

## STUDY ON THE IDENTIFICATION OF SEED

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### Introduction

It is sometime a difficult job to identify a seed of a crop species, especially seeds of different varieties. To maintain the national and international standard of laboratory or a seed technologist it is required to identify the seeds of different plant species, or varieties accurately. The media used to sustain and multiply plant species are called seed. Seed is also called propagule. Seed may also be defined as follows:

- A. Botanical Seed:** Fertilized and mature ovule containing an embryo in a dormant state is known as botanical seed. It is also called true seed. e.g., rice seed, wheat seed, maize seed etc.
- B. Agricultural Seed:** Any part of the plant, whether vegetative or reproductive, having the capability of producing new offspring of its own type under suitable condition is called agricultural seed. e.g., rice seed, wheat seed, maize seed, stem of sugarcane, tuber of potato, sucker of banana, pineapple crown etc.

The main objective of this experiment is to identify only the botanical seeds of different agronomic crops based on their external morphology, i.e., based on the seed size, shape, colour, presence or absence of special appendages, etc.

The seeds of one crop species can easily be identified from that of other crop species. But seeds belonging to the same crop species need careful observation on their size, shape, colour etc. for identification.

### I. Cereal crops:

Sl. No.	Common name	English name	Scientific name	Family
1.	Dhan	Rice	<i>Oryza sativa</i>	Poaceae (Gramineae)
2.	Gom	Wheat	<i>Triticum aestivum</i>	Poaceae (Gramineae)
3.	Bhutta	Maize	<i>Zea mays</i>	Poaceae (Gramineae)
4.	Sorghum	Sorghum	<i>Sorghum bicolor</i>	Poaceae (Gramineae)
5.	Kaon	Foxtail millet	<i>Setaria italica</i>	Poaceae (Gramineae)
6.	Cheena	Proso millet	<i>Panicum miliaceum</i>	Poaceae (Gramineae)
7.	Jab	Barley	<i>Hordeum vulgare</i>	Poaceae (Gramineae)
8.	Bajra	Pearl millet	<i>Pennisetum glaucum</i>	Poaceae (Gramineae)
9.	Jai	Oat	<i>Avena sativa</i>	Poaceae (Gramineae)

### II. Pulse crops:

Sl. No.	Common name	English name	Scientific name	Family
1.	Masur	Lentil	<i>Lens culinaris</i>	Fabaceae (Leguminosae)
2.	Mug	Mungbean	<i>Vigna radiata</i>	Fabaceae (Leguminosae)
3.	Khesari	Grasspea	<i>Lathyrus sativus</i>	Fabaceae (Leguminosae)
4.	Chhola	Chickpea	<i>Cicer arietinum</i>	Fabaceae (Leguminosae)
5.	Maskali	Blackgram	<i>Vigna mungo</i>	Fabaceae (Leguminosae)
6.	Matar	Fieldpea	<i>Pisum sativum</i>	Fabaceae (Leguminosae)
7.	Felon	Cowpea	<i>Vigna unguiculata</i>	Fabaceae (Leguminosae)
8.	Arahar	Pigeonpea	<i>Cajanus cajan</i>	Fabaceae (Leguminosae)



9.	Jhar Sheem	Bushbean	<i>Phaseolus vulgaris</i>	Fabaceae (Leguminosae)
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### III. Oil yielding crops:

Sl. No.	Common name	English name	Scientific name	Family
1.	Sarisha	Rapeseed	<i>Brassica campestris</i>	Brassicaceae (Cruciferae)
			<i>Brassica napus</i>	Brassicaceae (Cruciferae)
		Mustard	<i>Brassica juncea</i>	Brassicaceae (Cruciferae)
2.	Til	Sesame	<i>Sesamum indicum</i>	Pedaliaceae
3.	Surjamukhe	Sunflower	<i>Helianthus annuus</i>	Asteraceae (Compositae)
4.	Cheenababam	Ground nut	<i>Arachis hypogaea</i>	Fabaceae (Leguminosae)
5.	Tishi	Linseed	<i>Linum usitatissimum</i>	Linaceae
6.	Kusumful	Safflower	<i>Carthamus tinctorius</i>	Asteraceae (Compositae)
7.	Garjan til	Niger	<i>Guizotia abyssinica</i>	Asteraceae (Compositae)
8.	Soybean	Soybean	<i>Glycine max</i>	Fabaceae (Leguminosae)
9.	Venna	Castor	<i>Ricinus communis</i>	Euphorbiaceae

### IV. Fibre crops:

Sl. No.	Common name	English name	Scientific name	Family
1.	Deshi pat	Jute	<i>Corchorus capsularis</i>	Sterculiaceae (Tiliaceae)
2.	Tosa pat	Jute	<i>Corchorus olitorius</i>	Sterculiaceae (Tiliaceae)
3.	Tula	Cotton	<i>Gossypium hirsutum</i>	Sterculiaceae (Malvaceae)
4.	Kenaf	Kenaf	<i>Hibiscus cannabinus</i>	Sterculiaceae (Malvaceae)
5.	Meshta	Mesta	<i>Hibiscus sabdariffa</i>	Sterculiaceae (Malvaceae)
6.	San pat	Sunn hemp	<i>Crotalaria juncea</i>	Fabaceae (Leguminosae)

### V. Fodder crops:

Sl. No.	Common name	English name	Scientific name	Family
1.	Napier ghash	Napier grass	<i>Pennisetum purpureum</i>	Poaceae (Gramineae)
2.	Para ghash	Para grass	<i>Panicum purpurascens</i>	Poaceae (Gramineae)
3.	Sorghum	Sorghum	<i>Sorghum bicolor</i>	Poaceae (Gramineae)
4.	Bajra	Pearl millet	<i>Pennisetum glaucum</i>	Poaceae (Gramineae)
5.	Bhutta	Maize	<i>Zea mays</i>	Poaceae (Gramineae)
6.	Jai	Oat	<i>Avena sativa</i>	Poaceae (Gramineae)
7.	Felon	Cowpea	<i>Vigna unguiculata</i>	Fabaceae (Leguminosae)

### VI. Green manuring crops

Sl. No.	Common name	English name	Scientific name	Family
1.	Dhaincha	Dhaincha	<i>Sesbania aculeata</i>	Fabaceae (Leguminosae)
2.	Dhaincha (African)	Dhaincha (Wild)	<i>Sesbania rostrata</i>	Fabaceae (Leguminosae)
3.	Sanpat	Sunn hemp	<i>Crotalaria juncea</i>	Fabaceae (Leguminosae)
4.	Felon	Cowpea	<i>Vigna unguiculata</i>	Fabaceae (Leguminosae)

### VII. Fuel crops:

Sl. No.	Common name	English name	Scientific name	Family
1.	Dhaincha	Dhaincha	<i>Sesbania aculeata</i>	Fabaceae (Leguminosae)
2.	Dhaincha (African)	Dhaincha (Wild)	<i>Sesbania rostrata</i>	Fabaceae (Leguminosae)

### VIII. Sugar crops:

Sl. No.	Common name	English name	Scientific name	Family
1.	Akh	Sugarcane	<i>Saccharum officinarum</i>	Poaceae (Gramineae)



2.	Beet	Sugarbeet	<i>Beta vulgaris</i>	Chenopodiaceae
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#### IX. Beverage crops

Sl. No.	Common name	English name	Scientific name	Family
1.	Cha	Tea	<i>Camellia sinensis</i>	Theaceae
2.	Coffee	Coffee	<i>Coffea arabica</i>	Rubiaceae
3.	Coco	Cocoa	<i>Theobroma cacao</i>	Sterculiaceae (Malvaceae)

#### X. Narcotic crops

Sl. No.	Common name	English name	Scientific name	Family
1.	Tamak	Tobacco	<i>Nicotiana tabacum</i>	Solanaceae
2.	Ganja	Canabis	<i>Cannabis sativa</i>	Cannabaceae

#### Suggested Readings:

Agrawal, R.L. (1995) Seed technology. Oxford & IBH Publishing Company Pvt. Ltd., New Delhi  
 Basra, A.S. (2006) Handbook of Seed Science and Technology. CRC Press, Boca Raton  
 Copeland, L.O. and McDonald, M.F (1995) Principles of Seed Science and Technology. Springer, Berlin

