

The South African Seed Certification Scheme

ANNEXURE 69

REQUIREMENTS RELATING TO MAIZE (*Zea mays* L.)

1 Field requirements

- 1.1 Subject to the provisions of paragraph 1.2, a field may be registered as a unit only if no plants of any *Zea* variety have been established thereon for seed production or otherwise during the growing season preceding the registration thereof.
- 1.2 Only in the case of an open-pollinated variety, may a field which is intended for the production of basic seed or certified seed of a particular maize variety also be registered as a unit, if -
 - 1.2.1 in the case of basic seed, certified pre-basic seed of the same variety has been produced thereon during the preceding growing season; and
 - 1.2.2 in the case of certified seed, certified pre-basic seed or basic seed of the same variety has been produced thereon during the preceding growing season.
 - 1.2.3 in the case of 2nd generation certified seed, 1st generation certified seed of the same variety has been produced thereon during the preceding growing season.

2 Planting requirements

- 2.1 Plants shall be established in rows on a unit.
- 2.2 Gap-filling in rows shall not be permissible.
- 2.3 In the case of the intended production of seed of a hybrid variety -
 - 2.3.1 the plants of the seed parent and those of the pollen parent shall be established in separate rows; and
 - 2.3.2 rows containing plants of the pollen parent shall be clearly marked., unless the authorised person determines otherwise in writing in a particular case after consideration of a written request by the seed grower concerned.

3 Isolation requirements

- 3.1 Subject to the provisions of paragraph 3.3, 3.4 and 3.5, a unit shall be surrounded by an isolation area which shall be at least 350 metres wide; and
 - 3.1.1 in the case of the intended production of certified seed of an open pollinated variety, a unit shall be surrounded by an isolation area which shall be at least 200 metres wide.
- 3.2 Such isolation area shall be free from plants of any maize variety or species of *Zea* which shed pollen at the stage at which the plants on the unit concerned show pollen-susceptible silk, unless -
 - 3.2.1 in the case of the intended production of basic seed, they have been established from certified pre-basic seed of the same variety; and
 - 3.2.2 in the case of the intended production of certified seed, they have been established from certified pre-basic seed or basic seed of the same variety; and
 - 3.2.3 in the case of the intended production of an open-pollinated variety of 2nd generation certified seed, they have been established from 1st generation certified seed of the same variety.
- 3.3 Plants of different seed parents of a hybrid variety may be established on adjoining units if -
 - 3.3.1 a common pollen parent is used; and
 - 3.3.2 a distance of at least five metres wide, which is free from plants of the seed parents concerned, is maintained between the units concerned.
- 3.4 An area at least 400 metres wide around a unit which is intended for the production of certified pre-basic seed or basic seed shall be free from plants of any maize variety or species of *Zea* which shed pollen at the stage at which the plants on the unit concerned show pollen-susceptible silk.
- 3.5 Plants of a yellow kernel variety may be established on a field adjoining a unit which is intended for the production of certified seed of a white kernel variety if -
 - 3.5.1 such adjoining field is not intended for the production of certified pre-basic seed or basic seed or certified seed;
 - 3.5.2 no plants with seed cobs containing white kernels occur on such adjoining field; and
 - 3.5.3 a distance of at least five metres wide, which is free from any plants of a variety of a species of *Zea*, is maintained between the unit and field concerned.

4 Requirements for plants

- 4.1 Subject to the provisions of paragraphs 4.2, 4.3 and 4.4, the number of deviating plants on a unit shall -
 - 4.1.1 in the case of the intended production of certified pre-basic seed or basic seed, not exceed 0,1 percent; and
 - 4.1.2 in the case of the intended production of certified seed, not exceed 0,5 percent.

- 4.2 If plants are established on a unit with a view to the production of certified pre-basic seed or basic seed of a hybrid variety -
- 4.2.1 the number of deviating pollen-shedding plants of the pollen parent at any stage after the plants of the seed parent show pollen-susceptible silk shall not exceed 0,1 percent of the plants of the pollen parent;
- 4.2.2 the number of deviating plants of the seed parent at the stage at which the plants of the seed parent no longer show pollen-susceptible silk shall not exceed 0,1 percent of the plants of the seed parent; and
- 4.2.3 the number of pollen-shedding plants of the seed parent at the stage at which 2 percent or more of those plants show pollen-susceptible silk -
- 4.2.3.1 during a particular inspection of that unit, not exceed 0,5 percent of the plants of the seed parent: Provided that the aggregate of the number of pollen-shedding plants of the seed parent found during consecutive inspections shall not exceed 1,0 percent of the plants of the seed parent; and
- 4.2.3.2 shall during a particular inspection of a single row or a portion thereof, or of two adjacent rows or portions thereof, not exceed 5,0 percent of the plants of the seed parent in that row or rows or portion or portions;
- 4.2.4 the number of ripe deviating seed cobs on or harvested from the plants of the seed parent shall not exceed 0,1 percent of the seed cobs on or harvested from the plants of the seed parent.
- 4.3 If plants are established on a unit with a view to the production of certified seed of a hybrid variety -
- 4.3.1 the number of deviating pollen-shedding plants of the pollen parent at the stage at which 5,0 percent or more of the plants of the seed parent show pollen-susceptible silk shall not exceed 0,2 percent of the plants of the pollen parent;
- 4.3.2 the number of deviating plants of the seed parent at the stage at which the plants of the seed parent no longer show pollen-susceptible silk shall not exceed 0,2 percent of the plants of the seed parent;
- 4.3.3 the number of pollen-shedding plants of the seed parent at the stage at which 5,0 percent or more of those plants show pollen-susceptible silk -
- 4.3.3.1 shall during a particular inspection of that unit, not exceed 1,0 percent of the plants of the seed parent : Provided that the aggregate of the number of pollen-shedding plants of the seed parent found during inspections shall not for the three inspections showing the highest incidence of such plants exceed 1,0 percent of the plants of the seed parent; and
- 4.3.3.2 shall during a particular inspection of a single row or a portion thereof, or of two adjacent rows or portions thereof, not exceed 5,0 percent of the plants of the seed parent in that row or rows or portion or portions; and
- 4.3.4 the number of ripe deviating seed cobs on or harvested from the plants of the seed parent shall not exceed 0,2 percent of the seed cobs on or harvested from the plants of the seed parent.
- 4.4 If the percentages referred to in paragraphs 4.2.3 and 4.3.3 are exceeded in respect of a unit, seed of a hybrid variety shall not be considered for certification if it has been harvested from plants which were established -
- 4.4.1 within a distance calculated at the rate of 10 metres for each 1,0 percent or portion thereof, but with a maximum of 350 metres, by which the applicable percentage referred to in paragraphs 4.2.3.1 and 4.3.3.1 is exceeded from the unit concerned; and
- 4.4.2 within a distance calculated at the rate of five metres plus one metre for each 1,0 percent or portion thereof, but with a maximum of 50 metres, by which the applicable percentage referred to in paragraphs 4.2.3.2 or 4.3.3.2 is exceeded from the row or rows or portion or portions thereof concerned.

5 Inspection requirements

- 5.1 Plants which are established on a unit shall be inspected -
- 5.1.1 before the flowering stage thereof;
- 5.1.2 during the flowering stage thereof; and
- 5.1.3 during the full seed stage thereof.
- 5.2 A seed grower shall notify the authorized person at least five days prior to the date on which the plants on a unit are expected to start flowering.
- 5.3 If plants have been established on a unit with a view to the production of certified pre-basic seed or basic seed of a hybrid variety -
- 5.3.1 the seed grower concerned shall pick and dehusk the seed cobs of the plants of the seed parent and thereafter remove it from the unit concerned with a view to thresh it;
- 5.3.2 those seed cobs shall be inspected after having been picked and dehusked; be inspected before being threshed; and
- 5.3.3 the seed grower concerned shall notify the authorised person at least five days prior to the date on which such seed cobs are expected to be threshed.

- 5.4 If plants have been established on a unit with a view to the production of certified seed of a hybrid variety-
- 5.4.1 the seed grower concerned shall either harvest or otherwise remove the seed cobs of -
- 5.4.1.1 the plants of the seed parent and remove it from the unit concerned before threshing those seed cobs; or
- 5.4.1.2 of the plants of the pollen parent before the seed of the plants of the seed parent is harvested by means of a combine harvester;
- 5.4.2 the seed cobs referred to in paragraph 5.4.1.1 or the plants of the seed parent referred to in paragraph 5.4.1.2, or as the case may be, shall respectively be inspected before being threshed or being harvested by means of a combine harvester; and
- 5.4.3 the seed grower concerned shall notify the authorised person at least five days prior to the date on which the seed of the plants concerned of the seed parent is expected to be harvested.

6 Physical requirements

- 6.1 Certified pre-basic seed or basic seed shall -
- 6.1.1 have a germination percentage of at least 70;
- 6.1.2 have at least 99,0 percent pure seed; and
- 6.1.3 not contain more than -
- 6.1.3.1 0,2 percent other seed;
- 6.1.3.2 1,0 percent other material;
- 6.1.3.3 0,1 percent seed of which the colour of the endosperm deviates from the colour of the endosperm of the variety concerned.
- 6.2 Certified seed shall -
- 6.2.1 have a germination percentage of at least 90;
- 6.2.2 have at least 99,0 percent pure seed; and
- 6.2.3 not contain more than -
- 6.2.3.1 0,05 percent other seed;
- 6.2.3.2 1,0 percent other material; and
- 6.2.3.3 0,2 percent seed of which the colour of the endosperm differs from the colour of the endosperm of the variety concerned.
- 6.2.4 Notwithstanding the provisions of paragraph 6.3.1, not more than one seed of any of the restricted weed seed species may occur in an ISTA working sample for the determination of other seed by number of the specie being tested.