

# The South African Seed Certification Scheme

## ANNEXURE 35

### REQUIREMENTS RELATING TO SUNFLOWER (*Helianthus annuus* L.)

#### 1 Field requirements

- 1.1 Subject to the provisions of paragraph 1.2, a field may be registered as a unit only if -
  - 1.1.1 no plants of any species of *Helianthus* have been established thereon for seed production or otherwise during the growing season preceding the registration thereof.
- 1.2 In the case of an open-pollinated sunflower variety only: A field which is intended for the production of basic seed or certified seed of a particular sunflower variety may 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; and
  - 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.

#### 3 Isolation requirements

- 3.1 Subject to the provisions of paragraph 3.3, a unit shall be surrounded by an isolation area which -
  - 3.1.1 in the case of the intended production of certified pre-basic and basic seed of -
    - 3.1.1.1 an open-pollinated variety, is at least 1 500 metres wide; and
    - 3.1.1.2 a hybrid variety, is at least 3 000 metres wide; and
  - 3.1.2 in the case of the intended production of certified seed -
    - 3.1.2.1 of an open-pollinated variety, is at least 500 metres wide; and
    - 3.1.2.2 of a hybrid variety, is at least 1 000 metres wide.
- 3.2 Such isolation area shall be free from plants of any sunflower variety or species of *Helianthus* which flower at the same time as the plants on the unit concerned, unless -
  - 3.2.1 in the case of the intended production of certified basic seed of an open-pollinated variety, 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 of an open-pollinated variety, 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 parent concerned, is maintained between the units concerned.

#### 4 Requirements for plants

- 4.1 Subject to the provisions of paragraph 4.2, 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 0,2 percent; and
  - 4.1.2 in the case of the intended production of certified seed, not exceed 0,5 percent.
- 4.2 If male sterility is used in the seed parent of a hybrid variety -
  - 4.2.1 the number of deviating pollen-shedding plants of the pollen parent on a unit shall -
    - 4.2.1.1 in the case of the intended production of certified pre-basic seed or basic seed, not exceed 0,2 percent of the plants of the pollen parent at the stage at which 2,0 percent or more of the plants of the seed parent have pollen-susceptible flowers; and
    - 4.2.1.2 in the case of the intended production of certified seed, not exceed 0,5 percent of the plants of the pollen parent at the stage at which 5,0 percent or more of the plants of the seed parent have pollen-susceptible flowers.

- 4.2.2 the number of deviating plants of the seed parent on a unit shall -
- 4.2.2.1 in the case of the intended production of certified pre-basic seed or basic seed, not exceed 0,2 percent of the plants of the seed parent; and
- 4.2.2.2 in the case of the intended production of certified seed, not exceed 0,5 percent of the plants of the seed parent; and
- 4.2.3 the number of pollen-shedding plants of the seed parent on a unit shall –
- 4.2.3.1 in the case of the intended production of certified pre-basic seed or basic seed, not exceed 0,2 percent of the plants of the seed parent at the stage at which 2,0 percent or more of the plants of the seed parent has pollen-susceptible flowers: Provided that the aggregate number of plants with pollen-shedding flowers found during consecutive inspections shall not exceed 0,2 percent of the plants of the seed parent; and
- 4.2.3.2 in the case of the intended production of certified seed, not exceed 0,5 percent of the plants of the seed parent at the stage at which 5,0 percent or more of the plants of the seed parent has pollen-susceptible flowers: Provided that the aggregate of the number of pollen-shedding flowers found during inspections shall not for the three inspections showing the highest incidence of such plants, exceed 0,5 percent of the plants of the seed parent.
- 4.3 The number of disease-infected plants on a unit shall -
- 4.3.1 in the case of the intended production of certified pre-basic seed or basic seed, not exceed 1,0 percent; and
- 4.3.2 in the case of the intended production of certified seed, not exceed 3,0 percent.
- 4.4 For the purposes of paragraph 4.3 "disease-infected plants" shall mean plants which are not visually free from *Verticillium* wilt disease.

## 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;
- 5.1.3 during the full seed stage thereof; and
- 5.1.4 in the case of a hybrid variety, after the seed heads of plants of the pollen parent have been removed.
- 5.2 If plants of a hybrid variety have been established on a unit-
- 5.2.1 the seed grower concerned shall notify the authorised person at least 10 days prior to the date on which -
- 5.2.1.1 the plants of the seed parent are expected to start flowering; and
- 5.2.1.2 the seed heads of the pollen parent are to be removed; and
- 5.2.2 the seed of the plants of the seed parent may not be harvested before the inspection referred to in paragraph 5.1.4 has been carried out.

## 6 Physical requirements

- Seed shall -
- 6.1 have a germination percentage of at least 80;
- 6.2 have at least 98,0 percent pure seed; and
- 6.3 not contain more than -
- 6.3.1 0,1 percent other seed; and
- 6.3.2 2,0 percent other material; and
- 6.3.3 0,2 percent seed of deviating plants; and
- 6.3.4 1,0 percent seed without a seed coat.
- 6.3.5 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; and
- 6.4 not contain more than 0,2 percent sclerotia of *Sclerotinia sclerotiorum* in a 1000 gram sample.