

FIELD INSPECTIONS

After registrations, the areas are allotted to the Seed Certification Officers to conduct field inspections as per the field standards of IMSCS 2013. The number of field inspections varies from crop to crop depending upon the crop stage, crop duration, pollination and nature of contamination.

1. First Inspection / Vegetative Inspection : It is to verify the seed grower, extent of field, variety offered, isolation distance, planting ratio in case of hybrids, source verification of parental seed used and also crop stand.

2. Second Inspection / During Flowering : It is to record the number of off-types, pollen shedders in female parent, objectionable weeds, inseparable plants, maintenance of isolation distance, distance & direction of the seed crop from the contaminant, true to type plant characters, percentage of silks in case of Maize, etc.,

3. Third Inspection / Flowering / Post Flowering : It is to record the number of off-types duly taking recommended counts based on the area and other requirements/ rectifications as mentioned in case of second inspection.

4. Fourth Inspection / Pre-harvest : This inspection is to estimate the seed yield, crop stand, also varietal purity. In Jowar and Bajra this final inspection is expected to conduct only after harvest of the male rows.

For self pollinated crops like Groundnut, Bengalgram etc., where two inspections are recommended all required field parameters should be observed in first inspection i.e., flowering inspection itself duly rejecting the field plots not conforming to field standards.

In case of Maize after harvesting of seed crop sorting out of cobs should be done invariably under supervision of APSSCA, then only processing will be allowed.

The crop-wise number of field inspections and minimum isolation distances required for certification are given in Table-1 & 2 respectively.

**TABLE -1
MINIMUM NUMBER OF FIELD INSPECTIONS REQUIRED FOR
CERTIFICATION**

Sl. No.	Crop	No. of inspections	Crop stages at which inspection are to be conducted
1	2	3	4
1	PADDY i) Varieties ii) Hybrids	2 4	Flowering to harvest. The first before flowering, second and third during flowering, fourth at maturity or before harvesting.
2	SORGHUM i) Hybrids ii) Open Pollinated Varieties	4 3	The first before flowering, second and third during flowering, fourth prior to harvesting. The first before flowering, second during flowering, third prior to harvesting.
3	MAIZE i) Inbred lines.Hybrids/ Single Crosses ii) Composites, Synthetics and open-pollinated varieties	4 2	One before flowering and the remaining three during flowering. One before flowering and the other during flowering.

Sl. No.	Crop	No. of inspections	Crop stages at which inspection are to be conducted
1	2	3	4
4	BAJRA i) Hybrids ii) Composites/open pollinated Varieties	4 3	One before flowering, second and third during flowering, fourth at maturity or prior to harvesting. One before flowering, second during flowering and third inspection at maturity or prior to harvesting.
5	RAGI	2	First during flowering, second at maturity or prior to harvesting.
6	KORRA	2	First during flowering and the second at maturity or prior to harvesting.
7	BENGALGRAM	2	First during flowering & second at pre-harvesting
8	GREENGRAM & BLACKGRAM	2	First before flowering, second at flowering and pod developmental stage.
9	REDGRAM	2	First during flowering & second at pre-harvesting
10	COWPEA	2	The first before flowering, second at flowering and pod development stage.
11	GROUNDNUT	2	First during flowering & second at pre-harvesting
12	CASTOR i) Hybrids ii) Varieties	4 2	First before flowering, second and third during flowering, fourth at maturity or before harvesting. First during flowering & second at pre-harvesting
13	SUNFLOWER i) Hybrids ii) Varieties	4 3	First at vegetative stage (6-7 pairs of leaves), second and third during flowering, fourth at pre-harvesting. First at vegetative stage, second during flowering, third at pre-harvesting.
14	SAFFLOWER/ SESAMUM	3	First during flowering, second during flowering, third at maturity and prior to harvesting.
15	SOYBEAN	2	First before flowering, second before harvesting.
16	COTTON i) Foundation ii) Hybrids iii) Varieties	3 3 2	First and second during flowering (Parental Lines) and third during maturity, prior to harvesting. First during maturity, second during the flowering, third in order to determine that self bolls are eliminated and cotton only from crossed bolls are picked. Flowering to harvest
17	JUTE	2	First before flowering, second bud to peak flowering
18	BRINJAL VARIETIES/HYBRIDS AND CHILLIES	3	First before flowering, second during flowering & fruiting stage, third at mature fruit stage & prior to harvesting
19	CLUSTERBEAN	2	First before flowering, second at flowering and fruit development stage

Sl. No.	Crop	No. of inspections	Crop stages at which inspection are to be conducted
1	2	3	4
20	BHENDI	3	First before flowering, second during flowering and fruiting, third during the mature fruit stage & prior to harvesting.
21	TOMATO i) Varieties	3	First before flowering, second during flowering and fruiting stage, third during the mature fruit stage.
	ii) Hybrids	4	First before flowering, second and third during flowering and fruiting stage, fourth at mature fruit stage and prior to harvesting.
22	FORAGE SORGHUM	3	First before flowering, second during flowering, third before harvesting.
23	CUCURBITS	3	First before flowering, second during flowering & fruiting stage, third at mature fruit stage

Pollination behaviour of different crops

Pollination Groups	Field Crops	Vegetable Crops
SELF POLLINATED	Paddy Wheat Ragi Barley Oats Blackgram Greengram Bengalgram Groundnut Soybean Jute	Cowpea Cluster bean Tomato Dolichos bean French bean Garden pea Lettuce
CROSS POLLINATED	Maize Bajra Sunflower Niger Castor Sunhemp Mustard	Cabbage Carrot Cucurbits Radish Amaranthus
OFTEN-CROSS POLLINATED	Sorghum Redgram Sesamum Cotton Lucerne Berseem Safflower	Bhendi Brinjal Chillies Capsicum Sweet Pepper Limabean

TABLE-II
ISOLATION DISTANCE IN FIELD CROPS FOR FOUNDATION/CERTIFIED SEED

Sl. No.	CROP	Minimum Isolation distance		To be isolated by the distance column 3 or 4 from fields of
		Foundation	Certified	
1	2	3	4	5
1)	PADDY i) Varieties	3	3	Other varieties, the same variety not conforming to varietal purity requirements for Certification.
	ii) Hybrids	200	100	Other varieties including commercial hybrid of the same variety, fields of same hybrid not conforming to variety purity requirements for certification.
2	SORGHUM i) Hybrid	300	200	Other varieties of grain and dual purpose sorghum including commercial hybrid of the same variety. The same variety not conforming to varietal purity requirements for certification.
		400	400	Johnson grass (<i>Sorghum halopense</i>) Forage sorghum with high tillering and grassy panicle.
			5	Sorghum hybrids with same male parent conforming to varietal purity for certification.
			200	Hybrids having common male parent but not conforming to varietal purity requirement for certification

	ii) Open pollinated	200	100	Other varieties of grain and dual purpose sorghum. The same variety not conforming to varietal purity requirements for certification.
		400	400	Johnson grass (<i>Sorghum halopense</i>) Forage sorghum with high tillering and grassy panicle
3	MAIZE: i) Inbred lines	400	-	Any maize with same kernel colour and texture; Fields of the same inbred line not conforming to varietal purity requirements for certification.
		600	-	Any maize fields with different kernel colour, texture and teosinte.
	ii) Single Cross Hybrid	400	-	Any maize with same kernel colour and texture, maize of the same single cross not conforming to varietal purity requirements for certification. Fields of other single crosses having common male parent and not conforming to varietal purity requirements for certification.
		5	-	Fields of other hybrids having same male parent and conforming to varietal purity.
		600	--	Any maize with different kernel colour and texture and teosinte.
	iii) Other Hybrids	--	200	Any Maize with same kernel colour and texture, maize of same double cross not conforming to varietal purity and other hybrids having common male parent and not conforming to varietal purity requirements for certification.

		--	300	Any maize with kernel colour and texture, teosinte different from that of the seed parent
		--	5	Other hybrids having common male parent and conforming to varietal purity requirements for certification
	vi) Composites, Synthetics & Open pollinated varieties	400	200	Fields of other varieties and of the same varieties not conforming to varietal purity requirements for certification and teosinte.
4.	BAJRA i) Hybrids	1000	200	Other varieties including commercial hybrid and of the same hybrid not conforming to varietal purity requirement for certification.
		-	200	Other hybrids having common male parent but not conforming to varietal purity requirements for certification.
		-	5	Other hybrids having common male parent and conforming to varietal purity.
	ii) Composites, Synthetics & Open pollinated varieties	400	200	Fields of other varieties and of same varieties not conforming to varietal purity requirements for certification.
5.	RAGI (Finger millet)	3	3	Other varieties, and the same variety not conforming to varietal purity.
6.	KORRA (Foxtail millet)	3	3	Other varieties, & the same variety not conforming to varietal purity.

7.	PULSES a) REDGRAM	250	100	Other varieties and fields of the same variety not conforming to the varietal purity requirements for certification.
	b) GREENGRAM c) BLACKGRAM d) HORSE GRAM e) BENGALGRAM f) FRENCH BEANS g) LENTIL h) COWPEA & PEAS	10	5	Fields of other varieties and same variety not conforming to varietal purity requirements for certification.
8.	CASTOR i)Varieties ii)Hybrids iii)Hybrids by Modified Method	600 1000	300 300	Other varieties and same variety not conforming to varietal purity requirements for certification.
9.	GROUNDNUT	3	3	Other varieties & the same variety not conforming to varietal purity requirements for certification.
10	LINSEED	50	25	Fields of other varieties and the same variety not conforming to varietal purity requirements for certification.
11	SUNFLOWER i) Hybrids	600	400	Fields of other varieties including commercial hybrid of the same variety, and the same hybrid not conforming to varietal purity requirements for certification and wild <i>Helianthus spp.</i>
	ii) Varieties	400	200	Fields of other varieties, and fields of the same variety not conforming to the varietal purity requirements for certification and wild <i>Helianthus spp.</i>

12	SESAMUM	100	50	Fields of other varieties and fields of same variety not conforming to the varietal purity requirements for certification and any of the following species of the genus Brassica.
13	SOYBEAN	3	3	Fields of other varieties and fields of the same variety not conforming to the varietal purity requirements for certification.
14	COTTON: i) Parents/Hybrids	50	30	Other varieties of the same species including commercial hybrid of the same variety, fields of the same variety not conforming to varietal purity requirements for certification; fields of the other species.
		5	3	Fields of other varieties of different spp (different polyploid levels).
		-	5	Between blocks of the parental lines of the same hybrid.
	ii) Varieties	50	30	Other varieties of the same species and the same variety not conforming to the varietal purity requirements for certification.
		5	5	Fields of other varieties of different species (ploidy levels),
15	JUTE	50	30	Other varieties and the same variety not conforming to varietal purity requirements for certification.
		5	5	Fields of other species.

16	CLUSTER BEAN	10	5	Other varieties and the same variety not conforming to varietal purity requirements for certification.
17	BRINJAL i) Varieties	300	150	Other varieties & the same variety not conforming to varietal purity requirements for certification.
	ii) Hybrids	200	200	Other varieties including commercial hybrid & the same variety not conforming to varietal purity requirements for certification.
18	CAPSICUM / CHILLI	500	250	Other varieties & the same variety not conforming to varietal purity requirements for certification. Fields of Capsicum from Chilli and vice versa
19	BHENDI	500	250	Other varieties and same variety not conforming to varietal purity requirements for certification, wild okra - <i>Abelmoschus manihot</i> .
20	TOMATO	50	25	Other varieties, the same variety not conforming to varietal purity requirements for certification.
21	CUCURBITS/VEGETABLES a) Varieties of all Gourds, b) Cucumber c) Muskmelon, d) Pumpkin e) Watermelon	1000	500	Fields of other varieties and fields of the same variety not conforming to varietal purity requirements for certification.
	f) Watermelon Hybrids	1500	1000	Fields of other varieties including commercial Watermelon hybrid of the same variety and the same variety not conforming to varietal purity requirements for certification. Between blocks of the parental lines.
		-	5	