

Seed Classification – Our Understanding

Seed potatoes shall be classified according to variety and the standards given below. The classification shall be subject to official control in the producing country. The DA is responsible for the maintenance of all classification data to provide traceability. Seed potatoes shall be placed in two classes within each of three categories as defined below:

1. Pre-basic category seed

These are seed potatoes of generations prior to basic seed:




(a) Pre-basic TC (tissue culture) class seed shall be directly derived by micro propagation and may be tissue culture plantlets or tubers of the first generation

2. Basic category seed

These are seed potatoes descended directly from Pre-basic or Basic category seed or produced under the special provisions of a national certification scheme and are mainly intended for the production of certified seed potatoes.

3. Field generation

Each class may be additionally classified according to the number of generations (FG1, FG2 etc.). The final designation of a class will therefore contain a class name and may contain a field generation record (e.g. Basic I FG3, Certified I FG3).

Pre-Basic Seeds	Basic Seeds	Field Generation Seeds
		
<p>Tissue Culture Lab + Mini Tuber Productions (G0)</p>	<p>Generation Seeds</p>	<p>Traditional Approach</p>
<p>Potato Tissues of various potato varieties to develop the mini tuber (G0)</p>	<p>G0 plantation to produce Generation seeds of various categories (G1, G2 etc.)</p>	<p>Basic Seeds : Breeder or Foundation (F1 / F2 etc.) Low category seeds</p>

Developing Potato Seeds

Potato growth can be divided into five phases.

Phase 1: During the first phase, sprouts emerge from the seed potatoes and root growth begins.

Phase 2: During the second, photosynthesis begins as the plant develops leaves and branches above-ground and stolon develop from lower leaf axils on the below-ground stem.

Phase 3: In the third phase the tips of the stolon swell forming new tubers and the shoots continue to grow and flowers typically develop soon after.

Phase 4: Tuber bulking occurs during the fourth phase, when the plant begins investing the majority of its resources in its newly formed tubers. At this phase, several factors are critical to a good yield: optimal soil moisture and temperature, soil nutrient availability and balance, and resistance to pest attacks.

Phase 5: The fifth phase is the maturation of the tubers: the plant canopy dies back, the tuber skins harden, and the sugars in the tubers convert to starches.