Seed Multiplication Ratio

It is the ratio of seed yield per seed generation i.e. many seeds are produced from a single seed. It is nothing but the number of seeds to be produced from a single seed when it is sown and harvested

Crop	Seed Multiplication Ratio	Crop	Seed Multiplication Ratio
Wheat	1:20	Lucerne	1:25
Paddy	1:80 (Varieties)	Oats	1:15
	1:100 (Hybrids)	Bhendi	1:100
Maize	1:80 (Varieties)	Tomato	1:400
	1:100 (Hybrids)	Brinjal	1:450
Sorghum	1:100	Chillies	1:240
Bajra	1:200	Watermelon	1:100
Ragi	1:80	Pumpkin	1:160
Gram	1:10	Bittergourd	1:41
Blackgram	1:40	Bottlegourd	1:99
Greengram	1:40	Ridgegourd	1:83
Cowpea	1:40	Cucumber	1:200
Horsegram	1:40	French bean	1:9
Moth bean	1:40	Clusterbean	1:50
Red gram	1:100	Peas	1:19
Cole crops	1: 433	Onion	1:171
Potato	1:4	Radish	1:100
Groundnut	1:8	Carrot	1:83
Linseed	1:50	Mustard and rape	1:100
Cotton	1:50	Soybean	1:16
Jute	1:100	Sunflower	1:50
Mestha	1:40	Sesame	1:250
Sunhemp	1:30	Safflower and castor	1:60
Berseem	1;10	Lucerne	1:25

Seed processing

- The seed lots should be processed and sampled within **3 months from the date** of receipt in the processing unit.
- Certified seed should be tagged within 2 months from the date of test. A **validity period of 9 months** is given for the certified seed lots.
- The validity period could be further extended **for six months** provided on retesting seed conforms.

Seed Growth and Maturation

- In wheat, the dry weight of the seed increases rapidly in about 35 days after anthesis.
- The water content of the grain is maximum between 14 and 21 days after anthesis
- The amounts of reducing sugar and sucrose are high between 7 and 14 days and decline rapidly thereafter due to conversion to starch.
- A soybean seed attains **maximum dry weight** between 48 and 54 days after flowering.
- Oil accumulation is less during **12-18 days after fertilization;** maximum oil accumulates between **24 and 42 days after flowering**

Seed Replacement Rate

It is a measure of how much of the total cropped area was sown with certified seeds in comparison to farm saved seeds.

Seed replacement rate is the quantity of quality seed that have replaced the actual seed requirement of the location that are normally produced by the farmer using their own seed.

Type of Seed Storage

CONVENTIONAL STORAGE STRUCTURES

Structures	Make	items	Capacity	Remarks
1.Bamboo Structures	Split bamboo woven in the form of a cylinder with wide base and narrow mouth	Paddy, wheat and sorghum	500 kg	Life 4-5 years. Weight loss due to insect attack is 5 % in paddy and 15 % in sorghum.
2. Mud and earthen structures	Clay, straw and cow dung- 3:3:1. earthen structures are made, sun dried and then burnt in fire	Paddy, wheat, sorghum, oil seeds and pulses	5 to 10 q	Life 8- 10 years. During rainy season develop cracks and moisture absorption followed by insect and mould infestation.

3.Wooden structures	Local wood is painted black. At the top, 30cm x 20 cm inlet and at the bottom 30 cm x15cm outlet is provided	Paddy	10 q	15- 20 years. Neither airtight nor moisture proof.
4. Brick structures	Rectangular, structures built as part of the house, with brick in cement or lime mortar having a wall thickness of 40 –50 cm. At the top 50x 50 cm inlet and at bottom 15 x15 cm outlet is provided.	Paddy, sorghum and wheat	25- 30 q	25- 30 years. High initial cost, not insect and moisture proof.
5.Underground structures	Circular pits vary from 100 – 400cm in depth and 50 – 100cm dia at neck and250 – 300 cm at the bottom. For filling and emptying there is an opening at the top. Before filling the sides and bottom are packed with straw and husk. After filling the pit is gain covered with straw and stone, the finally with mud.	Cereals	100 – 200q	Safe against insects but, loss of seed viability and handling difficulties made it out of date