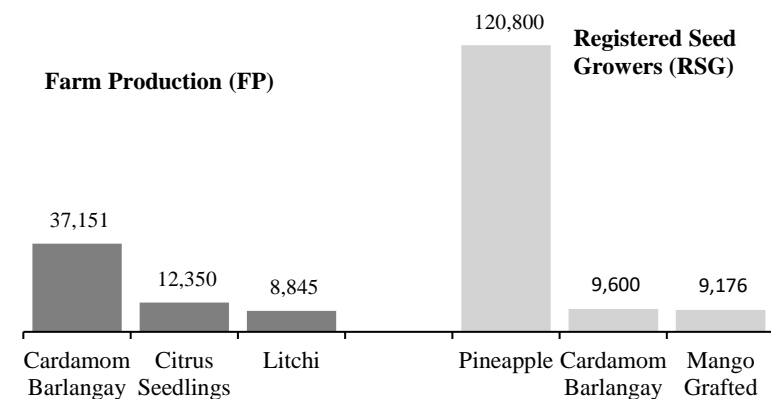


Figure 2 shows the top three sub-tropical fruit plants sold during the FY 2018-19 by FP and RSD. **Cardamom Barlangay**, **Citrus Seedlings** and **Litchi**, respectively accounted for **52%**, **17%** and **12%** of the total sale of sub-tropical fruit plants by FP. For RSG, **Pineapple**, **Cardamom Barlangay** and **Grafted Mango** were the top three sub-tropical fruit plants, respectively accounted for **84%**, **7%** and **6%** of the total sale.

Oilseeds Seedlings:

- FP and RSG produced 2 different varieties each of oilseeds seedling during the FY 2019-19.
- FP produced a total of **0.072 MT** of Mustard M-27 and Yusi Peka 2. RSG, on the other hand produced a total of **0.002 MT** of Yusi Peka 2.

Import of Fertilizers:

- **6** different types of fertilizers were imported during the FY 2019-19.
- A total of **3,942 MT** of fertilizers were imported.

Acknowledgement

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For any queries or feedback

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Key observation (cont.)

Figure 3. Top three temperate fruit plants produced during FY 2018-19 in Number

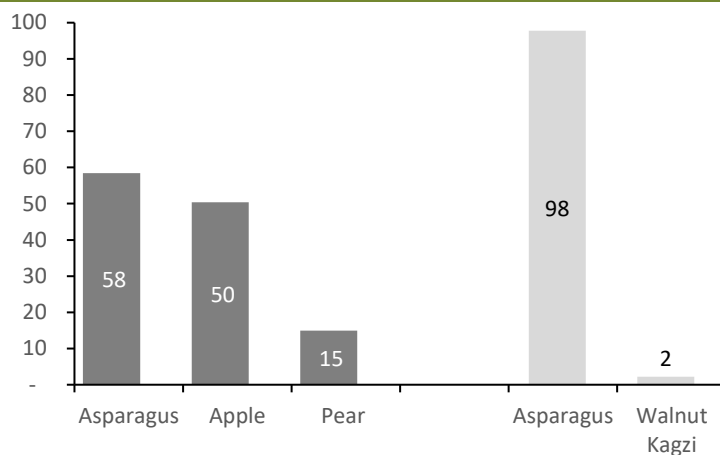


Figure 3 shows the top three temperate fruit plants produced by Farm Production (FP) and Registered Seed Growers (RSG) during the FY 2018-19. The top three vegetable seeds and seedlings produced by FP were *Asparagus* (about 37%), *Apple* (about 32%) and *Pear* (about 9%). For RSG, the only 2 varieties produced were *Asparagus* (about 98%) and *Walnut Kagzi* (about 2%).

Figure 4. Top three potatoes produced during FY 2018-19 in MT

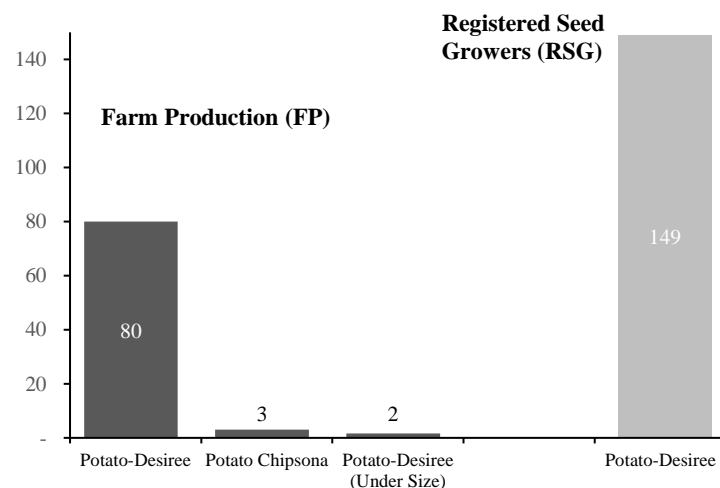


Figure 4 shows the top three potato produced during the FY 2018-19 by FP and RSD. The top three potatoes produced by FP were *Potato-Desiree* (about 80%), *Potato Chipsona* (about 3%) and *Potato-Desiree (under size)* (about 1.6%) while for RSG, the only potato type produced was *Potato-Desiree* (about 100%).

Key observation (cont.)

Figure 5. Top three cereal seeds and seedling produced during FY 2018-19 in MT

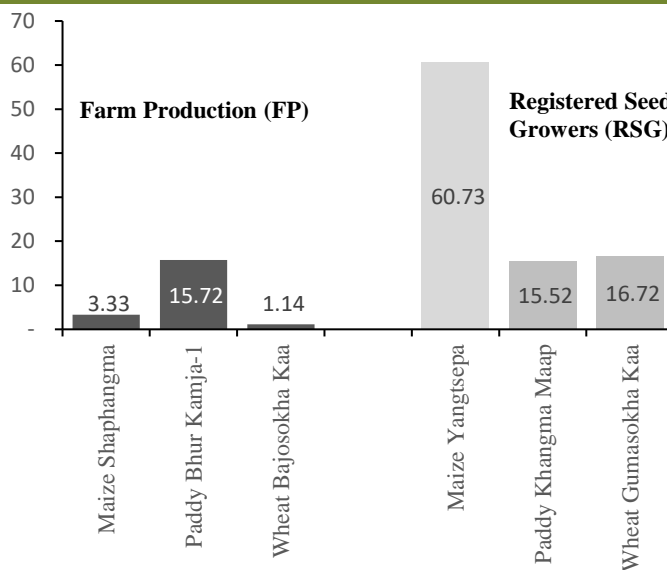


Figure 5 shows the top three cereal seeds and seedlings produced by Farm Production (FP) and Registered Seed Growers (RSG) during the FY 2018-19. Among the cereal seeds and seedlings produced by FP, commonly sold are *Maize Shaphangma* (about 14%), *Paddy Bhur Kamja-1* (about 66%) and *Wheat Bajosokha Kaa* (about 5%). Among the cereal seeds and seedlings produced by RSG, *Maize Yangtsepa* (about 51%), *Paddy Khangma Maap* (about 13%) and *Wheat Gumasokha Kaa* (about 14%) are the commonly sold cereals.

Figure 6. Import of fertilizers during FY 2018-19

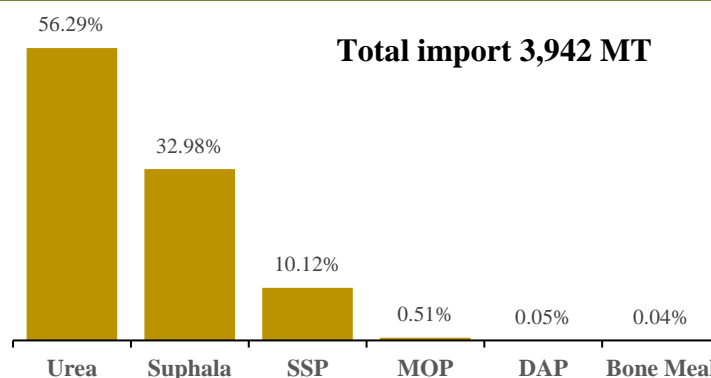


Figure 6 shows the import of fertilizers during the FY 2018-19. The top three fertilizers imported were *Urea* (about 56%), *Suphala* (about 33%) and *Single Super Phosphate (SSP)* (about 10%).

Table 1.1 VEGETABLE SEEDS AND SEEDLING PRODUCTION BY FARM PRODUCTION (FP) IN KG

Commodity	Farm Production (FP)
Pea Usui	1,996
Pea Mr. Big	117
Radish SPTN	80
Bean Pole	46
Bean Borlotto Drawf	39
Turnip PTWG	30
Spinach Leaf Beet	30
Cabbage Golden Acre	29
Ladies Finger Kranti	29
Water Melon Sugar Baby	25
Bunching Onion No. 21	17
Tomato Rattan	15
Cucumber Shaba Genchu	13
Squash Zucchini	13
Tomato Roma	10
Japanese Green Taisai	8
Spinach All Green	5
Japanese Green Mibuna	2
Total	2,501

Table 1.2 VEGETABLE SEEDS AND SEEDLING PRODUCTION BY REGISTERED SEED GROWERS (RSG) IN KG

Commodity	Registered Seed Growers (RSG)
Bean Borlotto Climber	4,353
Radish Minowase	941
Garlic	200
Chili Sha Ema	158
Brocoli Dessico	139
Bean Top Crop	121
Bean Borlotto Drawf	94
Cauliflower Khangma Early	81
Mustard Green Him Beauty	25
Total	6,112

Table 1.3 SUB-TROPICAL FRUIT PLANTS PRODUCED BY FARM PRODUCTION (FP) AND REGISTERED SEED GROWERS (RSG) IN KG DURING FY 2018-19

Commodity	FP	RSG
Areca nut Bhur S-1	-	-
Avocado Hass	-	-
Banana G-Naine	2,100	4,439
Cardamom Barlangay	37,151	9,600
Citrus Seedlings	12,350	-
Dragon Fruit Gewaringpa-1	652	-
Guava Bebsew Shakha	1,531	-
Jack Fruit Bhur S-1	31	-
Litchi	8,845	-
Mango Grafted	7,020	9,176
Papaya Bhur S-1	-	-
Passion Fruit	2	-
Pine Apple	45	120,800
Pomegranate Bedana	1,752	-
Total	71,479	144,015

Table 1.4 TEMPERATE FRUIT PLANTS PRODUCED BY FARM PRODUCTION (FP) AND REGISTERED SEED GROWERS (RSG) IN KG DURING FY 2018-19

Commodity	FP	RSG
Apple	8,613	-
Almond Kagzi	-	-
Apricot Shakapara	490	-
Asparagus	10,000	74,880
Cherry Seneca	204	-
Chesnut Jewphu-1	44	-
Peach	1,151	-
Pear	2,550	-
Perssimmon	1,546	-
Plum	785	-
Prune	14	-
Strawberry Seedling	1,508	-
Walnut Kagzi	200	1,695
Total	27,105	76,575

Table 1.5 POTATO SALES BY FARM PRODUCTION (FP) AND REGISTERED SEED GROWERS (RSG) IN MT DURING FY 2018-19

Commodity	FP	RSG
Potato Chipsona	3	-
Potato-Desiree	80	149
Potato-Desiree (Oversize)	0	-
Potato-Desiree (Under Size)	2	-
Potato-Kufri Joyti	-	-
Potato-Nasephey	1	-
Kewa Kaap	-	-
Potato-Yusimaap	-	-
Total	86	149

Table 1.6 CEREAL SEEDS AND SEEDLINGS PRODUCED BY FARM PRODUCTION (FP) AND REGISTERED SEED GROWERS (RSG) IN KG DURING FY 2018-19

Commodity	FP	RSG
Maize Chaskharpa	-	9,350
Maize Hybrid	-	-
Maize Shaphangma	3,330	-
Maize Yangtsepa	1,590	60,730
Maize Rejects	-	-
Paddy Bajo Maap 1	80	-
Paddy Bajo Maap-2	1,500	725
Paddy Bhur Kamja-1	15,720	6,613
Paddy Bhur Kamja-2	-	447
Paddy IR-20913	-	-
Paddy IR-64	-	500
Paddy Khangma Maap	-	15,520
Paddy No.11	-	2,780
Paddy Yusi Ray Maap	-	6,820
Paddy Reject	397	-
Wheat Bajosokha Kaa	1,140	-
Wheat Bumthang Kaa-60	-	-
Wheat Gumasokha Kaa	-	16,720
Total	23,757	120,205

Table 1.7 OILSEED SEEDS AND SEEDLINGS PRODUCED BY FARM PRODUCTION (FP) AND REGISTERED SEED GROWERS (RSG) IN MT DURING FY 2018-19

Commodity	FP	RSG
Mustard M-27	0.070	-
Soya Bean Khangma Lebi-1	-	-
Yusi Peka 1	-	-
Yusi Peka 2	0.002	0.002
Total	0.070	-

Table 1.8 IMPORT OF FERTILIZER IN MT DURING FY 2018-19

Commodity	Import
Urea	2,219
Suphala	1,300
SSP	399
MOP	20
DAP	2
Bone Meal	2
Total	3,942