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GOVERNMENT NOTICES.

DEPARTMENT OF AGRICULTURAL TECHNICAL SERVICES.

No. R. 1112.] [26 July 1963.

REGULATIONS RELATING TO THE SAMPLING, ANALYSIS, TESTING AND EXAMINATION OF SEED.—THE SEEDS ACT, 1961 (ACT No. 28 OF 1961).

Under the powers vested in him by section *thirty* of the Seeds Act, 1961 (Act No. 28 of 1961), the State President has made the regulations set out in the Schedules hereto, relating to the sampling, analysis, testing and examination of seed.

SCHEDULE.

SAMPLING AND SAMPLES.

1. In order to obtain a respresentative sample of seed, the inspector or officer shall proceed as follows:—

(1) Free-flowing seed in bags, closed or open, shall be sampled with a probe or trier, which is long enough to reach all parts of the bag and which will not damage the seed. Approximately equal amounts of seed shall be taken from near the top, middle and bottom of each bag sampled.

(2) In the case of non-free-flowing seed which is packed in bags or other containers and which is difficult to sample with a probe or trier, the sample may be drawn by thrusting the hand into the seed and withdrawing representative portions.

(3) In the case of seed in bags—

(*a*) each bag shall be sampled if the lots consist of three bags or fewer;

(*b*) every third bag shall be sampled, but never fewer than three bags, if the lot consists of more than three bags but not more than 30 bags;

(*c*) every fifth bag shall be sampled, but never fewer than ten bags, if the lot consists of more than 30 bags.

(4) (*a*) Bulk lots in bins or other similar containers shall be sampled by withdrawing portions by hand from at least seven uniformly distributed parts of the quantity being sampled.

(*b*) When sampling bulk lots stored in heaps, a sample shall be taken by drawing portions by means of a probe or trier, long enough to reach the centre of the heap, in from ten to twenty places near the border, middle and bottom of the heap.

GOEWERMENTSKENNISGEWINGS.

DEPARTEMENT VAN LANDBOU-TEGNIESE DIENSTE.

No. R. 1112.] [26 Julie 1963.

REGULASIES MET BETREKKING TOT DIE MONSTERNEMING, ONTLEDING, TOETS EN ONDERSOEK VAN SAAD.—DIE WET OP SAAD, 1961 (WET No. 28 VAN 1961).

Kragtens die bevoegdheid hom verleen by artikel *dertig* van die Wet op Saad, 1961 (Wet No. 28 van 1961), het die Staatspresident die regulasies in die Bylae hiervan vervat, uitgevaardig met betrekking tot die monsterneming, ontleding, toets en ondersoek van saad.

BYLAE.

MONSTERNEMING EN MONSTERS.

1. Ten einde 'n verteenwoordigende monster van saad te verkry, moet die inspekteur of beampte as volg te werk gaan:—

(1) Monsters van vryvloeiende saad in toe of oop sakke moet geneem word met 'n saksteker of saadbuis wat lank genoeg is om alle dele van die sak te bereik en nie die saad sal beskadig nie. Ongeveer gelyke hoeveelhede saad moet geneem word naby die bek, middel en boom van elke sak wat getoets word.

(2) In die geval van saad wat nie vry vloei nie en wat in sakke of ander houers verpak is, en waarvan monsters moeilik met 'n saksteker of saadbuis geneem kan word, kan die monster geneem word deur die hand in die saad te steek en verteenwoordigende gedeeltes daarvan uit te haal.

(3) In die geval van saad wat in sakke verpak is, moet—

(*a*) uit elke sak monsters geneem word as die lot uit drie sakke of minder bestaan;

(*b*) uit elke derde sak monsters geneem word, maar nooit minder as drie sakke nie, as die lot uit meer as drie sakke maar hoogstens 30 sakke bestaan;

(*c*) uit elke vyfde sak monsters geneem word, maar nooit minder as tien sakke nie, as die lot uit meer as 30 sakke bestaan.

(4) (*a*) Van groot lotte in blikke of ander soortgelyke houers moet monsters geneem word deur gedeeltes met die hand te neem van minstens sewe eweredige verspreide dele van die hoeveelheid waarvan die monster geneem word.

(*b*) Wanneer monsters geneem word van groot lotte wat in hope verpak is, moet 'n monster verkry word deur gedeeltes deur middel van 'n saksteker of saadbuis wat lank genoeg is om die middel van die hoop te bereik, op van tien tot twintig plekke naby die rand, by die middel en onder in die hoop uit te haal.

(5) In the case of seed packed in small containers (packets, tins, etc.) entire unopened containers may be taken in sufficient number to obtain a minimum size sample as required in the last column of Table 1 of these regulations.

(6) If sampling is done during the cleaning process, a sample shall be drawn at regular intervals from the seed stream while passing from the cleaning plant, provided the container used to draw the sample is of such construction that the entire cross-sectional area of the seed stream is uniformly sampled, and that the seed entering it cannot bounce out again.

(7) (*a*) For the purpose of reducing the bulk sample, the portions obtained from different bags or parts of lots shall be placed on a hard, smooth surface and shall, after being thoroughly mixed, be spread out and, if necessary, quartered down. For this purpose the opposing quarters shall be discarded. This process may be repeated until the required quantity is obtained. It shall also be permissible to use a mechanical divider for reducing the bulk sample.

(*b*) The minimum size of the seed sample to be sent in for analysis by the inspector shall be at least the quantity as indicated in the last column of Table 1 hereto for the kind in question.

ANALYSIS OF THE SEED.

2. In order to examine, analyse and test the seed, the seed analyst shall proceed as follows:—

Determination of Purity.

(1) (*a*) In order to obtain a working sample for the purity analysis, the seed analyst shall reduce the sample received from the inspector or officer to approximately the weight specified in column 2 of Table 1 for the seed in question. The weight of the working sample in mixtures shall be determined by the kind (or group of kinds of similar size) constituting the major proportion of the sample. When there are two or more kinds of seed having different weights, each present to about the same extent, the analyst shall use his judgment in deciding upon the kind or group which will determine the sample weight. The weights given in Table 1 are minima, and the working sample may weigh slightly more than the weight specified. No attempt shall be made to bring the working sample to exactly the weight specified.

(*b*) For the purpose of obtaining the working sample, any one of the following methods shall be permissible:—

(i) *The Random Cups Method.*—A tray of convenient size is used and on it are placed six to eight cups or small containers of equal size, placed at random over the surface. The seed is shaken gently from a seed pan over the surface of the tray, a regular pattern being followed to ensure an even distribution, working first in one direction and then in a direction at right angles to the first. The seed caught in the small containers is used as the working sample, or may be further reduced, if necessary, in a similar manner after mixing.

(ii) *The Modified Halving Method.*—The procedure is similar to that of the random cups method, but instead of random cups a modified tray is used, which is divided into an even number of square compartments, every alternate one of which has no bottom. When the seed is shaken over the tray and the tray is lifted, half the sample remains on the pan placed beneath the tray. In this way the sample is repeatedly divided in half until a sample of the desired size is obtained.

(5) In die geval van saad wat in klein houers (pakkies, blikke, ens.), verpak is, kan onoopgemaakte houers in hul geheel in voldoende hoeveelhede geneem word om die minimum grootte monster te verkry soos vereis word in die laaste kolom van tabel 1 van hierdie regulasies.

(6) Wanneer monsters gedurende die skoonmaakproses geneem word, moet 'n monster by gereelde tussenpose uit die saadstroom geneem word terwyl die saad die skoonmaaktoestel verlaat, mits die houer wat gebruik word om die monster te neem so gemaak is dat eweredige monsters van die hele dwarsdeursnee-oppervlakte van die saadstroom geneem word, en dat die saad wat daar ingaan, nie weer kan uitspring nie.

(7) (*a*) Ten einde die groot monster te verminder, moet die gedeeltes wat uit verskillende sakke of gedeeltes van lotte verkry is, op 'n harde, gelyk oppervlak geplaas word en nadat dit goed gemeng is, uitgesprei en, indien nodig, in kwarte verdeel word. Vir hierdie doel word die teenoorgestelde kwarte weggelaat. Hierdie proses kan herhaal word totdat die gewenste hoeveelheid verkry is. Die gebruik van 'n meganiese verdeler vir die vermindering van die groot monster word ook toegelaat.

(*b*) Die minimum grootte van die saadmonster wat die inspekteur vir ontleding moet instuur, moet minstens die hoeveelheid wees soos in die laaste kolom van tabel 1 hierby vir die betrokke soort aangedui.

ONTLEDING VAN SAAD.

2. Om die saad te ondersoek, te ontleed of te toets, moet die ontleder as volg te werk gaan:—

Bepaling van suiwerheid.

(1) (*a*) Om 'n werkmonster vir die suiwerheidsontleding te kry, moet die ontleder die monster wat van die inspekteur of beampte ontvang is, verminder tot naastenby die gewig vir die betrokke saad in kolom 2 van tabel I aangegee. Die gewig van die werkmonster in mengsels moet bepaal word deur die soort (of groep soorte van dieselfde grootte) wat die grootste gedeelte van die monster uitmaak. Wanneer daar twee of meer soorte saad met verskillende gewigte is en elkeen in naastenby dieselfde mate aanwesig is, moet die ontleder na goeddunke besluit watter soort of groep die gewig van die monster sal bepaal. Die gewigte in tabel I aangegee, is minima, en die werkmonster kan effens meer weeg as die gespesifiseerde gewig. Geen poging mag aangewend word om die monster tot presies die gespesifiseerde gewig te bring nie.

(*b*) Om die werkmonster te verkry, word enigeen van die volgende metodes toegelaat:—

(i) *Die ewekansige bakkiemetode.*—'n Plat houer van gerieflike grootte word gebruik, waarop ses tot agt ewe groot bakkies na willekeur geplaas word. Die saad word versigtig uit 'n saadpan oor die oppervlak van die plat houer gestrooi terwyl 'n bepaalde patroon gevolg word om 'n gelykmatige verspreiding te bewerkstellig. Eers word in een rigting gestrooi en dan in 'n rigting reghoekig met die eerste. Die saad wat in die klein maathouers opgevang word, word as die werkmonster gebruik, of kan nog, indien nodig, na mening op dieselfde wyse verminder word.

(ii) *Die gewysigde halveringsmetode.*—Die prosedure is dieselfde as by die ewekansige bakkiemetode, maar in plaas van ewekansige bakkies word 'n gewysigde plat houer gebruik wat verdeel is in 'n gelyke getal vierkantige hokkies waarvan elke tweede een boomloos is. Wanneer die saad oor die houer gestrooi en die houer opgelig word, bly die helfte agter op die pan wat onder die houer geplaas word. Op dié wyse word die monster herhaaldelik in die helfte verdeel totdat 'n monster van die gewenste grootte verkry word.

(iii) *Mixing-by-Hand Method.*—The sample shall be well mixed and spread out in a layer of uniform thickness on a flat tray or mixing basin. The seed, after being spread out, shall not be shaken before being sampled; should this happen, the mixing and spreading shall be repeated. Small portions of the seed shall then be taken with a spoon from a number of different places on the tray until the required quantity has been obtained. In no case shall the number of spoon samples be smaller than five.

(iv) Mechanical Division.

(*c*) The purity analysis shall be made as a single test on at least the weight stipulated in Table 1 or by testing two subsamples drawn independently from the bulk sample. Each such subsample shall be at least one-half the quantities listed in Table 1. Owing to sampling variation it is to be expected that there will be differences in the results of duplicate analysis. Table 2 (*a*) for non-chaffy seeds and table 2 (*b*) for chaffy seeds shall be used in determining allowable latitudes of variation between duplicate samples. In case the first test and its duplicate should vary by more than the latitude allowed, a second pair, and, if necessary, a third pair of tests shall be made.

(*d*) Each duplicate sample shall then be separated into the following fractions:—

(i) Pure seed, which shall include, in addition to mature, undamaged seed of the kind under test, the following:—

Shrivelled or immature seeds; grass florets and/or parts of grass florets with an obvious caryopsis containing endosperm; cracked seeds and pieces of broken seeds that are more than one-half their original sizes;

seeds (botanically, fruits and fruitlike structures) regardless of whether they contain a true seed, unless it is readily apparent by visual examination that no true seed is present; included in this classification are *Beta* and one-seeded fruits such as *Cichorium, Lactuca* and similar seeds;

diseased seeds, excepting seeds which have been altered by fungi to form sclerotia or smut balls, and galls resulting from nematode infestation;

free caryopsis of cereals and grasses removed from the glumes, lemmas and paleas.

(ii) Seed of other crops, which shall include seeds of plants grown as crops, other than the kind under test. With respect to the classification of immature, damaged, diseased and empty seeds, the distinguishing characteristics set out for pure seed shall also be applicable to seed of other crops.

(iii) Weed seed, which shall include seeds, bulblets and tubers of plants recognised as weeds by law, official regulations or general usage, excepting undeveloped or badly damaged weed seeds as defined under "inert matter".

(iv) Inert matter, which shall include seedlike structures from crop plants, as follows:—

Pieces of broken or damaged seeds one-half the original size or less;

seeds of legumes and crucifers with the seed coats entirely removed;

empty glumes, lemmas and paleas and unattached sterile florets and/or parts of florets of grasses and cereals;

attached sterile florets and/or parts of florets of grasses, which shall be removed from the fertile florets, except in *Chloris gayana, Dactylis glomerata* and *Poa*

(iii) *Handmengmetode:*—Die monster word goed gemeng en egalig op 'n plat houer of mengbak gesprei. Nadat die saad uitgesprei is, moet dit nie geskud word alvorens 'n monster daarvan geneem is nie; indien dit gebeur, moet die saad weer gemeng en uitgesprei word. Klein gedeeltes van die saad word dan met 'n lepel van 'n aantal plekke op die houer geneem totdat die gewenste hoeveelheid verkry is. In geen geval moet die aantal lepelmonsters minder as vyf wees nie.

(iv) Meganiese verdeling.

(*c*) Die suiwerheidsontleding moet as 'n enkele toets gedoen word op minstens die gewig soos voorgeskryf in tabel I, of deur twee submonsters te toets wat elk onafhanklik van mekaar uit die totale monster geneem is. Elke submonster moet minstens die helfte so groot wees soos die hoeveelhede in tabel I aangegee. As gevolg van variasie in monsterneming moet verwag word dat daar verskille in die resultate van duplikaatontledings sal wees. Tabel 2 (*a*) vir niekafagtige en tabel 2 (*b*) vir kafagtige saad moet gebruik word om die toleransies vas te stel tussen duplikaatontledings. Ingeval die eerste toets en sy duplikaat met meer sou verskil as die tolleransie, moet 'n tweede paar, en indien nodig, 'n derde paar ontledings gedoen word.

(*d*) Elke duplikaatmonster moet dan in die volgende franksies geskei word:—

(i) Suiwer saad, wat benewens die ryp, onbeskadigde saad van die soort wat getoets word, die volgende insluit:—

Gekrimpte of onontwikkelde saad; grasblomme en/of dele van grasblomme met 'n duidelike kariopsis wat endosperm bevat; gebarste saad en stukkies gebreekte saad wat meer as die helfte van hul oorspronklike grootte is;

saad (botaniese, vrugte en vrugagtige strukture) ongeag of hulle 'n egte saad bevat, tensy met die oog duidelik vasgestel kan word dat geen egte saad werklik aanwesig is nie; by hierdie klassifikasie word *Beta* en eensadige vrugte soos *Cichorium, Lactuca* en soortgelyke saad ingesluit; aangetaste saad, uitgesonderd saad deur swamme vervorm tot sklerotia of brandspoorballe, en galknoppe as gevolg van aalwurmbesmetting; los kariopsis van graan- en grassoorte wat van die glumes, lemmas en paleas verwyder is.

(ii) Saad van ander gewasse wat, uitgesonderd dié soort wat getoets word, saad insluit van plante wat as gewasse gekweek word. Ten opsigte van die klassifikasie van onontwikkelde, beskadigde, aangetaste en leë saad, is die onderskeidende eienskappe soos vir suiwer saad gemeld ook van toepassing op saad van ander gewasse.

(iii) Onkruidsaad wat, uitgesonderd sekere onontwikkelde of erg beskadigde onkruidsaad soos omskryf onder "onaktiewe stof", saad, bolletjies en knolle van plante insluit wat volgens wet, amptelike regulasies of algemene gebruik as onkruidsaad beskou word.

(iv) Onaktiewe stof, insluitende saadagtige dele van gewasplante, soos volg:—

Brokkies van gebreekte of beskadigde saad wat die helfte van die oorspronklike grootte of minder is;

saad van peul- en koolgewasse (*Leguminosae* en *Cruciferae*) waarvan die saadhuid heeltemal verwyder is;

leë glumes, lemmas en paleas en los onvrugbare blomme van gras; aangehegte onvrugbare blomme en/of blomdele van gras wat van die vrugbare blomdele verwyder moet word, uitgesonderd by *Chloris gayana, Dactylis glomerata* en *Poa*-spesies; in die geval van *Dactylis* moet

species; in the case of *Dactylis* the weight of the multiple florets containing at least one caryopsis shall be determined, four-fifths of this weight added to the "pure seed" and one-fifth to the "inert matter";

seedlike structures from weed plants, as follows:—

Seeds of grasses with over one-half of the embryo removed;

"seeds" of *Cuscuta* species which are soft and ashen grey to creamy white in colour;

florets and/or parts of florets of grasses in which the caryopsis has not developed;

seeds of *Leguminosae* and *Cruciferae* with the seed coats entirely removed;

seeds of *Ambrosia* with the involucre and pericarp absent;

black "seeds" of *Plantago lanceolata*, whether shrivelled or not;

all badly developed or empty structures which resemble seeds, but which on visual examination (including the use of reflected light) can be definitely demonstrated as having no embryo;

any other matter, such as soil, sand, stones, chaff, stems, leaves, nematode galls, cone scales, pieces of cones, pieces of bark, flowers, fungus bodies (such as ergot, other sclerotia and smut balls), and all other matter which is not seed.

(*e*) If the sample contains two or more similar kinds of seed which would be very difficult to separate in the entire working sample, the similar seeds may be separated and weighed as a group. From this mixture at least 1,000 seeds shall be taken at random and the separation made from this portion. The proportion of each kind shall then be determined by weight, or if the seeds are of equal weight, the proportion may be determined by count. From this quantity the percentage in the entire sample is calculated.

(*f*) Each of the four fractions referred to under paragraph (*d*) of sub-regulation (1) of regulation 2 of this Schedule shall be weighed in grams to four decimal places and the percentage by weight of each fraction (based on the sum of the weights of the fractions and not on the original weight) determined. The sum of the weights of the fractions shall be compared with their original weight as a check against loss of material or other error.

(*g*) The averages of the percentage figures of pure seed, seed of other crops, weed seed and inert matter respectively, obtained from the duplicate or more analyses, shall represent the percentages of pure seed, seed of other crops, weed seed and inert matter in the seed concerned.

Determination of Undeveloped, Discoloured, Insect-eaten, Damaged Seed, Seed with Broken Seed Coat, Off-type and Clean Seed.

(2) (*a*) The determination shall be carried out on the pure seed fraction defined in sub-regulation (1) (*d*) (i) of regulation 2. For the purpose of the determination the depulicate pure seed samples shall be put together.

(*b*) The pure seed obtained as prescribed in subparagraph (*a*) shall be divided into the following fractions:—

(i) *Undeveloped seed,* which shall include seed which is visibly undeveloped and has not matured normally, and which will pass through a screen of generally accepted minimum size for the kind, variety or selection in question of the seed is sifted with such screen for at least 30 seconds;

die gewig van die blompakkies wat minstens een kariopsis bevat, bepaal word en vier-vyfdes van hierdie gewig by die "suiwer saad" en een-vyfde by "onaktiewe stof" getel word;

saadagtige strukture van onkruidplante, soos volg:—

Grassaad met meer as die helfte van die kiem verwyder;

"saad" van die *Cuscuta*-spesies wat sag en asgrys tot roomwit van kleur is;

grasblomme en/of blomdele waarin die kariopsis nie ontwikkel het nie;

saad van *Leguminosae* en *Cruciferae* met saadhuid heeltemal verwyder;

saad van *Ambrosia* met die omwindsel en vrugwand afwesig;

swart "saad" van *Plantago lanceolata*, hetsy verkrimp of nie;

alle swak ontwikkelde of leë strukture wat na saad lyk, maar wat by ondersoek met die oog (insluitende die gebruik van weerkaatste lig) duidelik toon dat geen kiem aanwesig is nie;

enige ander stof soos grond, sand, klippe, kaf, stingels, blare, aalwurmgalknoppe, keëlskubbe, keëlbrokkies, stukkies bas, blomme, swamliggame (soos ergot, ander sklerotia en brandspoorballetjies) en alle ander stof wat nie saad is nie.

(*e*) Indien die monster twee of meer eenderse soorte saad bevat wat in die hele werkmonster baie moeilik sal wees om te skei, kan die eenderse sade as 'n groep geskei en geweeg word. Van hierdie mengsel moet minstens 1,000 sade voor die voet geneem en die skeiding uit hierdie gedeelte gemaak word. Die verhouding van elke soort word dan volgens gewig vasgestel, of indien die saad ewe veel weeg, kan die verhouding vasgestel word deur die saad te tel. Van hierdie hoeveelheid word die persentasie in die hele monster bereken.

(*f*) Elkeen van die vier fraksies in paragraaf (*d*) van subregulasie (1) van regulasie 2 van hierdie Bylae genoem, moet in gram tot vier desimale plekke geweeg en die persentasie per gewig van elke fraksie (gebaseer op die som van die gewigte van die onderdele en nie op die oorspronklike gewig nie) bepaal word. Die som van die gewigte van die fraksie moet vergelyk word met die oorspronklike gewig daarvan om verlies aan materiaal of ander foute te kontroleer.

(*g*) Die gemiddeldes van die persentasiesyfers onderskeidelik vir suiwer saad, saad van ander gewasse, onkruidsaad en onaktiewe stof, wat van die duplikaat- of meer ontledings verkry is, verteenwoordig die persentasies ten opsigte van suiwer saad, saad van ander gewasse, onkruidsaad en onaktiewe stof in die betrokke saad.

Bepaling van onontwikkelde, verkleurde, insekgevrete, beskadigde saad, saad met gebreekte saadhuid, afwykende en skoon saad.

(2) (*a*) Die bepaling word uitgevoer op die suiwersaadfraksie omskryf in subregulasie (1) (*d*) (i) van regulasie 2. Vir die doel van die bepaling word die duplikaatsuiwersaadmonsters bymekaar gevoeg.

(*b*) Die suiwer saad verkry soos voorgeskryf in subparagraaf (*a*) word in die volgende fraksies verdeel:—

(i) *Onontwikkelde saad,* wat saad insluit wat sigbaar onontwikkeld is en nie normaal ryp geword het nie, en wat deur 'n sif van algemeen aanvaarde minimum grootte vir die betrokke soort, variëteit of seleksie sal val as die saad minstens dertig sekondes daarmee gesif word;

(ii) *discoloured seed,* which shall include seed which has been speckled, mottled or discoloured by weather, frost, heat, moisture, disease, fungi or any other agency, and which adversely affects the appearance of the sample;

(iii) *insect-eaten seed,* which shall include seed which has been eaten, bored or otherwise damaged by insects;

(iv) *damaged seed,* which shall include seed which has been damaged by harvesting, threshing or cleaning machines or by any other mechanical means, and seed of which the seed coat has cracked for physiological reasons during the development of the seed;

(v) *seed with broken seed coats,* which shall include seed of which the seed coat or testa is visibly cracked or broken in one or more places;

(vi) *off-type seed,* which shall include seed which does not comply with the recognised description of the kind of variety in question;

(vii) *clean seed,* the fraction remaining after the defective seeds mentioned under (i) to (vi) have been removed from the pure seed.

(*c*) Each of the fractions referred to in subparagraph (*b*) shall be weighed in grams to two decimal places and the percentage by weight of each fraction based on the original weight of the working sample referred to under regulation 2 (I) (*a*), shall be determined.

Determination of Number of Weed Seeds per Weight of Seed.

(3) (*a*) The minimum weight of the seed sample on which the determination is carried out shall be equal to the weight indicated in the last column of table I hereto for the kind in question.

(*b*) The number of weed seeds present in a specific weight of the seed shall be calculated on a pro rata basis according to the number of weed seeds found in the weight of seed examined.

Determination of Germination.

(4) (*a*) For the purpose of determining the germination, seed shall be taken from the pure-seed fraction.

(*b*) If a germination test only is required, the pure-seed for the germination test shall be taken at random from—

(i) the sample as received from the inspector or officer if the pure-seed content of the sample is considered to be 98 per cent or above;

(ii) a pure-seed fraction made according to the provisions of these regulations (except that crop seeds, inert matter and weed seeds need not be separated) if the pure-seed content is considered to be less than 98 per cent.

(*c*) At least 400 seeds shall be counted, without discrimination as to size and appearance, and tested in replicates of 100 or fewer.

(*d*) The substrata, temperatures, duration of test and special treatments for the various classes of seeds are specified in table 3.

(i) *Substrata.*—Paper substrata may be absorbent blotters, filter paper or paper towelling. Blotters and folded paper towels are commonly used for BP (between paper) tests, towelling for RP (rolled paper) tests and filter paper, blotters or a combination of the two for TP (top of paper) tests. For TP tests filter paper may also be placed on absorbent cotton or porous paper wadding. All paper substrata must be free from injurious chemicals and water-soluble dyes. Whenever an accumulation of toxic substances is apparant from the development of abnormal seedlings, retests shall be made in sterile soil or vermiculite.

(ii) *verkleurde saad,* wat saad insluit wat deur weer, ryp, hitte, vog, siekte, swamme of op enige ander wyse gevlek, gestippel of verkleur is, en wat die voorkoms van die monster benadeel;

(iii) *insekgevrete saad,* wat saad insluit wat deur insekte gevreet, geboor of andersins beskadig is;

(iv) *beskadigde saad,* wat saad insluit wat deur oes-, dors- of skoonmaakmasjiene of op 'n ander meganiese wyse beskadig is, en saad waarvan die saadhuid tydens die ontwikkeling van die saad as gevolg van fisiologiese redes oopgebars het;

(v) *saad met gebreekte saadhuid,* wat saad insluit waarvan die vel of saadhuid duidelik op een of meer plekke gebars of gebreek is;

(vi) *afwykende saad,* wat saad insluit wat nie aan die erkende beskrywing van die betrokke soort of variëteit voldoen nie;

(vii) *skoon saad,* die fraksie wat oorbly nadat die defekte saad soos onder (i) tot (vi) genoem, uit die suiwer saad verwyder is.

(*c*) Elkeen van die fraksies in paragraaf (*b*) genoem, moet in gram tot twee desimale plekke geweeg word en die persentasie per gewig van elke fraksie gebaseer op die oorspronklike gewig van die werkmonster genoem in regulasie 2 (1) (*a*) bepaal word.

Bepalings van getal onkruidsade per gewig saad.

(3) (*a*) Die minimum gewig van die saadmonster waarop die bepaling uitgevoer word, moet gelyk wees aan die gewig wat in die laaste kolom van tabel 1 hierby vir die betrokke soort aangedui word.

(*b*) Die getal onkruidsade aanwesig in 'n bepaalde gewig van die saad moet bereken word op 'n *pro rata*-basis ooreenkomstig die getal onkruidsade wat gevind word in die gewig saad wat ondersoek word.

Bepaling van ontkieming.

(4) (*a*) Om die ontkieming te bepaal, moet saad van die suiwersaadfraksie geneem word.

(*b*) Indien slegs 'n ontkiemingstoets nodig is, moet die suiwer saad vir die ontkiemingstoets voor die voet geneem word van—

(i) die monster soos ontvang van die inspekteur of beampte indien die suiwersaadgehalte van die monster as 98 persent of hoër beskou word;

(ii) 'n suiwersaadfraksie gemaak ooreenkomstig die bepalings van hierdie regulasies (uitgesonderd dat gewassaad, onaktiewe stof en onkruidsaad nie geskei hoef te word nie) indien die suiwersaadgehalte van die monster as laer as 98 persent beskou word.

(*c*) Minstens 400 sade moet, ongeag die grootte en voorkoms daarvan, afgetel en in replikate van 100 of minder getoets word.

(*d*) Die kiemmediums, temperatuur, duur van toets en spesiale behandelings vir die verskillende klasse saad word in tabel 3 gespesifiseer.

(i) *Kiemmediums.*—Papierkiemmediums kan uit absorberende kladpapier, filtreerpapier of papierhanddoekstof bestaan. Kladpapier en gevoude papierhanddoekstof word algemeen gebruik vir BP-toetse (tussen papier), handdoekstof vir RP-toetse (gerolde papier), en filtreerpapier, kladblokke of 'n kombinasie van die twee vir TP-toetse (bo-op papier). Vir TP-toetse kan filtreerpapier ook op absorberende watte of poreuse papierwatte geplaas word. Alle papierkiemmediums moet vry wees van skadelike chemikalieë en kleurstowwe wat in water oplosbaar is. Indien 'n ophoping van toksiese stowwe klaarblyklik voorkom, soos blyk uit die ontwikkeling van abnormale saailinge, moet hertoetse weer in steriele grond of vermikuliet gedoen word.

The number of sheets of paper to be used will depend on the thickness and composition of the paper. The total thickness of the substrata, when wet, shall not be less than approximately two millimetres.

Soil shall be non-caking, such as garden loam, and shall be sifted prior to use to remove large particles. If soil contains clay that may cause caking, a sufficient quantity of sand should be added to overcome this condition.

Sand shall be free of both very fine and large particles, and preferably composed of particles that will pass through a sieve having round holes 0·8 mm. in diameter, but will be retained on a sieve having round holes 0·05 mm. in diameter. Grass seeds shall not be covered with soil, but shall be pressed into the top part of the substratum.

Porous porcelain or clay dishes standing in water or on moist sand may be used in lieu of TP (top of paper) substrata where the latter is indicated in table 3.

V (vermiculite) and S (sand or soil) substrata shall be sterilised to kill any bacteria, fungi, spores, nematodes and foreign seeds that may be present.

(ii) *Temperature.*—Provision is made in table 3 for the use of alternating temperatures (20° to 30° C.) for many kinds of seed. This permits the use of the Jacobsen apparatus, or so-called Copenhagen Tank, as well as conventional germination cabinets and chambers. It is permissible to allow 20° C. constant temperature to run as low as 18° C., but it shall not exceed 21° C.

Alternating temperature shall be kept at the lower temperature for approximately 16 hours per day and at the higher temperature for approximately 8 hours per day. The temperature changes shall be sharp for seeds which are likely to be dormant. Gradual changes are allowed for non-dormant seeds.

(iii) *Light.*—Kinds of seed requiring light for germination may be tested at alternating temperatures, as indicated in table 3. Light shall be provided for the entire duration of the higher alternating temperature, except where otherwise indicated. Either natural or artificial light may be used, but in making the light available, the specified temperatures shall be maintained. For seeds that may be dormant, the light intensity shall be between 750 and 1,250 lux (approximately 75 to 125 foot candles).

(iv) *Moisture and Aeration.*—The initial amount of moisture shall be supplied according to the nature and dimensions of the seed bed, but the quantity of water applied subsequently shall be left to the discretion of the analyst. The substratum shall be moist enough at all times to supply the required moisture to the seeds. In preparing soil tests, water shall be added until the consistency of the soil is such that a ball is formed if the soil is squeezed in the palm of the hand, but that the ball, when pressed between two fingers, will break easily. After the soil is watered, it shall be rubbed through a sieve and put into the containers for the test without packing.

To prevent loss of moisture, sand and soil tests shall be covered with moist blotters or glass plates until the seedlings begin to emerge. The addition of water subsequent to placing the seed in test will depend upon the evaporation from the substrata in the germination chambers. Germination tests shall be observed at frequent intervals to ensure an adequate moisture supply of the substrata at all times.

Die getal papiervelle wat gebruik word, sal van die dikte en samestelling van die papier afhang. Wanneer die kiemmediums nat is, moet hul totale dikte nie minder as ongeveer twee millimeter wees nie.

Grond moet nie toeslaan nie. Tuinleemgrond is geskik en moet voor gebruik gesif word om groterige deeltjies daaruit te verwyder. Indien grond klei bevat wat kan toeslaan, behoort 'n voldoende hoeveelheid sand bygevoeg te word om hierdie toestand te verhelp.

Sand moet vry wees van baie fyn sowel as groot deeltjies, en moet verkieslik saamgestel wees uit deeltjies wat deur 'n 0·8 mm-rondegatsif sal kan gaan, maar wat teruggehou sal kan word op 'n 0·05 mm-rondegatsif. Grassaad moet nie met grond bedek word nie, maar moet in die boonste deel van die kiemmedium vasgedruk word.

Poreuse porselein- of kleibakke wat in water of op nat sand staan, kan in plaas van die TP-kiemmedium (bo-op papier) gebruik word waar laasgenoemde in tabel 3 aangedui word.

V (vermikuliet-) en S (sand- of grond-) kiemmediums moet gesteriliseer word om bakterieë, swamme, spore, aalwurms en vreemde saad wat aanwesig mag wees, te vernietig.

(ii) *Temperatuur.*—In tabel 3 word voorsiening gemaak vir die gebruik van wisseltemperatuur (20° C. tot 30° C.) vir baie soorte saad. Dit laat die gebruik van sowel die Jacobsen-apparaat, of sogenaamde Kopenhaagse tenk, as die gebruiklike ontkiemingskabinette en -kluise toe. Die konstante temperatuur van 20° C. kan tot 18° C. daal, maar mag nie hoër as 21° C. styg nie.

Wisseltemperatuur moet ongeveer 16 uur per dag by die laer temperatuur en ongeveer agt uur per dag by die hoër temperatuur gehou word. Die temperatuurwisseling moet skerp wees vir saad wat moontlik rustend is. Geleidelike veranderings word toegelaat vir sade wat nie rustend is nie.

(iii) *Lig.*—Saadsoorte wat lig vir ontkieming nodig het, kan by wisseltemperatuur getoets word soos aangedui in tabel 3. Behalwe waar anders aangedui, moet lig vir die hele duur van die hoër wisseltemperatuur verskaf word. Natuurlike of kunsmatige lig kan gebruik word, maar waar lig beskikbaar gestel word, moet die gespesifiseerde temperatuur gehandhaaf word. Vir sade wat moontlik rustend mag wees, moet die ligintensiteit tussen 750 en 1,250 lux wees (ongeveer 75 tot 125 voetkerse).

(iv) *Vogtigheid en deurligting.*—Die aanvanklike hoeveelheid water moet in ooreenstemming met die geaardheid en afmetings van die saadbedding toegedien word, maar die hoeveelheid water wat daarna toegedien word, word aan die oordeel van die ontleder oorgelaat. Die kiemmedium moet op alle tye vogtig genoeg wees om die nodige vogtigheid aan die saad te verskaf. By die voorbereiding van grondtoetse moet water toegedien word totdat die digtheid van die grond sodanig is dat 'n bal gevorm word as die grond in die palm van die hand gedruk word, maar dat die bal maklik sal breek as dit tussen die vingers gedruk word. Nadat die grond natgemaak is, moet dit deur 'n sif gevryf en in die maathouers geplaas word sonder om dit vas te druk.

Om vogverlies te voorkom, moet sand- en grondtoetse met klam kladpapier of glasplaatjies bedek word totdat die kiemplantjies begin uitkom. Die toevoeging van water nadat daar met die toets van die saad begin is, sal afhang van die verdamping van die kiemmedium in die ontkiemingskluise. Om te verseker dat die kiemmedium altyd genoeg water kry moet die ontkiemingstoetse gereeld nagegaan word.

(*e*) A seed shall be considered to have germinated when it has developed into a normal seedling. The following seedlings shall be considered as normal: —

Seedlings which have all the following essential structures, as follows: —

(i) Seedlings with a well-developed root system, including a primary root except for those plants (e.g. certain species of *Gramineae*) normally producing seminal roots of which there should at least be two;

(ii) seedlings with a well-developed and intact hypocotyl without damage to the conducting tissues;

(iii) seedlings with an intact plumule or epicotyl with a well-developed leaf within, or emerging through the coleoptile or an intact plumular bud;

(iv) seedlings with one cotyledon for monocotyledons and two cotyledons for dicotyledons.

Seedlings with the following slight defects shall be counted as normal provided they show vigorous and balanced development of the other essential structures: —

(i) Seedlings of *Pisum, Vicia faba, Phaseolus, Lupinus, Vigna, Glycine, Arachis, Gossypium, Zea* and all species of *Cucurbitaceae* with no primary root but with two or more secondary roots of sufficient length and vigour to support the seedling in the soil;

(ii) seedlings with superficial damage or decay to the hypocotyl, epicotyl or cotyledons which is limited in area and does not affect the conducting tissues;

(iii) seedlings of dicotyledons with only one cotyledon.

(*f*) Malformed and abnormal seedlings shall not be considered to have germinated.

Abnormal seedlings shall be classified as follows: —

(i) Seedlings free from decay which are poorly developed at the end of the test as a result of slow germination due to low germinating power, even though they appear capable of forming a normal root or normal secondary roots; this shall not include seedlings that develop slowly as a result of hardseededness or dormancy;

(ii) broken seedlings, including—

seedlings with both cotyledons missing;

seedlings having a portion of the root missing, and in which subsequent growth of secondary roots has not yet occurred at the time of the final count;

seedlings with cracks, breaks or lesions on the hypocotyls or roots that extend into the conducting tissues;

(iii) seedlings whose radicles have constrictions extending into the conducting tissues;

(iv) seedlings partly or wholly decayed, provided there is no evidence to show that the infection has been transmitted from another seedling;

(v) seedlings which at the end of the germination period show practically no sign of growth, even though the seed coat may have burst, regardless of whether or not the cotyledons are green;

(vi) seedlings with weak, unhealthy shoots or roots;

(vii) seedlings showing serious deformities (e.g. curling of the hypocotyl, or of the cotyledons) and having practically no vigour;

(viii) seedlings which develop abnormally owing to seedborne disease, provided there is no evidence to show that the infection has been transmitted from a neighbouring infected seedling;

(*e*) 'n Saad word as ontkiem beskou wanneer dit tot 'n normale saailing ontwikkel het. Die volgende saailinge word as normaal beskou: —

Saailinge wat noodsaaklike strukture bevat, soos volg: —

(i) Saailinge met 'n goedontwikkelde wortelstelsel, insluitende 'n primêre wortel, behalwe dié soorte plante (bv. sekere *Gramineae*-spesies wat gewoonlik bywortels vorm en waarvan daar minstens twee moet wees;

(ii) saailinge met 'n goedontwikkelde en vaste hipokotiel sonder beskadiging van die geleidingsweefsel;

(iii) saailinge met 'n vaste pluimpie of epikotiel met 'n goedontwikkelde blaar binne in, of wat uitkom deur die koleoptiel of 'n vaste pluimknop;

(iv) saailinge met een saadlob in die geval van eensaadlobbige plante en twee saadlobbe in die geval van tweesaadlobbige plante.

Saailinge met die volgende ligte defekte moet as normaal getel word mits die ander noodsaaklike strukture 'n sterk en gebalanseerde groei vertoon: —

(i) Saailinge van *Pisum, Vicia faba, Phaseolus, Lupinus, Vigna, Glycine, Arachis, Gossypium, Zea* en alle spesies van *Cucurbitaceae*, sonder 'n primêre wortel maar met twee of meer sekondêre wortels wat lank en sterk genoeg is om die saailing in die grond te stut;

(ii) saailinge met oppervlakkige beskadiging of bederf van die hipokotiel, epikotiel of saadlobbe wat beperk is in omvang en wat nie die geleidingsweefsel aantas nie;

(iii) saailinge van tweesaadlobbige plante met net een saadlob.

(*f*) Misvormde en abnormale saailinge word nie as ontkiem beskou nie.

Abnormale saailinge word as volg ingedeel: —

(i) Saailinge vry van verrotting wat as gevolg van stadige ontkieming, veroorsaak deur 'n gebrek aan kiemkrag, aan die einde van die toetse swak ontwikkel is, ofskoon dit mag voorkom asof hulle in staat is om 'n normale wortel of normale sekondêre wortels te vorm; dit sluit nie saailinge in wat stadig ontwikkel as gevolg van hardskaligheid of kiemrus nie;

(ii) gebreekte saailinge, insluitende—

saailinge waarvan albei saadlobbe ontbreek;

saailinge waarvan 'n gedeelte van die wortel ontbreek en waarvan die latere groei van die sekondêre wortels nog nie ten tyde van die finale telling plaasgevind het nie;

saailinge met barste, breekplekke of letsels aan die hipokotiele of wortels wat tot in die geleidingsweefsels strek;

(iii) saailinge waarvan die kiemworteltjies vernouinge het wat tot in die geleidingsweefsels strek;

(iv) saailinge wat gedeeltelik of heeltemal verrot is, mits daar geen tekens is wat toon dat die besmetting van 'n ander saailing oorgedra is nie;

(v) saailinge wat aan die einde van die ontkiemingstydperk feitlik geen tekens van groei toon nie, selfs al het die saadhuid gebars, ongeag of die saadlobbe groen is of nie;

(vi) saailinge met swak, ongesonde spruite of wortels;

(vii) saailinge wat ernstige misvormdheid toon (bv. opkrul van die hipokotiel of saadlobbe) en feitlik sonder groeikrag is;

(viii) saailinge wat abnormaal ontwikkel as gevolg van saadgedraagde siektes, mits daar geen tekens is wat toon dat die besmetting van 'n naburige besmette saailing oorgedra is nie;

(ix) seedlings of *Cruciferae* (*Brassica, Raphanus,* etc.), as follows:—

Well-developed seedlings of which the roots, hypocotyl or cotyledons are partly decayed, provided there is no evidence to show that the infection has been transmitted from a neighbouring decayed seedling;
seedlings with a well-developed hypocotyl, but with a radicle having no root-hairs;
seedlings with well-developed shoots, but with a short, stubby radicle, or without radicle or roots;
seedlings with deep, unhealed cracks and lesions on the hypocotyl, extending into the conducting tissues;
seedlings with a radicle which is wholly or partly attenuated;
well-developed seedlings which are watery or glassy;
seedlings having 550 per cent or more of the area of the cotyledons (or the area around the growing point) discoloured by brown spots or patches owing to disease organisms such as *Alternaria;*
seedlings with abnormally large cotyledons and very small radicles;
seedlings showing any other serious abnormality, not specifically indicated (e.g. curled cotyledons, curled hypocotyl, etc.);

(x) seedlings of onion and leek (*Allium*) as follows:—

Seedlings with stubby or constricted roots, usually with a thickened part at the base of the hypocotyl, regardless of whether attacked by bacterial rot or not;
seedlings with a poorly developed leaflike cotyledon without a definite curve, sometimes spindly, watery and slow to sprout;

(xi) seedlings of lettuce (*Lactuca*) as follows:—

Seedlings with brown-coloured radicles or roots, or with attenuated roots having no root-hairs;
seedlings with more than one-half of the area of their cotyledons covered with brown-coloured spots, or a smaller area if adjacent to the growing point;
weak seedlings with short radicles and hypocotyls;
seedlings with unhealed cracks and lesions in the hypocotyls, extending into the conducting tissues;

(xii) seedlings of *Beta* as follows:—

Seedlings having no root or a stubby primary root and poor secondary-root development, usually associated with a shortened hypocotyl;
seedlings with malformed, shortened, twisted, watery or stubby hypocotyls, usually associated with stubby roots;
seedlings with deep granular lesions or cracks in the hypocotyls, if they appear to interfere with the conducting tissues;
seedlings with both cotyledons absent as in samples of "sheared" beet seed and occasional samples of spinach;
seedlings with two large cotyledons, but a malformed, short hypocotyl, usually with a stubby root;
seedlings having decayed cotyledons or hypocotyl, provided they are not the result of improper test conditions;

(xiii) seedlings of grasses, as follows:—

Seedlings without roots;
seedlings without green leaves, but with only the white sheath or coleoptile formed;

(ix) saailinge van *Cruciferae* (*Brassica, Raphanus,* ens.) soos volg:—

Goed ontwikkelde saailinge waarvan die wortels, hipokotiel of saadlobbe gedeeltelik verrot is, mits daar geen tekens is wat toon dat die besmetting van 'n naburige saailing oorgedra is nie;
saailinge met 'n goed ontwikkelde hipokotiel, maar met 'n kiemworteltjie sonder wortelhare;
saailinge met goed ontwikkelde spruite, maar met 'n kort, stomp kiemworteltjie, of sonder kiemworteltjie of wortels;
saailinge met diep, ongeheelde barste en letsels aan die hipokotiel wat tot in die geleidingsweefsels strek;
saailinge met 'n kiemworteltjie wat heeltemal of gedeeltelik verdun het;
goedontwikkelde saailinge wat waterdig of glaserig is;
saailinge waarvan 50 persent of meer van die oppervlakte van die saadlobbe (of die oppervlakte rondom die groeipunt) as gevolg van siekteorganismes soos *Alternaria,* deur bruin vlekke of kolle verkleur is;
saailinge met abnormaal groot saadlobbe en baie klein kiemworteltjies;
saailinge met enige ander ernstige abnormaliteit wat nie spesifiek aangegee is nie (bv. gekrulde saadlobbe, gekrulde hipokotiele, ens.);

(x) saailinge van uie en prei (*Allium*), soos volg:—

saailinge met stomp of vernoude wortels, gewoonlik met 'n verdikking by die voet van die hipokotiel, ongeag of dit deur bakteriese verrotting aangetas is of nie;
saailinge met 'n swak ontwikkelde blaaragtige saadlob sonder 'n definitiewe kromming, soms dun, waterig en stadig om te groei;

(xi) saailinge van blaarslaai (*Lactuca*), soos volg:—

Saailinge met bruinkleurige kiemworteltjies of wortels, of met verdunde wortels sonder wortelhare;
saailinge met meer as die helfte van die oppervlakte van hul saadlobbe bedek met bruinkleurige vlekke, of 'n kleiner oppervlakte indien dit langs die groeipunt voorkom;
swak saailinge met kort kiemworteltjies en hipokotiele;
saailinge met ongeheelde barste en letsels in die hipokotiel wat tot in die geleidingsweefsels strek;

(xii) saailinge van *Beta* soos volg:—

saailinge wat geen wortel het nie, of 'n stomp primêre wortel en swak ontwikkelde sekondêre wortels, gewoonlik met 'n verkorte hipokotiel geassosieer;
saailinge met misvormde, verkorte, verdraaide, waterige of stomp hipokotiele, gewoonlik met stomp wortels geassosieer;
saailinge met diep, korrelrige letsels of barste in die hipokotiele, indien hulle die geleidingsweefsels skyn te belemmer;
saailinge waarvan albei saadlobbe ontbreek, soos in monsters van "gevryfde" beetsaad en soms in monsters van spinasie;
saailinge met twee groot saadlobbe, maar met 'n misvormde, kort hipokotiel—gewoonlik met 'n stomp wortel;
saailinge met verrotte saadlobbe of hipokotiel, mits dit nie die gevolg van ondoeltreffende toetstoestande is nie;

(xiii) grassaailinge, soos volg:—

Saailinge sonder wortels;
saailinge sonder groen blare, maar waarvan slegs die wit skede of koleoptiel gevorm is;

seedlings with shortened shoots extending no more than one-half of the distance up through the coleoptile;
seedlings with thin, spindly or watery shoots accompanied by weak root development and decayed grains;
seedlings with badly torn or longitudinally split leaves with or without splitting of the coleoptile;

(xiv) seedlings of clovers (*Trifolium*) and other small-seeded legumes as follows: —

Seedlings with stubby roots, usually associated with shortened hypocotyls;
seedlings with deep, longitudinal splits on the roots or hypocotyls extending into the conducting tissues of the hypocotyls;
seedlings with both cotyledons missing, regardless of whether the epicotyl is present or not;
seedlings with one cotyledon missing, if the epicotyl is also absent;
seedlings with decayed cotyledons, provided the decay was not transmitted to the seedling from an adjacent seed, or was not the result of improper test conditions;
spindly, watery seedlings, if not the result of excess moisture in substrata;

(xv) seedlings of beans (*Phaseolus*), peas (*Pisum*) and other large-seeded legumes, as follows: —

Seedlings with epicotyl missing, broken or damaged to the extent that it does not develop during the germination test, even though there may be shoots arising from the axil of one or both of the cotyledons;
seedlings with both primary leaves missing, even though the epicotyl is intact;
seedlings with malformed hypocotyl characterised by open splits, or which appear curled or shortened or thickened;
seedlings with primary root missing and no well-developed set of secondary roots;
seedlings with two shoots, both of which are weak;
seedlings of which especially the epicotyl is decayed, provided the decay organism spreads from the germinating seed;

(xvi) seedlings of cereals, as follows: —

Seedlings without a primary root and only one or two short and spindly secondary roots in species having a principal or primary root;
seedlings without green leaves, but with only the white sheath or the coleoptile formed;
seedlings with shortened plumules, extending no more than one-half of the distance up through the coleoptiles;
seedlings with badly shattered or longitudinally split leaves, with or without splitting of the coleoptile;
seedlings with decayed shoots, provided that the decay is not the result of improper test conditions;
seedlings which are badly frost-damaged and are characterised by granular coleoptiles and spirally twisted leaves and coleoptiles.

(*g*) When testing seeds of *Beta vulgaris* tests shall be conducted in such a manner as to retain the identity of each seedling with the seed structure from which it developed. This may be done either by counting and removing the seedlings before they separate from the seed structures or by using some device to separate the seed structures in the test. A seed unit of *Beta* shall be deemed to have germinated if it produces one or more normal seedlings; likewise a multiple floret of *Dactylis glomerata, Chloris gayana* and species of *Poa* shall be germinated as a

saailinge met verkorte spruite wat tot hoogstens die helfte van die afstand deur die koleoptiel strek;
saailinge met dun, tingerige of waterige spruite gepaard met swak wortelontwikkeling en bedorwe korrels;
saailinge met erg verflenterde of in die lengte gesplete blare, met of sonder splitsing van die koleoptiel;

(xiv) saailinge van klawer (*Trifolium*) en ander kleinsadige peulgewasse, soos volg: —

Saailinge met stomp wortels, gewoonlik met verkorte hipokotiele geassosieer;
saailinge met diep lengtebarsies aan die wortels of hipokotiele wat tot in die geleidingsweefsels van die hipokotiele strek;
saailinge waarvan albei saadlobbe ontbreek, ongeag of daar 'n epikotiel aanwesig is of nie;
saailinge waarvan een saadlob ontbreek, as die epikotiel ook ontbreek;
saailinge met verrotte saadlobbe, mits die verrotting nie van 'n naburige saad na die saailing oorgedra of die gevolg van ondoeltreffende toetstoestande is nie;
tingerige, waterige saailinge, indien nie die gevolg van 'n oormaat water in die kiemmedium nie;

(xv) saailinge van bone (*Phaseolus*), erte (*Pisum*) en ander grootsadige peulgewasse, soos volg: —

Saailinge waarvan die epikotiel ontbreek of sodanig gebreek of beskadig is dat dit nie gedurende die kiemtoets ontwikkel nie, al mag daar spruite uit die oksel van een of albei saadlobbe groei;
saailinge waarvan albei primêre blare ontbreek, al is die epikotiel ongeskonde;
saailinge met misvormde hipokotiele gekenmerk deur oop barsies, of wat 'n gekrulde, verkorte of verdikte voorkoms het;
saailinge waarvan die primêre wortel ontbreek en sonder 'n stel goed ontwikkelde sekondêre wortels;
saailinge met twee spruite wat albei swak is;
saailinge waarvan veral die epikotiel verrot mits die verrottingsorganisme uit die ontkiemde saad versprei;

(xvi) saailinge van graansoorte, soos volg: —

Saailinge sonder 'n primêre wortel en slegs een of twee tengerige sekondêre wortels in die geval van spesies waar 'n primêre wortel voorkom;
saailinge sonder groen blare, maar met slegs die wit skede of die koleoptiel gevorm;
saailinge met verkorte plumulas wat hoogstens die helfte van die afstand deur die koleoptiele strek;
saailinge met erg verflenterde blare of blare wat in die lengte gesplits is, met of sonder splitsing van die koleoptiel;
saailinge met verrotte spruite, mits die verrotting nie die gevolg is van swak toetstoestande nie;
saailinge wat erg deur ryp beskadig is en gekenmerk word deur korrelrige koleoptiele en spiraalgedraaide blare en koleoptiele.

(*g*) Wanneer saad van *Beta vulgaris* getoets word, moet toetse op so 'n wyse uitgevoer word dat die identiteit van elke saailing met die saadstruktuur waaruit dit ontwikkel het, behou word. Dit kan geskied deur die saailinge te tel en te verwyder voordat hulle van die saadstruktuur skei of om van 'n apparaat gebruik te maak om die saadstruktuur in die toets te skei. 'n Saadeenheid van *Beta* word geag ontkiem te wees as dit een of meer normale saailinge voortbring; eweneens moet 'n blompakkie van *Dactylis glomerata, Chloris gayana* en spesies van

single seed. Seeds of *Leguminosae* which remain hard at the end of the test period prescribed in table 3, because they have not absorbed water, shall be deemed to be "hard seed". If, at the end of the germination test period provided for seed of *Leguminosae* there are present swollen seeds or seeds which have just started to germinate, the test may be continued for five additional days and the normal seedlings included in the germination percentage.

(*h*) In cases where it is desirable to hasten the germination of dormant seeds, the following special treatments shall be permissible—

(i) To prechill the seed at temperatures as indicated in table 3; the seed shall be kept in contact with a moist substratum during the prechilling period;

(ii) to use a 0·2 per cent solution of potassium nitrate for moistening the substratum;

(iii) to dry the seed before germination at a temperature not exceeding 40° C.

(*j*) New tests shall be made where there is a difference of—

(i) 10 per cent or more in the germination percentages between any two replicates, if the average germination of all the replicates thus tested is 90 per cent or more; or

(ii) 12 per cent or more in the germination per centages between any two replicates, if the average germination of all the replicates thus tested is from 80 to 89 per cent;

(iii) 15 per cent or more in the germination percentages between any two replicates, if the average germination of all the replicates thus tested is 79 per cent or less.

(*k*) The germination percentage shall be calculated on a count basis. The average figure obtained from the replicates tested, shall be deemed to be the germination of the seed in question.

Determination of Trueness to Type and Variety.

(5) (*a*) (i) For the purpose of determining the trueness of type and variety by means of seed characteristics, at least 1,000 seeds shall be taken without discrimination as to size and appearance from the sample received from the inspector or officer.

(ii) A seed shall be considered true to type and/or variety if, with due consideration to climatic, disease or other disturbance of the appearance, size and shape of the seed, it complies with the generally accepted botanical description of the type and/or variety in question.

(iii) The true-to-type and/or variety percentage shall be calculated on a count basis.

(*b*) (i) For the purpose of determining the trueness to type and variety by means of a growing test, at least 500 plants thereof, taken without discrimination as to size and appearance shall be grown in trial plots during the first sowing season following the receipt of the sample.

(ii) The test shall be made under optimum conditions, which shall require growing the plants in areas where the crop is adapted, according to the best possible accepted cultural practices, including proper control of insects and diseases, and during the proper season.

(iii) A seed shall be considered true to type and/or variety if, with due consideration to climatic, disease or other disturbance of the growth of the plant, it produces a plant which complies with the general accepted morphological description of the type and/or variety in question.

(iv) The true to type and/or variety percentage shall be calculated on a count basis of the actual number of plants which have developed sufficiently to identify the type and/or variety.

Poa as 'n enkele saad ontkiem word. Saad van *Leguminosae* wat hard bly aan die einde van die toetstydperk, soos voorgeskryf in tabel 3, omdat dit nie water opgeneem het nie, word geag „harde saad" te wees. As daar aan die einde van die ontkiemingstoetstydperk vir saad van *Leguminosae* geswelde saad aanwesig is, of saad wat net begin het om te ontkiem, kan die toetse nog vyf dae lank voortgesit en die normale saailinge by die ontkiemingspersentasie ingesluit word.

(*h*) In gevalle waar dit wenslik is om die ontkieming van rustende saad te verhaas, word die volgende spesiale behandelings toegelaat: —

(i) Om saad vooraf te verkoel by temperatuurgrade soos aangegee in tabel 3; die saad moet gedurende die voorverkoelingstydperk met 'n vogtige kiemmedium in aanraking gehou word;

(ii) om 'n 0·2-persent-oplossing van kaliumnitraat te gebruik om die kiemmedium nat te maak;

(iii) om die saad voor ontkieming by 'n temperatuur van hoogstens 40° C. te droog.

(*j*) Nuwe toetse moet gedoen word as daar 'n verskil is van—

(i) 10 persent en meer tussen die ontkiemingspersentasies van enige twee replikate as die gemiddelde ontkieming van al die replikate in die toets 90 persent of meer is; of

(ii) 12 persent en meer tussen die ontkiemingspersentasies van enige twee replikate as die gemiddelde ontkieming van al die replikate in die toets van 80 tot 89 persent is;

(iii) 15 persent en meer tussen die ontkiemingspersentasies van enige twee replikate as die gemiddelde ontkieming van al die replikate in die toets 79 persent of minder is.

(*k*) Die ontkiemingspersentasie moet op 'n tellingsbasis bereken word. Die gemiddelde syfer verkry van die replikate in die toets word as die ontkieming van die betrokke saad beskou.

Bepaling van egtheid van soort en variëteit.

(5) (*a*) (i) Om die egtheid van soort en variëteit deur middel van saadeienskappe te bepaal, moet minstens 1,000 saadjies sonder onderskeid ten opsigte van grootte en voorkoms geneem word van die monster wat van die inspekteur of beampte ontvang is.

(ii) 'n Saad word geag soort- en/of variëteitseg te wees as dit met inagneming van klimaats-, siekte- of ander versteuring van die voorkoms, grootte en vorm van die saad, voldoen aan die algemeen aanvaarde plantkundige beskrywing van die betrokke soort en/of variëteit.

(iii) Die soort- en/of variëteitsegtheidspersentasie moet op 'n tellingsbasis bereken word.

(*b*) (i) Om die egtheid van soort en variëteit deur middel van 'n groeitoets te bepaal, moet minstens 500 plante daarvan sonder onderskeid ten opsigte van grootte en voorkoms in proefpersele gedurende die eerste saaiseisoen na ontvangs van die monster gekweek word.

(ii) Die toets moet onder optimum toestande uitgevoer word, wat vereis dat die plante gekweek moet word in streke waar die gewas aangepas is en volgens die beste erkende verbouingspraktyke, met inbegrip van behoorlike bestryding van insekte en siektes, asook gedurende die regte seisoen.

(iii) 'n Saad word geag soort- en/of variëteitseg te wees as dit met inagneming van klimaats-, siekte- of ander versteuring van die groei van die plant, 'n plant voortbring wat voldoen aan die algemeen aanvaarde morfologiese beskrywing van die betrokke soort en/of variëteit.

(iv) Die soort- en/of variëteitsegtheidspersentasie moet bereken word op 'n tellingsbasis van die werklike getal plante wat voldoende ontwikkel het om die soort en/of variëteit vas te stel.

(*c*) (i) The ultra-violet test (also known as the Gentner fluorescence test) may be used to determine the percentages of *Lolium perenne* and *Lolium multiflorum* in samples containing these seeds.

(ii) The test shall consist of not fewer than 400 seeds in replicates of 100 or fewer.

(iii) The seeds shall be placed on white filter paper for germination spaced and arranged in such a way as to prevent entwining of the roots and confusion of the fluorescent lines. The filter paper may be placed on an additional substratum, if necessary, for maintenance of proper moisture.

(iv) In regard to temperature and moisture for testing, and methods of overcoming dormancy, the procedure described under "Determination of Germination" shall be followed. The first examination may be made on the sixth day and the final count shall be made on the fourteenth day.

(v) The seedlings shall be examined under ultra-violet light produced by an ultra-violet lamp transmitting radiations between 3,000 and 4,000 A.U. (Angstrom Units), with a maximum radiation between 3,600 and 3,700 A.U., and a trace of visible light. The intensity of the radiation shall be sufficient to reveal the weakest flourescent lines. Lamps possessing these qualities include the—

(*a*) Hanau and Hanovia Quarts Lamps;
(*b*) Cooper - Hewitt Mercury-Vapour, 250 - watt lamp;
(*c*) Keese Manufacturing Company's model No. 7, black light with Corning Heat-resistant Red Purple ultra No. 5874 or No. 5840 filter and General Electric Mercury EH[4] Bulb; and the
(*d*) Philip's H.P.W.-125-watt Lamp.

(vi) Seedlings showing the necessary fluorescence shall be counted as *Lolium multiflorum* and seedlings not showing any fluorescence shall be counted as *Lolium perenne*.

(vii) The percentages of fluorescent and non-fluorescent seedlings shall be based on the number of normal seedlings produced. The abnormal seedlings shall be treated in the same way as dead seeds.

(viii) New tests shall be made where there is a difference of 10 per cent or more in the percentages of of fluorescent/non-fluorescent seedlings between any two replicates if the average percentage of fluorescent /non-fluorescent seedlings of all the replicates thus tested is 90 per cent or more; 12 per cent or more in the percentages of fluorescent / non-fluorescent seedlings between any two replicates if the average percentage of fluorescent/non-fluorescent seedlings of all the replicates thus tested is from 80 to 89 per cent; 15 per cent or more in the percentages of fluorescent/non-fluorescent seedlings between any two replicates if the average percentage of fluorescent/ non-fluorescent seedlings of all the replicates thus tested, is 79 per cent or less.

(ix) The percentage of fluorescent/non-fluorescent seedlings shall be calculated on a count basis. The average figure obtained from the replicates tested, shall be the percentage of fluorescent/non-fluorescent seedlings.

Determination of Percentage Alkaloid Containing Seeds.

(6) (*a*) In order to determine the percentage of alkaloid containing seeds, at least 400 seeds shall be taken at random from the sample received from the inspector or officer and tested in replicates of 100 or fewer.

(*b*) For the purpose of the test a solution, made up as follows, shall be used:—

20 grams of potassium iodide,
10 grams of iodine crystals,
1,000 cubic centimetres of distilled water.

(*c*) The seeds shall be cut through crosswise and one-half placed in the solution, as prescribed above, for ten seconds, after which the seeds shall be washed with water for five seconds and then spread out on filter paper.

(*c*) (i) Die ultraviolettoets (ook bekend as die Gentner-fluoressensietoets) kan gebruik word om die persentasies *Lolium perenne* en *Lolium multiflorum* te bepaal in die monsters wat hierdie saad bevat.

(ii) Die toets moet uit minstens 400 saadjies in replikate van 100 of minder bestaan.

(iii) Die saad moet vir ontkieming op wit filtreerpapier geplaas en so gespasieer en gerangskik word dat die wortels nie inmekaarrank en verwarring in die fluoressensielyne ontstaan nie. Die filtreerpapier kan indien nodig op 'n addisionele kiemmedium geplaas word om die regte graad van vogtigheid te handhaaf.

(iv) Met betrekking tot die temperatuur en vogtigheid vir die toets en metodes om die kiemrus te breek, moet die prosedure in „Bepaling van Ontkieming" beskryf, gevolg word. Die eerste ondersoek kan op die sesde dag gedoen en die finale telling moet op die veertiende dag gemaak word.

(v) Die saailinge moet onder ultravioletlig ondersoek word deur middel van 'n ultravioletlamp wat tussen 3,000 en 4,000 A.E. (angstromeenhede) uitstraal met 'n maksimum uitstraling tussen 3,600 en 3,700 A.E., en 'n spoor van sigbare lig. Die intensiteit van die uitstraling moet voldoende wees om die swakste fluoressensielyne bloot te lê. Lampe wat oor hierdie hoedanighede beskik, sluit in die—

(*a*) Hanau- en Hanovia-kwartslampe;
(*b*) Cooper-Hewitt-kwikdamplamp (250 watt);
(*c*) Keese Manufacturing Company se model No. 7, swart lig, met Corning-hittebestande (rooi-pers ultrafilter) (No. 5874 of No. 5840) en General Electric-kwikgloeilamp (EH[4]);
(*d*) Philip se H.P.W.-125 W.-lamp.

(vi) Saailinge wat die nodige fluoressensie toon, moet as *Lolium multiflorum* en saailinge wat geen fluoressensie toon nie, as *Lolium perenne* getel word.

(vii) Die persentasies van fluoressensie- en nie fluoressensiesaailinge moet gebasseer word op die getal normale saailinge wat voortgebring word. Die abnormale saailinge moet op dieselfde wyse as dooie saad behandel word.

(viii) Nuwe toetse moet gedoen word as daar 'n verskil van 10 persent of meer is tussen die persentasies fluoressensie-/nie-fluoressensiesaailinge van enige twee replikate as die gemiddelde persentasie fluoressensie-/nie-fluoressensiesaailinge van al die replikate in die toets 90 persent of meer is. 12 persent of meer tussen die persentasies fluoressensie-/nie-fluoressensiesaailinge van enige twee replikate as die gemiddelde persentasie fluoressensie- / nie-fluoressensiesaailinge van al die replikate in die toets van 80 tot 89 persent is; 15 persent of meer tussen die persentasies fluoressensie-/nie-fluoressensiesaailinge van enige twee replikate as die gemiddelde persentasie fluoressensie-/nie-fluoressensiesaailinge van al die replikate in die toets 79 persent en laer is.

(ix) Die persentasie fluoressensie-/nie-fluoressensiesaailinge moet op 'n tellingsbasis bereken word. Die gemiddelde syfer verkry van die replikate in die toets is die persentasie fluoressensie-/nie-fluoressensiesaailinge.

Bepaling van persentasie alkoloïedbevattende saad.

(6) (*a*) Om die persentasie alkoloïedbevattende saad te bepaal, moet minstens 400 saadjies voor die voet van die monster wat van die inspekteur of beampte ontvang is, geneem in replikate van 100 of minder getoets word.

(*b*) Om die toets uit te voer, moet die volgende oplossing gebruik word:—

20 gram kaliumjodied,
10 gram jodiumkristalle,
1,000 kubieke centimeter gedistilleerde water.

(*c*) Die saad moet in die dwarste deurgesny en die een helfte daarvan tien sekondes in die voorgeskrewe oplossing geplaas word, waarna dit vyf sekondes in water gewas en dan op filtreerpapier uitgesprei moet word.

Seeds of which the out surfaces show a brownish-red discolouration shall be considered to be alkaloid-containing and those showing a yellowish-brown discolouration shall be considered to be alkaloid-free.

(*d*) The percentage of alkaloid-containing seeds shall be calculated on a count basis. The average figure obtained from the replicates tested shall be the percentage of alkaloid-containing seeds.

TABLE 1.

MINIMUM WEIGHTS OF SEED SAMPLES.

Kind of Seed.	Minimum Weight of Seed.	
	For Working Sample (Grams).	To be submitted by inspector. For Determination of Number of Weed Seeds per Weight of Seed (grams).
Allium cepa L.	10	100
Allium porrum L.	10	100
Beta vulgaris L.	50	250
Brassica onapus L.	10	100
Brassica oleracea L. var. *acephala* DC.	10	100
Brassica oleracea L. var. *botrytis* L.	10	100
Brassica oleracea L. var. *capitata* L.	10	100
Brassica oleracea L. var. *caulorapa* DC.	10	100
Brassica oleracea L. var. *gemmifera* Zenker	10	100
Brassica oleracea L. var. *napobrassica* L.	10	100
Brassica pekinesis L.	10	100
Brassica rapa L.	10	100
Bromus inermis Leyss.	5	50
Bromus wildenowii Kunth (B. catharticus Vahl.)	25	250
Capsicum spp.	25	250
Cenchrus ciliaris L.	2	50
Chloris gayana Kunth.	1	25
Cichorium endivia L.	5	50
Citrullus vulgaris Schrad.	500	1,000
Cucumis melo L.	100	500
Cucumis sativus L.	100	500
Cucurbita maxima Duchesné.	500	1,000
Cucurbita moschata Duchesné.	500	1,000
Cucurbita pepo L.	500	1,000
Dactylis glomerata L.	2	50
Daucus carota L.	5	50
Digitaria spp.	2	50
Eragrostis spp.	1	25
Festuca arundinacea Schreb.	5	50
Festuca pratensis Huds. (F. elatior L.)	5	50
Glycine max (L) Merr.	500	1,000
Gossypium hirsutum L.	500	1,000
Hibiscus cannabinus L.	100	500
Lactuca sativa L.	5	50
Lolium multiflorum Lam.	5	50
Lolium perenne L.	5	50
Lupinus albus L.	500	1,000
Lupinus angustifolius L.	500	1,000
Lupinus luteus L.	500	1,000
Lycopersicon esculentum Mill.	5	50
Medicago sativa L.	5	50
Ornithopus sativus Link.	—	—
Paspalum dilatatum Poir.	2	50
Paspalum urvillei Steud.	2	50
Pastinaca sativa L.	10	100
Petroselinum crispum (Mill.) Nym.	5	50
Phalaris tuberosa L.	5	50
Phaseolus vulgaris L.	500	1,000
Pisum sativum L.	500	1,000
Poa pratensis L.	1	25
Raphanus sativus L.	50	250
Ricinus communis L.	500	1,000
Setaria sphacelata (Schumach.) Stapf	2	50
Solanum melongena L. var. *esculentum* Nees	10	100
Sorghum almum Parodi	25	250
Sorghum species Perennial Sweetsorgrass	25	250
Sorghum species *Kaffircorn*	25	250
Sorghum sudanense (Piper) Stapf	25	250
Trifolium fragiferum L.	5	50
Trifolium incarnatum L.	10	100
Trifolium pratense L.	5	50
Trifolium repens L.	2	50
Trifolium subterraneum L.	25	250
Vicia faba L.	500	1,000
Zea mays L.	500	1,000

Saad waarvan die snyvlak 'n bruin-rooi verkleuring toon, moet as alkaloïedbevattende en dié met 'n geelbruin verkleuring as nie-alkaloïedbevattende beskou word.

(*d*) Die persentasie alkaloïedbevattende saad moet op 'n tellingsbasis bereken word. Die gemiddelde syfer verkry van die replikate in die toets is die persentasie alkaloïedbevattende saad.

TABEL 1.

MINIMUM GEWIGTE VAN SAADMONSTERS.

Soort saad.	Minimum gewig saad.	
	Vir werkmonster (gram).	Om deur inspekteur ingedien te word. Vir bepaling van aantal onkruidsade per gewig saad (gram).
Allium cepa L.	10	100
Allium porrum L.	10	100
Beta vulgaris L.	50	250
Brassica napus L.	10	100
Brassica oleracea L. var. *acephala* DC.	10	100
Brassica oleracea L. var. *botrytis* L.	10	100
Brassica oleracea L. var. *capitata* L.	10	100
Brassica oleracea L. var. *caulorapa* DC.	10	100
Brassica oleracea L. var. *gemmifera* Zenker	10	100
Brassica oleracea L. var. *napobrassica* L.	10	100
Brassica pekinensis L.	10	100
Brassica rapa L.	10	100
Bromus inermis Leyss.	5	50
Bromus wildenowii Kunth (B. catharticus Vahl.)	25	250
Capsicum spp.	25	250
Cenchrus ciliaris L.	2	50
Chloris gayana Kunth.	1	25
Cichorium endivia L.	5	50
Citrullus vulgaris Schrad.	500	1,000
Cucumis melo L.	100	500
Cucumis sativus L.	100	500
Cucurbita maxima Duchesné.	500	1,000
Cucurbita moschata Duchesné.	500	1,000
Cucurbita pepo L.	500	1,000
Dactylis glomerata L.	2	50
Daucus carota L.	5	50
Digitaria spp.	2	50
Eragrostis spp.	1	25
Festuca arundinacea Schreb.	5	50
Festuca pratensis Huds. (F. elatior L.)	5	50
Glycine max (L) Merr.	500	1,000
Gossypium hirsutum L.	500	1,000
Hibiscus cannabinus L.	100	500
Lactuca sativa L.	5	50
Lolium multiflorum Lam.	5	50
Lolium perenne L.	5	50
Lupinus albus L.	500	1,000
Lupinus angustifolius L.	500	1,000
Lupinus luteus L.	500	1,000
Lycopersicon esculentum Mill.	5	50
Medicago sativa L.	5	50
Ornithopus sativus Link.	10	100
Paspalum dilatatum Poir.	2	50
Paspalum urvillei Steud.	2	50
Pastinaca sativa L.	10	100
Petroselinum crispum (Mill.) Nym.	5	50
Phalaris tuberosa L.	5	50
Phaseolus vulgaris L.	500	1,000
Pisum sativum L.	500	1,000
Poa pratensis L.	1	25
Raphanus sativus L.	50	250
Ricinus communis L.	500	1,000
Setaria sphacelata (Schumach.) Stapf	2	50
Solanum melongena L. var. *esculentum* Nees	10	100
Sorghum almum Parodi	25	250
Sorghum spesies (meerjarige Soetsorgras)	25	250
Sorghum-spesies (kafferkoring)	25	250
Sorghum sudanense (Piper) Stapf	25	250
Trifolium fragiferum L.	5	50
Trifolium incarnatum L.	10	100
Trifolium pratense L.	5	50
Trifolium repens L.	2	50
Trifolium subterraneum L.	25	250
Vicia faba L.	500	1,000
Zea mays L.	500	1,000

TABLE 2 (*a*).

TOLERANCES OF PURE SEED VARIATIONS FOR NON-CHAFFY SEEDS IN DUPLICATE ANALYSIS TESTS ON THE WORKING SAMPLE.

Purity Value, Percentage.	0·00	0·10	0·20	0·30	0·40	0·50	0·60	0·70	0·80	0·90	Purity Value, Percentage.
100	0·60	—	—	—	—	—	—	—	—	—	100
99	0·79	0·77	0·75	0·73	0·71	0·69	0·67	0·65	0·63	0·61	99
98	1·00	0·98	0·96	0·94	0·92	0·90	0·88	0·86	0·83	0·81	98
97	1·18	1·16	1·14	1·12	1·10	1·08	1·06	1·05	1·04	1·01	97
96	1·36	1·34	1·33	1·31	1·29	1·27	1·25	1·23	1·21	1·20	96
95	1·55	1·52	1·50	1·48	1·46	1·45	1·44	1·42	1·40	1·38	95
94	1·72	1·71	1·69	1·67	1·65	1·63	1·62	1·60	1·58	1·56	94
93	1·90	1·88	1·86	1·85	1·83	1·81	1·79	1·78	1·76	1·74	93
92	2·07	2·05	2·03	2·02	2·00	1·98	1·96	1·95	1·93	1·91	92
91	2·23	2·22	2·20	2·18	2·17	2·15	2·13	2·12	2·10	2·08	91
90	2·40	2·38	2·36	2·35	2·33	2·31	2·30	2·28	2·27	2·25	90
89	2·55	2·54	2·52	2·51	2·49	2·47	2·46	2·44	2·43	2·41	89
88	2·71	2·68	2·67	2·66	2·65	2·63	2·62	2·60	2·58	2·57	88
87	2·86	2·84	2·83	2·81	2·80	2·78	2·77	2·75	2·74	2·72	87
86	3·00	2·99	2·97	2·96	2·95	2·93	2·92	2·90	2·89	2·87	86
85	3·15	3·13	3·12	3·10	3·09	3·07	3·06	3·05	3·03	3·02	85
84	3·28	3·27	3·26	3·24	3·23	3·21	3·20	3·19	3·17	3·16	84
83	3·42	3·40	3·39	3·38	3·36	3·35	3·34	3·32	3·31	3·30	83
82	3·55	3·53	3·52	3·51	3·50	3·48	3·47	3·46	3·44	3·43	82
81	3·67	3·66	3·65	3·64	3·62	3·61	3·60	3·59	3·57	3·56	81
80	3·80	3·78	3·77	3·76	3·75	3·73	3·72	3·71	3·70	3·68	80
79	3·91	3·90	3·89	3·88	3·87	3·85	3·84	3·83	3·82	3·81	79
78	4·03	4·02	4·00	3·99	3·98	3·97	3·96	3·95	3·94	3·92	78
77	4·14	4·13	4·12	4·10	4·09	4·08	4·07	4·06	4·05	4·04	77
76	4·24	4·23	4·22	4·21	4·20	4·19	4·18	4·17	4·16	4·15	76
75	4·35	4·33	4·32	4·31	4·30	4·29	4·28	4·27	4·26	4·25	75
74	4·44	4·43	4·42	4·41	4·40	4·39	4·38	4·37	4·36	4·35	74
73	4·54	4·53	4·52	4·51	4·50	4·49	4·48	4·47	4·46	4·45	73
72	4·63	4·62	4·61	4·60	4·59	4·58	4·57	4·56	4·56	4·55	72
71	4·71	4·70	4·70	4·69	4·68	4·67	4·66	4·65	4·64	4·64	71
70	4·80	4·79	4·78	4·77	4·76	4·75	4·75	4·74	4·73	4·72	70
69	4·87	4·87	4·86	4·85	4·84	4·83	4·83	4·82	4·81	4·80	69
68	4·95	4·94	4·93	4·93	4·92	4·91	4·90	4·90	4·89	4·88	68
67	5·02	5·01	5·00	5·00	4·99	4·98	4·98	4·97	4·96	4·95	67
66	5·08	5·08	5·07	5·06	5·06	5·05	5·04	5·04	5·03	5·02	66
65	5·15	5·14	5·13	5·13	5·12	5·11	5·11	5·10	5·10	5·09	65
64	5·20	5·20	5·19	5·19	5·18	5·17	5·17	5·16	5·16	5·15	64
63	5·26	5·25	5·25	5·24	5·24	5·23	5·23	5·22	5·21	5·21	63
62	5·31	5·30	5·30	5·29	5·29	5·28	5·27	5·27	5·27	5·26	62
61	5·35	5·35	5·34	5·34	5·34	5·33	5·33	5·32	5·32	5·31	61
60	5·40	5·39	5·39	5·38	5·38	5·37	5·37	5·37	5·36	5·36	60
59	5·43	5·43	5·43	5·42	5·42	5·41	5·41	5·41	5·40	5·40	59
58	5·47	5·46	5·46	5·46	5·45	5·45	5·45	5·44	5·44	5·44	58
57	5·50	5·49	5·49	5·49	5·49	5·48	5·48	5·48	5·47	5·47	57
56	5·52	5·52	5·52	5·51	5·51	5·51	5·51	5·51	5·50	5·50	56
55	5·55	5·54	5·54	5·54	5·54	5·53	5·53	5·53	5·53	5·53	55
54	5·56	5·56	5·56	5·56	5·56	5·55	5·55	5·55	5·55	5·55	54
53	5·58	5·58	5·57	5·57	5·57	5·57	5·57	5·57	5·57	5·56	53
52	5·59	5·59	5·59	5·58	5·58	5·58	5·58	5·58	5·58	5·58	52
51	5·59	5·59	5·59	5·59	5·59	5·59	5·59	5·59	5·59	5·59	51
50	5·60	5·59	5·59	5·59	5·59	5·59	5·59	5·59	5·59	5·59	50

TABEL 2 (*a*).

TOLERANSIES VIR VERSKILLE IN SUIWER SAAD BY DUPLIKAATONTLEDINGS VAN DIE WERKMONSTERS BY NIE-KAFAGTIGE SADE.

Suiwerheidswaarde, persentasie.	0·00	0·10	0·20	0·30	0·40	0·50	0·60	0·70	0·80	0·90	Suiwerheidswaarde, persentasie.
100	0·60	—	—	—	—	—	—	—	—	—	100
99	0·79	0·77	0·75	0·73	0·71	0·69	0·67	0·65	0·63	0·61	99
98	1·00	0·98	0·96	0·94	0·92	0·90	0·88	0·86	0·83	0·81	98
97	1·18	1·16	1·14	1·12	1·10	1·08	1·06	1·05	1·04	1·01	97
96	1·36	1·34	1·33	1·31	1·29	1·27	1·25	1·23	1·21	1·20	96
95	1·55	1·52	1·50	1·48	1·46	1·45	1·44	1·42	1·40	1·38	95
94	1·72	1·71	1·69	1·67	1·65	1·63	1·62	1·60	1·58	1·56	94
93	1·90	1·88	1·86	1·85	1·83	1·81	1·79	1·78	1·76	1·74	93
92	2·07	2·05	2·03	2·02	2·00	1·98	1·96	1·95	1·93	1·91	92
91	2·23	2·22	2·20	2·18	2·17	2·15	2·13	2·12	2·10	2·08	91
90	2·40	2·38	2·36	2·35	2·33	2·31	2·30	2·28	2·27	2·25	90
89	2·55	2·54	2·52	2·51	2·49	2·47	2·45	2·44	2·43	2·41	89
88	2·71	2·68	2·67	2·66	2·65	2·63	2·62	2·60	2·58	2·57	88
87	2·86	2·84	2·83	2·81	2·80	2·78	2·77	2·75	2·74	2·72	87
86	3·00	2·99	2·97	2·96	2·95	2·93	2·92	2·90	2·89	2·87	86
85	3·15	3·13	3·12	3·10	3·09	3·07	3·06	3·05	3·03	3·02	85
84	3·28	3·27	3·26	3·24	3·23	3·21	3·20	3·19	3·17	3·16	84
83	3·42	3·40	3·39	3·38	3·36	3·35	3·34	3·32	3·31	3·30	83
82	3·55	3·53	3·52	3·51	3·50	3·48	3·47	3·46	3·44	3·43	82
81	3·67	3·66	3·65	3·64	3·62	3·61	3·60	3·59	3·57	3·56	81
80	3·80	3·78	3·77	3·76	3·75	3·73	3·72	3·71	3·70	3·68	80
79	3·91	3·90	3·89	3·88	3·87	3·85	3·84	3·83	3·82	3·81	79
78	4·03	4·02	4·00	3·99	3·98	3·97	3·96	3·95	3·94	3·92	78
77	4·14	4·13	4·12	4·10	4·09	4·08	4·07	4·06	4·05	4·04	77
76	4·24	4·23	4·22	4·21	4·20	4·19	4·18	4·17	4·16	4·15	76
75	4·35	4·33	4·32	4·31	4·30	4·29	4·28	4·27	4·26	4·25	75
74	4·44	4·43	4·42	4·41	4·40	4·39	4·38	4·37	4·36	4·35	74
73	4·54	4·53	4·52	4·51	4·50	4·49	4·48	4·47	4·46	4·45	73
72	4·63	4·62	4·61	4·60	4·59	4·58	4·57	4·56	4·56	4·55	72
71	4·71	4·70	4·70	4·69	4·68	4·67	4·66	4·65	4·64	4·64	71
70	4·80	4·79	4·78	4·77	4·76	4·75	4·75	4·74	4·73	4·72	80
69	4·87	4·87	4·86	4·85	4·84	4·83	4·83	4·82	4·81	4·80	69
68	4·95	4·94	4·93	4·93	4·92	4·91	4·90	4·90	4·89	4·88	68
67	5·02	5·01	5·00	5·00	4·99	4·98	4·98	4·97	4·96	4·95	67
66	5·08	5·08	5·07	5·06	5·06	5·05	5·04	5·04	5·03	5·02	66
65	5·15	5·14	5·13	5·13	5·12	5·11	5·11	5·10	5·10	5·09	65
64	5·20	5·20	5·19	5·19	5·18	5·17	5·17	5·16	5·16	5·15	64
63	5·26	5·25	5·25	5·24	5·24	5·23	5·23	5·22	5·21	5·21	63
62	5·31	5·30	5·30	5·29	5·29	5·28	5·27	5·27	5·27	5·26	62
61	5·35	5·35	5·34	5·34	5·34	5·33	5·33	5·32	5·32	5·31	61
60	5·40	5·39	5·39	5·38	5·38	5·37	5·37	5·37	5·36	5·36	60
59	5·43	5·43	5·43	5·42	5·42	5·41	5·41	5·41	5·40	5·40	59
58	5·47	5·46	5·46	5·46	5·45	5·45	5·45	5·44	5·44	5·44	58
57	5·50	5·49	5·49	5·49	5·49	5·48	5·48	5·48	5·47	5·47	57
56	5·52	5·52	5·52	5·51	5·51	5·51	5·51	5·50	5·50	5·50	56
55	5·55	5·54	5·54	5·54	5·54	5·53	5·53	5·53	5·53	5·53	55
54	5·56	5·56	5·56	5·56	5·56	5·55	5·55	5·55	5·55	5·55	54
53	5·58	5·58	5·57	5·57	5·57	5·57	5·57	5·57	5·57	5·56	53
52	5·59	5·59	5·59	5·58	5·58	5·58	5·58	5·58	5·58	5·58	52
51	5·59	5·59	5·59	5·59	5·59	5·59	5·59	5·59	5·59	5·59	51
50	5·60	5·59	5·59	5·59	5·59	5·59	5·59	5·59	5.59	5·59	50

TABLE 2 (*b*).

TOLERANCES OF PURE SEED VARIATIONS FOR CHAFFY SEEDS, INCLUDING *AGROSTIS, BROMUS CHLORIS, DACTYLIS, DIGITARIA, EHRHARTA, FESTUCA, PASPALUM, POA* AND *SETARIA*, AND MIXTURES CONTAINING THESE KINDS, SINGLY OR COMBINED, IN EXCESS OF 50 PER CENT, IN DUPLICATE ANALYSIS TESTS ON THE WORKING SAMPLE.

Purity Value, Percentage.	0·00	0·10	0·20	0·30	0·40	0·50	0.60	0·70	0·80	0·90	Purity Value, Percentage.
100	0·60	—	—	—	—	—	—	—	—	—	100
99	0·79	0·77	0·75	0·73	0·71	0·69	0·67	0·65	0·63	0·61	99
98	1·00	0·98	0·96	0·94	0·92	0·90	0·88	0·86	0·83	0·81	98
97	1·21	1·19	1·17	1·15	1·12	1·10	1·08	1·07	1·06	1·03	97
96	1·41	1·39	1·38	1·35	1·33	1·31	1·29	1·27	1·24	1·23	96
95	1·62	1·59	1·57	1·54	1·52	1·51	1·50	1·48	1·45	1·43	95
94	1·82	1·81	1·78	1·76	1·74	1·71	1·70	1·68	1·66	1·63	94
93	2·03	2·00	1·98	1·97	1·95	1·92	1·90	1·87	1·86	1·84	93
92	2·23	2·21	2·18	2·17	2·15	2·12	2·10	2·09	2·06	2·04	92
91	2·43	2·41	2·39	2·36	2·35	2·33	2·30	2·28	2·27	2·24	91
90	2·64	2·61	2·59	2·57	2·55	2·52	2·51	2·49	2·47	2·45	90
89	2·83	2·81	2·79	2·77	2·75	2·72	2·71	2·69	2·62	2·65	89
88	3·03	3·01	2·99	2·97	2·95	2·93	2·91	2·89	2·86	2·85	88
87	3·23	3·20	3·19	3·16	3·15	3·12	3·11	3·08	3·07	3·04	87
86	3·42	3·40	3·37	3·36	3·35	3·32	3·31	3·28	3·27	3·24	86
85	3·62	3·59	3·58	3·55	3·54	3·51	3·50	3·48	3·46	3·44	85
84	3·80	3·78	3·77	3·74	3·73	3·70	3·69	3·67	3·65	3·63	84
83	4·00	3·97	3·95	3·94	3·91	3·90	3·88	3·86	3·84	3·83	83
82	4·18	4·16	4·14	4·13	4·11	4·08	4·07	4·05	4·03	4·01	82
81	4·36	4·35	4·33	4·32	4·29	4·27	4·26	4·24	4·21	4·20	81
80	4·56	4·53	4·51	4·49	4·48	4·46	4·44	4·42	4·41	4·38	80
79	4·73	4·71	4·69	4·68	4·66	4·63	4·62	4·60	4·59	4·57	79
78	4·92	4·90	4·87	4·85	4·83	4·82	4·80	4·79	4·77	4·74	78
77	5·09	5·07	5·05	5·03	5·01	4·99	4·98	4·96	4·94	4·93	77
76	5·25	5·24	5·22	5·20	5·19	5·17	5·15	5·14	5·12	5·10	76
75	5·43	5·40	5·49	5·37	5·35	5·34	5·32	5·30	5·29	5·27	75
74	5·59	5·57	5·56	5·54	5·52	5·50	5·49	5·47	5·45	5·44	74
73	5·76	5·74	5·73	5·71	5·69	5·67	5·66	5·64	5·63	5·61	73
72	5·92	5·90	5·89	5·87	5·85	5·83	5·82	5·80	5·80	5·78	72
71	6·07	6·05	6·05	6·03	6·01	6·00	5·98	5·96	5·94	5·94	71
70	6·24	6·22	6·20	6·18	6·16	6·15	6·14	6·12	6·11	6·09	70
69	6·37	6·37	6·35	6·33	6·32	6·30	6·29	6·28	6·26	6·24	69
68	6·53	6·51	6·49	6·49	6·47	6·45	6·43	6·43	6·41	6·39	68
67	6·67	6·65	6·64	6·63	6·61	6·59	6·59	6·57	6·55	6·53	67
66	6·80	6·80	6·78	6·76	6·76	6·74	6·72	6·71	6·71	6·68	66
65	6·95	6·93	6·91	6·91	6·89	6·87	6·86	6·84	6·84	6·82	65
64	7·07	7·06	7·04	7·04	7·02	7·00	7·00	6·98	6·97	6·95	64
63	7·20	7·18	7·18	7·16	7·15	7·13	7·13	7·11	7·09	7·09	63
62	7·32	7·30	7·30	7·28	7·27	7·26	7·25	7·23	7·23	7·21	62
61	7·43	7·43	7·41	7·40	7·40	7·38	7·36	7·35	7·35	7·33	61
60	7·56	7·54	7·53	7·51	7·51	7·49	7·48	7·48	7·46	7·45	60
59	7·65	7·65	7·64	7·62	7·62	7·60	7·59	7·59	7·57	7·56	59
58	7·76	7·74	7·74	7·73	7·71	7·71	7·70	7·68	7·68	7·67	58
57	7·86	7·84	7·83	7·83	7·82	7·80	7·80	7·79	7·77	7·77	57
56	7·94	7·94	7·93	7·93	7·91	7·90	7·90	7·89	7·87	7·87	56
55	8·04	8·02	8·02	8·01	8·01	7·99	7·98	7·97	7·97	7·96	55
54	8·11	8·11	8·10	8·10	8·09	8·07	8·06	8·06	8·05	8·05	54
53	8·20	8·19	8·17	8·17	8·16	8·16	8·15	8·14	8·14	8·12	53
52	8·27	8·26	8·26	8·24	8·23	8·23	8·22	8·21	8·21	8·20	52
51	8·32	8·32	8·31	8·31	8·30	8·30	8·29	8·28	8·28	8·27	51
50	8·40	8·37	8·37	8·36	8·36	8·35	8·35	8·34	8·34	8·33	50

TABEL 2 (*b*).

TOLERANSIES VIR VERSKILLE IN SUIWER SAAD BY DUPLIKAATONTLEDINGS VAN DIE WERKMONSTER BY KAFAGTIGE SADE, INSLUITENDE *AGROSTIS, BROMUS, CHLORIS, DACTYLIS, DIGITARIA, EHRHARTA, FESTUCA, PASPALUM, POA* EN *SETARIA* EN MENGSELS WAT MEER AS 50 PERSENT VAN HIERDIE SOORTE AFSONDERLIK OF GESAMENTLIK BEVAT.

Suiwerheidswaarde, persentasie.	0·00	0·10	0·20	0·30	0·40	0·50	0·60	0·70	0·80	0·90	Suiwerheidswaarde, persentasie.
100	0·60	—	—	—	—	—	—	—	—	—	100
99	0·79	0·77	0·75	0·73	0·71	0·69	0·67	0·65	0·63	0·61	99
98	1·00	0·98	0·96	0·94	0·92	0·90	0·88	0·86	0·83	0·81	98
97	1·21	1·19	1·17	1·15	1·12	1·10	1·08	1·07	1·06	1·03	97
96	1·41	1·39	1·38	1·35	1·33	1·31	1·29	1·27	1·24	1·23	96
95	1·62	1·59	1·57	1·54	1·52	1·51	1·50	1·48	1·45	1·43	95
94	1·82	1·81	1·78	1·76	1·74	1·71	1·70	1·68	1·66	1·63	94
93	2·03	2·00	1·98	1·97	1·95	1·92	1·90	1·87	1·86	1·84	93
92	2·23	2·21	2·18	2·17	2·15	2·12	2·10	2·09	2·06	2·04	92
91	2·43	2·41	2·39	2·36	2·35	2·33	2·3 0	2·28	2·27	2·24	91
90	2·64	2·61	2·59	2·57	2·55	2·52	2·51	2·49	2·47	2·45	90
89	2·83	2·81	2·79	2·77	2·75	2·72	2·71	2·69	2·67	2·65	89
88	3·03	3·01	2·99	2·97	2·95	2·93	2·91	2·89	2·86	2·85	88
87	3·23	3·20	3·19	3·16	3·15	3·12	3·11	3·08	3·07	3·04	87
86	3·42	3·40	3·37	3·36	3·35	3·32	3·31	3·28	3·27	3·24	86
85	3·62	3·59	3·58	3·55	3·54	3·51	3·50	3·48	3·46	3·44	85
84	3·80	3·78	3·77	3·74	3·73	3·70	3·69	3·67	3·65	3·63	84
83	4·00	3·97	3·95	3·94	3·91	3·90	3·88	3·86	3·84	3·83	83
82	4·18	4·16	4·14	4·13	4·11	4·08	4·07	4·05	4·03	4·01	82
81	4·36	4·35	4·33	4·32	4·29	4·27	4·26	4·24	4·21	4·20	81
80	4·56	4·53	4·51	4·49	4·48	4·46	4·44	4·42	4·41	4·38	80
79	4·73	4·71	4·69	4·68	4·66	4·63	4·62	4·60	4·59	4·57	79
78	4·92	4·90	4·87	4·85	4·83	4·82	4·80	4·79	4·77	4·74	78
77	5·09	5·07	5·05	5·03	5·01	4·99	4·98	4·96	4·94	4·93	77
76	5·25	5·24	5·22	5·20	5·19	5·17	5·15	5·14	5·12	5·10	76
75	5·43	5·40	5·49	5·37	5·35	5·34	5·32	5·30	5·29	5·27	75
74	5·59	5·57	5·56	5·54	5·52	5·50	5·49	5·47	5·45	5·44	74
73	5·76	5·74	5·73	5·71	5·69	5·67	5·66	5·64	5·63	5·61	73
72	5·92	5·90	5·89	5·87	5·85	5·83	5·82	5·80	5·80	5·78	72
71	6·07	6·05	6·05	6·03	6·01	6·00	5·98	5·96	5·94	5·94	71
70	6·24	6·22	6·20	6·18	6·16	6·15	6·14	6·12	6·11	6·09	70
69	6·37	6·37	6·35	6·33	6·32	6·30	6·29	6·28	6·26	6·24	69
68	6·53	6·51	6·49	6·49	6·47	6·45	6·43	6·43	6·41	6·39	68
67	6·67	6·65	6·64	6·63	6·61	6·59	6·59	6·57	6·55	6·53	67
66	6·80	6·80	6·78	6·76	6·76	6·74	6·72	6·71	6·71	6·68	66
65	6·95	6·93	6·91	6·91	6·89	6·87	6·86	6·84	6·84	6·82	65
64	7·07	7·06	7·04	7·04	7·02	7·00	7·00	6·98	6·97	6·95	64
63	7·20	7·18	7·18	7·16	7·15	7·13	7·13	7·11	7·09	7·09	63
62	7·32	7·30	7·30	7·28	7·27	7·26	7·25	7·23	7·23	7·21	62
61	7·43	7·43	7·41	7·40	7·40	7·38	7·36	7·35	7·35	7·33	61
60	7·56	7·54	7·53	7·51	7·51	7·49	7·48	7·48	7·46	7·45	60
59	7·65	7·65	7·64	7·62	7·62	7·60	7·59	7·59	7·57	7·56	59
58	7·76	7·74	7·74	7·73	7·71	7·71	7·70	7·68	7·68	7·67	58
57	7·86	7·84	7·83	7·83	7·82	7·80	7·80	7·79	7·77	7·77	57
56	7·94	7·94	7·93	7·93	7·91	7·90	7·90	7·89	7·87	7·87	56
55	8·04	8·02	8·02	8·01	8·01	7·99	7·98	7·97	7·97	7·96	55
54	8·11	8·11	8·10	8·10	8·09	8·07	8·06	8·06	8·05	8·05	54
53	8·20	8·19	8·17	8·17	8·16	8·16	8·15	8·14	8·14	8·12	53
52	8·27	8·26	8·26	8·24	8·23	8·23	8·22	8·21	8·21	8·20	52
51	8·32	8·32	8·31	8·31	8·30	8·30	8·29	8·28	8·28	8·27	51
50	8·40	8·37	8·37	8·36	8·36	8·35	8·35	8·34	8·34	8·33	50

TABLE 3.

METHODS OF TESTING FOR GERMINATION.

Kind of Seed.	Substrata.	Temperature, °C.	Light.	First Count, Days.	Final Count, Days.	Fresh and/or Dormant Seed.
Allium cepa L.	BP, S, JA	20	—	6	12	
Allium porum L.	BP, S, JA	20	—	6	12	
Beta vulgaris L.	BP, TP, S	20–30	—	3	14	
Brassica napus L.	TP	20–30	—	3	7	
Brassica oleracea L.	TP	20–30	—	3	10	
var. acephala DC.	—	—	—	—	—	
Brassica oleracea L. *var. botrytis* (DC) L.	BP, TP, S, JA	20–30	—	3	10	
Brassica oleracea L. *var. capitata* L.	BP, TP, S, JA	20–30	—	3	10	
Brassica oleracea L. *var. caulorapa* DC.	BP, TP, S, JA	20–30	—	3	10	
Brassica oleracea L. *var. gemmifera* Zenker.	BP, TP, S, JA	20–30	—	3	10	
Brassica oleracea L. *var. napobrassica* L.	BP, TP, S, JA	20–30	—	3	10	
Brassica pekinensis L.	BP S, JA	20–30	—	3	7	
Brassica rapa L.	BP	20–30	—	3	7	
Bromus inermis Leyss.	TP, JA	20–30	L	6	14	
Bromus wildenowii (*B. catharticus*) Vahl.	TP, S, JA	10–30	L	7	28	Soil at 15° C.
Capsicum spp.	TP, JA	20–30	—	6	14	
Cenchrus ciliaris L.	TP, JA	20–30	—	3	7	
Chloris gayana Kunth.	TP, JA	20–30	L	6	14	
Cichorium endivia L.	TP, TS, JA	20–30	L	5	14	KNO_3 high moisture level desirable.
Citrullus vulgaris Schrad.	BP, S, JA	20–30	—	4	14	
Cucumis melo L.	BP, S, JA	20–30	—	4	8	
Cucumis sativus L.	PB, S, JA	20–30	—	4	8	
Cucurbita maxima Duchesne.	BP, S, JA	20–30	—	4	7	
Cucurbita moschata Duchesne.	BP, S, JA	20–30	—	4	7	
Cucurbita pepo L.	BP, S, JA	20–30	—	4	7	
Dactylis glomerata L.	TP, TS, JA	20–30	L	7	21	
Daucus carota L.	TP	20–30	—	7	21	
Digitaria spp.	BP, JA	20–30	—	7	21	
Eragrostis spp.	TP, JA	20–30	L	4	10	
Festuca arundinacea Schreb.	TP, JA	20–30	L	5	14	
Festuca pratensis (Huds) (F. elatior) L.	TP	20–30	L	5	14	
Glycine max (L) Merr.	S, RP	20–30	—	5	8	
Gossypium hirsutum L.	RP, S	20–30	—	4	12	Saturate lint with water and blot off excess.
Hibiscus cannabinus L.	RP, S	20–30	—	3	7	
Lactuca sativa L.	TP, JA	20	L	3	7	Prechill.
Lolium multiflorum Lam.	TP, JA	20–30	L	4	14	KNO_3, test at 10–30° C.
Lolium perenne L.	TP, JA	20–25	L	5	14	KNO_3, test at 10–30° C.
Lupinus albus L.	TP, RP, S	20	—	4	10	
Lupinus angustifolius L.	RP, S	20	—	4	10	
Lupinus luteus L.	RP, S	20	—	4	10	
Lycopersicon esculentum Mill.	BP, JA	20–30	—	5	14	KNO_3L.
Medicago sativa L.	BP, S, JA	20	—	4	7	
Ornithopus sativus Link.	BP, JA	20	—	7	14	
Paspalum dilatatum Poir.	TP, JA	20–35	L	3	21	KNO_3.
Paspalum urvillei Steud.	TP	20–35	L	3	21	KNO_3.
Pastinaca sativa L.	BP, S, JA	20–30	—	6	28	
Petroselinum crispum (Mill) Nym.	BP, JA	20–30	—	10	28	
Phalaris tuberosa L.	TP, JA	10–30	L	7	28	KNO_3.
Phaseolus vulgaris L.	RP, S	20–30	—	5	9	
Pisum sativum L.	RP, S	20	—	5	8	
Poa pratensis L.	TP, JA	15–30	L	10	28	Prechill.
Raphanus sativus L.	BP, S	20	—	4	6	
Ricinus communis L.	BP, S	20–30	—	6	9	
Setaria sphacelata (Schumach) Stapf	BP, TP	20–30	—	4	10	
Solanum melongena L. *var. esculentum* Nees.	TP, JA	20–30	—	7	14	
Sorghum almum Parodi.	TP	20–30	D	4	10	Prechill, light for fresh seed.
Sorghum species Perennial sweet Sorgras.	TP	20–30	—	4	10	
Sorghum species Kaffircorn.	JA	20–30	—	4	10	
Sorghum sudanense (Piper) Stapf.	BP, S	20–30	D	4	10	Prechill.
Trifolium fragiferum L.	BP, JA	20, 20–30	—	3	7	
Trifolium incarnatum L.	BP, S, JA	20, 20–30	—	4	7	Test at 15° C.
Trifolium pratense L.	BP, S, JA	20, 20–30	—	4	7	
Trifolium repens L.	BP, JA	20, 20–30	—	3	7	Test at 15° C.
Trifolium subterraneum L.	BP, S, JA	20, 30–30	—	4	14	Test at 15° C.
Vicia faba L.	RP, S	18	—	4	14	Prechill.
Zea mays L.	RP, S	20–30	—	4	7	

EXPLANATIONS.

1. Where alternative methods or conditions are indicated, either may be used.

2. BP = between paper; TP = top of paper; S = in sand or soil; TS = top of sand or soil; RP = rolled paper; JA = Jacobsen apparatus.

3. Temperature: The germination temperature is the temperature at the seed level. A single numeral indicates a constant temperature. Two numerals separated by a dash indicate an alteration of temperature; the test sample is kept at the first temperature for approximately 16 hours and at the second temperature for approximately eight hours per day. If test samples are not subjected to alternating temperatures over week-ends and on holidays, they are to be kept at the lower temperature during such time.

4. The letter L indicates that light and D that darkness is required; the dash indicates that it is not known whether light is necessary.

5. The number of days stated for the first count is approximate and a deviation of 1 to 3 days is permitted.

6. Where KNO_3 is indicated, an 0·2 per cent solution is used. It is prepared by dissolving two grams of potassium nitrate in 1,000 ml. of water. The substratum is saturated with a potassium nitrate solution when the test is begun, but water is used for subsequent moistening.

7. Prechilling means that seeds shall be treated at 5° or 10° C. for five to seven days. Unless otherwise indicated, the prechilling period is not included in the germination period given in this table.

TABEL 3.

TOETSMETODES VIR ONTKIEMING.

Soort saad.	Kiemmedium.	Tempe-ratuur, °C.	Lig.	Eerste teldae.	Finale teldae.	Vars en/of rustende saad.
Allium cepa L.	BP, S, JA	20	—	6	12	
Allium porrum L.	BP, S, JA	20	—	6	12	
Beta vulgaris L.	BP, TP, S	20–30	—	3	14	
Brassica napus L.	TP	20–30	—	3	7	
Brassica oleracea L. *var. acephala* DC.	TP	20–30	—	3	10	
Brassica oleracea L. *var. botrytis* (DC) L.	BP, TP, S, JA	20–30	—	3	10	
Brassica oleracea L. *var. capitata* L.	BP, TP, S, JA	20–30	—	3	10	
Brassica oleracea L. *var caulorapa* DC.	BP, TP, S, JA	20–30	—	3	10	
Brassica oleracea L. *var. gemmifera* Zenker	BP, TP, S, JA	20–30	—	3	10	
Brassica oleracea L. *var. napobrassica* L.	BP, TP, S, JA	20–30	—	3	10	
Brassica pekinensis L.	BP S, JA	20–30	—	3	7	
Brassica rapa L.	BP	20–30	—	3	7	
Bromus inermis Leyss.	TP, JA	20–30	L	6	14	
Bromus wildenowii Kunth (*B. catharticus* Vahl)	TP, S, JA	10–30	L	7	28	Grond by 15° C.
Capsicum spp.	TP, JA	20–30	—	6	14	
Cenchrus ciliaris L.	TP, JA	20–30	—	3	7	
Chloris gayana Kunth.	TP, JA	20–30	L	6	14	
Cichorium endivia L.	TP, TS, JA	20–30	L	5	14	KNO_3 hoë vogtigheidspeil wenslik.
Citrullus vulgaris Schrad.	BP, S, JA	20–30	—	4	14	
Cucumis melo L.	BP, S, JA	20–30	—	4	8	
Cucumis sativus L.	BP, S, JA	20–30	—	4	8	
Cucurbita maxima Duchesne.	BP, S, JA	20–30	—	4	7	
Cucurbita moschata Duchesne.	BP, S, JA	20–30	—	4	7	
Cucurbita pepo L.	BP, S, JA	20–30	—	4	7	
Dactylis glomerata L.	TP, TS, JA	20–30	L	7	21	
Daucus carota L.	TP	20–30	—	7	21	
Digitaria spp.	BP, JA	20–30	—	7	21	
Eragrostis spp.	TP, JA	20–30	L	4	10	
Festuca arundinacea Schreb.	TP, JA	20–30	L	5	14	
Festuca pratensis (Huds) (F. elatior) L.	TP	20–30	L	5	14	
Glycine max (L) Merr.	S, RP	20–30	—	5	8	
Gossypium hirsutum L.	RP, S	20–30	—	4	12	Versadig vesel met water en droog oortollige water af met kladpapier.
Hibiscus cannabinus L.	RP, S	20–30	—	3	7	Voorverkoel.
Lactuca sativa L.	TP, JA	20	L	3	7	KNO_3 toets by 10–30° C.
Lolium multiflorum Lam.	TP, JA	20–30	L	5	14	KNO_3 toets by 10–30° C.
Lolium perenne L.	TP, JA	20–25	L	5	14	
Lupinus albus L.	TP, RP, S	20	—	4	10	
Lupinus angustifolius L.	RP, S	20	—	4	10	
Lupinus luteus L.	RP, S	20	—	4	10	
Lycopersicon esculentum Mill.	BP, JA	20–30	—	5	14	KNO_3L.
Medicago sativa L.	BP, S, JA	20	—	4	7	
Ornithopus sativus Link.	BP, JA	20	—	7	14	
Paspalum dilatatum Poir.	TP, JA	20–35	L	3	21	KNO_3.
Paspalum urvillei Steud.	TP	20–35	L	3	21	KNO_3.
Pastinaca sativa L.	BP, S, JA	20–30	—	6	28	
Petroselinum crispum (Mill) Nym.	BP ,JA	20–30	—	10	28	
Phalaris tuberosa L.	TP, JA	10–30	L	7	28	KNO_3.
Phaseolus vulgaris L	RP, S	20–30	—	5	9	
Pisum sativum L.	RP, S	20	—	5	8	
Poa pratensis L.	TP, JA	15–30	L	10	28	Voorverkoel.
Raphanus sativus L.	BP, S	20	—	4	6	
Ricinus communis L.	BP, S	20–30	—	6	9	
Setaria sphacelata (Schumach) Stapf	BP, TP	20–30	—	4	10	
Solanum melongena L. *var. esculentum* Nees.	TP, JA	20–30	—	7	14	
Sorghum almum Parodi.	TP	20–30	D	4	10	Voorverkoel, lig vir vars sade.
Sorghum-spesies meerjarige soetsorgras.	TP	20–30	—	4	10	
Sorghum-spesies kafferkoring.	JA	20–30	—	4	10	
Sorghum sudanense (Piper) Stapf.	BP, S	20–30	D	4	10	Voorverkoel.
Trifolium fragiferum L.	BP, JA	20, 20–30	—	3	7	
Trifolium incarnatum L.	BP, S, JA	20, 20–30	—	4	7	Toets by 15° C.
Trifolium pratense L.	BP, S, JA	20, 20–30	—	4	7	
Trifolum repens L.	BP, JA	20, 20–30	—	3	7	Toets by 15° C.
Trifolium subterraneum L.	BP, S, JA	20, 20–30	—	4	14	Toets by 15° C.
Vicia faba L.	RP, S	18	—	4	14	Voorverkoel.
Zea mays L.	RP, S	20–30	—	4	7	

VERDUIDELIKINGS.

1. Waar alternatiewe metodes of toetsvoorskrifte aangedui word, kan albei toegepas word.

2. BP = tussen papier; TP = bo-op papier; RP = gerolde papier; S = in sand of grond; TS = bo-op sand of grond; JA = Jacobsen-apparaat.

3. Temperatuur: Die ontkiemingstemperatuur is die temperatuur by die saadvlak. 'n Enkele getal dui 'n konstante temperatuur aan. Twee getalle wat met 'n koppelteken verbind is, dui 'n wisseltemperatuur aan; die toetsmonster word by die eerste temperatuur ongeveer 16 uur en by die tweede temperatuur ongeveer 8 uur per dag gehou. Indien toetsmonsters nie gedurende naweke of vakansiedae aan wisseltemperatuur onderwerp word nie, moet hulle gedurende sodanige periode by die laagste temperatuur gehou word.

4. Die letter L dui aan dat lig en D dat donkerte vereis word; die strepie dui aan dat dit nie bekend is of lig nodig is nie.

5. Die getal dae waarna die eerste telling moet geskied, is by benadering en 'n afwyking van een tot drie dae word toegelaat.

6. Waar KNO_3 aangedui is, word 'n 0·2-persentoplossing gebruik. Dit word berei deur twee gram kaliumnitraat in 1,000 ml. water op te los. Die kiemmedium word by die aanvang van die toets met die kaliumnitraatoplossing deurweek, maar daarna word water gebruik vir bevogtiging.

7. Voorverkoeling beteken dat saad vyf tot sewe dae lank teen 5° C. of 10° C. behandel moet word. Tensy anders aangedui, is die voorverkoelingsperiode nie ingesluit by die ontkiemingsperiode wat in hierdie tabel aangegee word nie.

No. R. 1113.] [26 July 1963.

REGULATIONS RELATING TO SEED CONTAINER REQUIREMENTS, MARKING OF AND STATEMENTS ON SEED CONTAINERS, STATEMENTS IN ADVERTISEMENTS AND KEEPING OF RECORDS OF SEED.—THE SEEDS ACT, 1961 (ACT No. 28 OF 1961).

Under the powers vested in him by section *thirty* of the Seeds Act, 1961 (Act No. 28 of 1961) the State President has made the regulations set out in the Schedule hereto, relating to seed container requirements, marking of and statements on seed containers, statements in advertisements and keeping of records of seeds.

SCHEDULE.

DEFINITIONS.

1. In these regulations, unless the context otherwise indicates, " seed " means the seed of—

(*a*) the following forage grasses:—

Bromus inermis Leyss;
Bromus wildenowii Kunth (Bromus catharticus—Vahl);
Cenchrus ciliaris L.;
Chloris gayana Kunth.;
Dactylis glomerata L.;
Digitaria smutsii Stent;
Eragrostis tef (Zucc.) Trotter; [E. abyssinica (Jack) Link.];
Eragrostis curvula (Schrad.) Nees;
Festuca arundinacea Schreb.;
Festuca pratensis Huds. (F. *elatior* L.);
Lolium multiflorum Lam.;
Lolium perenne L.;
Paspalum dilatatum Poir.;
Paspalum urvillei Steud.;
Phalaris tuberosa L.;
Poa pratensis L.;
Setaria sphacelata (Schumach) Stapf.;
Sorghum almum L. Parodi;
Sorghum species, perennial sweet sorgrass;
Sorghum sudanense (Piper) Stapf.;

(*b*) the following forage legumes:—

Lupinus albus L.; white lupin;
Lupinus angustifolius L. blue lupin;
Lupinus luteus L., yellow lupin;
Medicago sativa L., Lucerne (alfalfa);
Ornithopus sativus Link, seradella;
Trifolium fragiferum L., strawberry clover;
Trifolium incarnatum L., crimson clover;
Trifolium pratense L., red clover;
Trifolium repens L., white clover;
Trifolium repens L., var. *latum*, ladino clover;
Trifolium subterraneum L., subterranean clover;

(*c*) the following field crops:—

Beta vulgaris L., var. *macrorhiza*, mangold;
Brassica napus L., rape;
Brassica oleracea, var. *acephala* D.C., kale;
Brassica oleracea, var. *caulorapa* D.C., kohlrabi;
Brassica oleracea, var. *napobrassica* L., Swedes;
Brassica rapa L., turnip;
Glycine max (L.), Merr., soyabean;
Gossypium hirsutum L., cotton;
Hibiscus cannabinus L., Kenaf;
Pisum sativum L., dried pea;
Raphanus sativus L., radish;
Ricinus communis, castor;
Sorghum species, kaffircorn;
Zea mays L., maize;

(*d*) the following vegetables:—

Allium cepa L., onion;
Allium porrum L., leek;
Beta vulgaris L., var. *cicla* (L.) Aell, spinach beet;
Beta vulgaris L., var. *hortensis*, beet, garden;
Brassica oleracea L., var. *botrytis* L., broccoli;
Brassica oleracea L., var. *botrytis* L., cauliflower;
Brassica oleracea L., var. *capitata* L., cabbage;
Brassica oleracea L., var. *caulorapa* D.C., kohlrabi;

No. R. 1113.] [26 Julie 1963.

REGULASIES MET BETREKKING TOT SAADHOUERVEREISTES, DIE MERK VAN EN VERKLARINGS OP SAADHOUERS, VERKLARINGS IN ADVERTENSIES EN DIE HOU VAN REKORDS VAN SAAD.—DIE WET OP SAAD, 1961 (WET No. 28 VAN 1961).

Kragtens die bevoegdheid hom verleen by artikel *dertig* van die Wet op Saad, 1961 (Wet No. 28 van 1961), het die Staatspresident die regulasies in die Bylae hiervan vervat, uitgevaardig met betrekking tot saadhouervereistes, die merk van en verklarings op saadhouers, verklarings in advertensies en die hou van rekords van saad.

BYLAE.

WOORDOMSKRYWING.

1. In hierdie regulasies, tensy uit die samehang anders blyk, beteken " saad " die saad van—

(*a*) die volgende voergrasse:—

Bromus inermis Leyss;
Bromus wildenowii Kunth (B. catharticus) Vahl.
Cenchrus ciliaris L.;
Chloris gayana Kunth.;
Dactylis glomerata L.;
Digitaria smutsii Stent;
Eragrostis tef (Zucc.) Trotter; [abyssinica (Jack) Link.];
Eragrostis curvula (Schrad.) Nees;
Festuca arundinacea Schreb.;
Festuca pratensis Huds. (F. *elatior* L.);
Lolium multiflorum Lam.;
Lolium perenne L.;
Paspalum dilatatum Poir.;
Paspalum urvillei Steud.;
Phalaris tuberosa L.;
Poa pratensis L.;
Setaria sphacelata (Schumach) Stapf.;
Sorghum almum L, Parodi;
Sorghum-spesies, meerjarige soetsorgras;
Sorghum sudanense (Piper) Stapf.;

(*b*) die volgende voerpeulgewasse:—

Lupinus albus L., witlupien;
Lupinus angustifolius L., Bloulupien;
Lupinus luteus L., geellupien;
Medicago sativa L., lusern (alfalfa);
Ornithopus sativus Link, serradella;
Trifolium fragiferum L. aarbeiklawer;
Trifolium incarnatum L., inkarnaatklawer;
Trifolium pratense L., rooiklawer;
Trifolium repens L., witklawer;
Trifolium repens L., var *latum* ladino-witklawer;
Trifolium subterraneum L., ondergrondse klawer;

(*c*) die volgende akkerbougewasse:—

Beta vulgaris L., var. *macrorhiza*, mangelwortel;
Brassica napus L., weikool;
Brassica oleracea, var. *acephala* D.C., beeskool;
Brassica oleracea, var. *caulorapa* D.C., knolkool;
Brassica oleracea, var. *napobrassica* L., Sweedseraap;
Brassica rapa L., raap;
Glycine max (L.), Merr sojaboon;
Gossypium hirsutum L., Katoen;
Hibiscus cannabinus L., kenaf;
Pisum savitum L., droë ert;
Raphanus sativus L., radys;
Ricinus communis, kasterolie;
Sorghum-spesies, kafferkoring;
Zea mays L., mielie;

(*d*) die volgende groentegewasse:—

Allium cepa L., ui;
Allium porrum L., prei;
Beta vulgaris L., var. *cicla* (L) Aell., spinasiebeet;
Beta vulgaris L., var. *hortensis*, tuinbeet;
Brassica oleracea L., var. *botrytis* L., brokkoli;
Brassica oleracea L., var. *botrytis* L., blomkool;
Brassica oleracea L., var. *capitata* L., kopkool;
Brassica oleracea var. *caulorapa* D.C. kohlrabi;

Brassica oleracea L., var. *gemmifera* Zenker, Brussels sprouts;
Brassica pekinensis L., Chinese cabbage;
Brassica rapa L., turnip;
Capsicum species, peppers;
Cichorium endivia L., endive;
Citrullus vulgaris Schrad., watermelon;
Cucumis melo L., muskmelon;
Cucumis sativus L., cucumber;
Cucurbita moschata Duchesne, C. *maxima* Duchesne et C. *pepo* L., squash and pumpkin;
Daucus carota L., carrot;
Lactuca sativa L., lettuce;
Lycopersicon esculentum Mill., tomato;
Pastinaca sativa L., parsnip;
Petroselinum crispum (Mill.) Nym., parsley;
Phaseolus vulgaris L., garden bean, dwarf;
Phaseolus vulgaris L., garden bean, runner;
Pisum sativum L., garden pea;
Raphanus sativus L., radish, garden;
Solanum melongena L., var. esculentum Nees, egg-plant;
Vicia faba L., broad bean;
Zea mays L., var. *saccharata*, Bailey sweetcorn;

"complete record" means a written record of all information pertaining to a seed lot, its identification, origin, kind, variety, purity and germination analyses, packing code number and quantity; and

"the Act" means the Seeds Act, 1961 (Act No. 28 of 1961).

SEED CONTAINER REQUIREMENTS.

2. Containers in which seed is sold, shall be sound and clean.

MARKING OF SEED CONTAINERS.

3. (1) Containers in which seed is sold shall be either labelled or marked with the following information in English and/or Afrikaans in any form that is clearly legible:—

(*a*) The name and address of the seller, or in the case of prepacked seed, the name and address of the packer, provided the seed is sold in the original unopened containers;

(*b*) the name of the kind and variety of the seed, the representative of which shall be confined to the recognised name of the kind and variety;

(*c*) purity and germination percentages—

(i) the wording "Standard Grade" if the seed conforms to the purity and germination percentage prescribed in the First Annexure hereto;

(ii) the purity and germination percentages, if one or both of such percentages are less than those prescribed in the First Annexure hereto: Provided that no fractions or decimals shall be used;

(*d*) a packing code number which shall correspond with the entry in the complete record as referred to in regulation 7;

(*e*) in the case of mixtures, the name of each of the kinds of seed therein which constitute more than 5 per cent by weight of the mixture, the percentage by weight of each such kind present therein and the germination percentage of each such kind.

(2) Sub-paragraphs (*c*), (*d*) and (*e*) of sub-regulation (1) shall not apply to the sale of seed in commercial seed packets not sold by weight.

(3) Sub-paragraphs (*c*) and (*e*) of sub-regulation (1) shall not apply to individual sales of the following or lesser weights:—

(i) Forage grasses: 5 lb.
(ii) Forage legumes: 5 lb.
(iii) Pasture herbs: 5 lb.
(iv) Field crops: 5 lb.

Brassica oleracea L., var. *gemmifera* Zenker, Brusselse spruitjies;
Brassica pekinensis L., Sjinese kool;
Brassica rapa L., raap;
Capsicum-spesies, rissies;
Cichorium endivia L., andyvie;
Citrullus vulgaris Schrad., waatlemoen;
Cucumis melo L., spanspek;
Cucumis sativus L., komkommer;
Curcurbita moschata Duchesne C. *maxima* Duchesne et C. *pepo* L., skorsie en pampoen;
Daucus carota L., geelwortel;
Lactuca sativa L., slaai;
Lycopersicon esculentum Mill., tamatie;
Pastinaca sativa L., witwortel;
Petroselinum crispum (Mill.) Nym., pietersielie;
Phaseolus vulgaris D., tuinboon, stam-;
Phaseolus vulgaris L., tuinboon, rank-;
Pisum sativum L., ert;
Raphanus sativus L., radys;
Solanum melongena L., var *esculentum* Nees, eiervrug;
Vicia faba L., boerboon;
Zea mays L. var. *saccharata* Bailey, suikermielie;

"volledige rekord" 'n geskrewe rekord wat alle inligting bevat in verband met 'n saadlot, die identifikasie, oorsprong, soort, variëteit, suiwerheids- en ontkiemingsontledings, verpakkingskodenommer en hoeveelheid daarvan; en

"die Wet" die Wet op Saad, 1961 (Wet No. 28 van 1961).

SAADHOUERVEREISTES.

2. Houers waarin saad verkoop word, moet heel en skoon wees.

MERK VAN SAADHOUERS.

3. (1) Houers waarin saad verkoop word, moet òf gemerk òf geëtiketteer wees met die volgende inligting in Afrikaans en/of Engels in enige vorm wat goed leesbaar is:—

(*a*) Die naam en adres van die verkoper, of in die geval van vooraf verpakte saad, die naam en adres van die verpakker, op voorwaarde dat die saad in die oorspronklike onoopgemaakte houers verkoop word;

(*b*) die naam van die soort en variëteit van die saad, waarvan die benaming beperk moet wees tot die erkende naam van die soort en variëteit;

(*c*) suiwerheids- en ontkiemingspersentasies—

(i) die bewoording "Standaardgraad" as die saad voldoen aan die suiwerheids- en ontkiemingspersentasies soos voorgeskryf in die Eerste Aanhangsel hiervan;

(ii) die suiwerheids- en ontkiemingspersentasies indien een of albei sodanige persentasies minder is as dié wat in die Eerste Aanhangsel hiervan voorgeskryf word: Met dien verstande dat geen breuke of desimaalsyfers gebruik mag word nie;

(*d*) 'n verpakkingskodenommer wat ooreenstem met die inskrywing in die volledige rekord waarvan in regulasie 7 melding gemaak word;

(*e*) in die geval van mengsels, die naam van elkeen van die soorte saad daarin wat meer as 5 persent per gewig van die mengsel uitmaak, die persentasie per gewig van elke sodanige soort daarin aanwesig en die ontkiemingspersentasie van elke sodanige soort.

(2) Subparagrawe (*c*), (*d*) en (*e*) van subregulasie (1) is nie van toepassing op die verkoop van saad in kommersiële saadpakkies wat nie per gewig verkoop word nie.

(3) Subparagrawe (*c*) en (*e*) van subregulasie (1) is nie van toepassing op indiwiduele verkope van die volgende of kleiner gewigte nie:—

(i) Voergrasse: 5 pond.
(ii) Voerpeulgewasse: 5 pond.
(iii) Weidingskruide: 5 pond.
(iv) Akkerbougewasse: 5 pond.

(v) Vegetables:—

(*a*) Beans (bush, runner and broad beans): 5 lb.
(*b*) Peas: 5 lb.
(*c*) Sweetcorn: 5 lb.
(*d*) Brassica (broccoli, Brussels sprouts, cabbage, cauliflower): 4 oz.
(*e*) Tomato: 2 oz.
(*f*) Other vegetables: 8 oz.

(4) Where seed has been treated with a substance containing a poisonous element, the wording "Treated with a poisonous substance—Behandel met 'n giftige middel" shall be printed in a conspicuous manner on the container or on the label attached thereto as well as on a label placed on top of the seed inside the container.

(5) No other wording or marks, except those having a direct bearing on the contents of containers in which seed is sold, shall appear on such containers. Recognised, established or registered trade marks of sellers shall be permitted to appear on containers.

(6) (*a*) The wording "Certified Seed" and/or certificate numbers may be used on containers in which seed is sold, or on labels attached thereto, provided the name of the country or state where the seed was grown and certified, is added, e.g. "South African certified seed", and provided further that the seller is in possession of written proof that the seed has been certified by a recognised certification authority in the country of origin.

(*b*) The wording "Certified Seed" and/or certificate numbers may not appear on commercial seed packets not sold by weight.

WEED SEED IN SEED.

4. (1) Seed shall not be sold if it contains weed seed in excess of 50 (fifty) per ounce of seed or more than 0·5 per cent by weight of the seed.

(2) Seed shall not be sold if it contains dodder (*Cascuta* spp.).

TOLERANCE.

5. The purity and germination percentage and the weed-seed content obtained by the analyst on the sample analysed may deviate from the percentages or numbers indicated by the seller on the container(s) from which the sample has been drawn or on the label attached thereto, provided such deviation does not exceed:—

(*a*) In the case of purity, the percentage calculated according to the following formula: Tolerance $(T) = 0.6 + \left(0{\cdot}2 \times \frac{p \times q}{100}\right)$, where p is the percentage of pure seed and q is the total percentage of inert matter, weed seed and seeds of other crops.

(i) This formula shall apply to all seeds, excepting species of *Agrostis, Bromus, Cenchrus, Chloris, Dactylis, Digitaria, Ehrharta, Festuca, Paspalum, Poa* and *Setaria* and mixtures containing these kinds singly or combined in excess of 50 per cent.

(ii) In the case of *Agrostis, Bromus, Chloris, Dactylis, Digitaria, Ehrharta, Festuca, Paspalum, Poa* and *Setaria* and mixtures containing these kinds singly or combined in excess of 50 per cent, an additional tolerance shall be allowed. The additional tolerance (T) shall be obtained by multiplying the regular tolerance by the lesser of p and q and dividing by 100.

(*b*) In the case of germination, the percentage specified in the following table:—

Range of Germination (Per Cent).	*Permissible Tolerance (Per Cent).*
97–100	4
95–96	5
90–94	6
80–89	7
70–79	8
60–69	9
Below 60	10

(v) Groentegewasse:—

(*a*) Bone (stam-, rank- en boerbone): 5 pond.
(*b*) Erte: 5 pond.
(*c*) Suikermielies: 5 pond.
(*d*) Brassica (blomkool, brokkoli, Brusselse spruitjies, kopkool) 4 onse.
(*e*) Tamaties: 2 onse.
(*f*) Ander groente: 8 onse.

(4) Wanneer saad behandel is met 'n stof wat 'n giftige bestanddeel bevat, moet die bewoording "Met 'n giftige middel behandel—Treated with a poisonous substance" op 'n opvallende wyse gedruk word op die houer of op 'n etiket wat daaraan geheg is sowel as op 'n etiket wat bo-op die saad binne in die houer geplaas is.

(5) Geen ander bewoording of merke, uitgesonderd dié wat direk betrekking het op die inhoud van houers waarin saad verkoop word, mag op sodanige houers voorkom nie. Erkende, gevestigde of geregistreerde handelsmerke van verkopers kan op die houers verskyn.

(6) (*a*) Die bewoording "Gesertifiseerde saad" en/of sertifikaatnommers kan aangebring word op houers waarin saad verkoop word, of op etikette wat daaraan geheg is, op voorwaarde dat die naam van die land of staat waar die saad verbou en gesertifiseer is, bygevoeg word, bv. "Suid-Afrikaanse gesertifiseerde saad", en voorts op voorwaarde dat die verkoper oor skriftelike bewys beskik dat die saad deur 'n erkende sertifiseringsowerheid in die land van oorsprong gesertifiseer is.

(*b*) Die bewoording "Gesertifiseerde saad" en/of sertifikaatnommers mag nie aangebring word op kommersiële saadpakkies wat nie per gewig verkoop word nie.

ONKRUIDSAAD IN SAAD.

4. (1) Saad mag nie verkoop word indien dit meer as 50 (vyftig) onkruidsade per ons saad, of meer as 0·5 persent per gewig van die saad bevat nie.

(2) Saad mag nie verkoop word indien dit dodder (*Cuscuta* spp.) bevat nie.

TOLERANSIE.

5. Die suiwerheids-, en ontkiemingspersentasie en onkruidsaadinhoud deur die ontleder verkry by die ontleding van die monster kan afwyk van die persentasie of gehalte deur die verkoper aangedui op die houer(s) waaruit die monster geneem is of op 'n etiket wat daaraan geheg is, mits sodanige afwyking nie meer as die volgende persentasies is nie:—

(*a*) In die geval van die suiwerheid, die persentasie bereken volgens die volgende formule: Toleransie $(T) = 0{\cdot}6 + \left(0{\cdot}2 \times \frac{p \times q}{100}\right)$, waar p die persentasie suiwer saad en q die totale persentasie onaktiewe stof, onkruidsade en sade van ander gewasse is.

(i) Hierdie formule is van toepassing op alle sade, uitgesonderd spesies van *Agrostis, Bromus, Cenchrus, Chloris, Dactylis, Digitaria, Ehrharta, Festuca, Paspalum, Poa* en *Setaria* en mengsels wat uit meer as 50 persent van hierdie soorte gesamentlik of afsonderlik bestaan.

(ii) In die geval van *Agrostis, Bromus, Chloris, Dactylis, Digitaria, Ehrharta, Festuca, Paspalum, Poa* en *Setaria* en mengsels wat uit meer as 50 persent van hierdie soorte gesamentlik of afsonderlik bestaan, word 'n addisionele toleransie toegelaat. Die addisionele toleransie (T) word verkry deur die gereelde toleransie te vermenigvuldig met die minste van p en q en te deel deur 100.

(*b*) In die geval van die ontkieming, die persentasie in die volgende tabel gespesifiseer:—

Ontkiemingsreeks (Persent).	*Toleransie (Persent).*
97–100	4
95–96	5
90–94	6
80–89	7
70–79	8
60–69	9
Onder 60	10

(*c*) In the case of weedseed content the numbers or percentage specified in the following table: —

(i) *Weed Seed Content (Number).*	*Tolerance (Number).*
0	2
50	20
(ii) *Weed Seed Content (Per Cent).*	*Tolerance (Per Cent).*
0·5	0·2

STATEMENTS IN ADVERTISEMENTS OF SEED.

6. (1) No words, marks, illustrations or pictures which are contradictory to or may give a false or misleading impression as to the history, origin or quality of seed shall be used in any advertisement of seed.

(2) The word "certified" may not be used in any advertisement unless the seller is in possession of written proof that the seed to which the advertisement relates, has been certified by a recognised certification authority.

KEEPING OF COMPLETE RECORDS OF SEED.

7. Every person cleaning or selling seed shall keep for a period of three years a complete record of each lot of seed handled.

SAMPLING AND TESTING OF SEED.

8. (1) Sampling and testing of seed under the regulations shall be carried out in accordance with the prescribed methods.

(2) The certificate of the inspector or officer taking the sample of seed, as required by sub-section (2) of section *seventeen* of the Act, shall be in the form prescribed in the Second Annexure hereto.

(3) The certificate stating, the result of the analysis or test of a sample, as required by sub-section (3) of section *seventeen* of the Act, shall be in the form prescribed in the Third Annexure hereto.

OFFENCES AND PENALTIES.

9. Any person who contravenes or fails to comply with a provision or requirement of these regulations shall be guilty of an offence and liable to a fine not exceeding one hundred rand or imprisonment for a period not exceeding six months, or to both such fine and such imprisonment.

FIRST ANNEXURE.

MINIMUM REQUIREMENTS FOR STANDARD GRADE SEED AND IMPORTED SEED.

	Purity Percentage, not less than.	Germination Capacity Percentage, not less than.	*Liveseed Content Percentage, not less than.
(*a*) Forage Grasses:—			
Bromus wildenowii	85	75	—
Bromus inermis	85	75	—
Cenchrus ciliaris	—	—	25
Chloris gayana	—	—	25
Dactylis glomerata	90	70	—
Digitaria smutsii	—	—	25
Eragrostis curvula	96	70	—
Eragrostis tef (E. *abyssinica*)	96	80	—
Festuca arundinacea	96	75	—
Festuca pratensis (F. *elatior*)	96	70	—
Lolium multiflorum	96	80	—
Lolium perenne	96	80	—
Paspalum dilatatum et P. urvillei	—	—	25
Phalaris tuberosa	97	60	—
Poa pratensis	85	70	—
Setaria sphacelata	—	—	25
Sorghum almum	96	70	—
Sorghum species perennial sweet sorgrass	96	70	—
Sorghum sudanense	96	70	—

* Live-seed content shall be determined by multiplying the purity percentage and the germination percentage and dividing by 100.

(*c*) In die geval van onkruidsaadinhoud, die getalle of persentasie in die volgende tabelle gespesifiseer: —

(i) *Onkruidinhoud (getal).*	*Toleransie (getal).*
0	2
50	20
(ii) *Onkruidinhoud (persent).*	*Toleransie (persent).*
0·5	0·2

VERKLARING IN ADVERTENSIES VAN SAAD.

6. (1) Geen woorde, handelsmerke, illustrasie of prente wat strydig is met of 'n vals of misleidende indruk ten opsigte van die geskiedenis, oorsprong of kwaliteit van saad kan skep, mag in enige advertensie van saad gebruik word nie.

(2) Die woord „gesertifiseer" mag in geen advertensie gebruik word nie, tensy die verkoper oor skriftelike bewys beskik dat die saad waarop die advertensie betrekking het, deur 'n erkende sertifiseringsowerheid gesertifiseer is.

HOU VAN VOLLEDIGE REKORDS VAN SAAD.

7. Iedereen wat saad skoonmaak of verkoop, moet vir 'n tydperk van drie jaar 'n volledige rekord hou van elke lot saad wat gehanteer is.

MONSTERNEMING EN TOETS VAN SAAD.

8. (1) Die monsterneming en toets van saad ingevolge hierdie regulasies moet volgens die voorgeskrewe metodes uitgevoer word.

(2) Die sertifikaat van die inspekteur of beampte wat die monster neem, soos by subartikel (2) van artikel *sewentien* van die Wet vereis, moet in die vorm wees soos in die Tweede Aanhangsel hiervan voorgeskryf.

(3) Die sertifikaat wat die resultaat van die ontleding of toets van 'n monster aangee, soos by subartikel (3) van artikel *sewentien* van die Wet vereis, moet in die vorm wees soos in die Derde Aanhangsel hiervan voorgeskryf.

OORTREDING EN STRAFBEPALINGS.

9. Iedereen wat 'n bepaling of vereiste van hierdie regulasies oortree of versuim om daaraan te voldoen, begaan 'n misdryf en is strafbaar met 'n boete van hoogstens eenhonderd rand of gevangenisstraf vir 'n tydperk van hoogstens ses maande, of met sodanige boete sowel as sodanige gevangenisstraf.

EERSTE AANHANGSEL.

MINIMUM VEREISTES VIR STANDAARDGRAADSAAD EN INGEVOERDE SAAD.

	Suiwerheidspersentasie, minstens.	Ontkiemingspersentasie, minstens.	*Lewende saadgehalteperpersentasie, minstens.
(*a*) Voergrasse:—			
Bromus wildenowii	85	75	—
Bromus inermis	85	75	—
Cenchrus ciliaris	—	—	25
Chloris gayana	—	—	25
Dactylis glomerata	90	70	—
Digitaria smutsii	—	—	25
Eragrostis curvula	96	70	—
Eragrostis tef. (*E. abyssinica*)	96	80	—
Festuca arundinacea	96	75	—
Festuca pratensis (F. elatoir)	96	70	—
Lolium multiflorum	96	80	—
Lolium perenne	96	80	—
Paspalum dilatatum et P. *urvillei*	—	—	25
Phalaris tuberosa	97	60	—
Poa pratensis	85	70	—
Setaria sphacelata	—	—	25
Sorghum almum	96	70	—
Sorghum-spesies (meerjarige soetsorgras)	96	70	—
Sorghum sudanense	96	70	—

* Die lewendesaadgehalte word bepaal deur die suiwerheidspersentasie met die ontkiemingspersentasie te vermenigvuldig en dan deur 100 te deel.

	Purity Percentage, not less than.	Germination Capacity Percentage, not less than.	*Liveseed Content Percentage, not less than.
(*b*) Forage Legumes:—			
†*Lupinus albus*, white lupin.	98	75	—
†*Lupinus angustifolius*, blue lupin	98	75	—
†*Lupinus luteus*, yellow lupin	98	75	—
Medicago sativa, lucerne (alfalfa)	98	90	—
Ornithopus sativus, serradella	96	70	—
Trifolium fragiferum, strawberry clover	97	80	—
Trifolium incarnatum, crimson clover	97	80	—
Trifolium pratense, red clover	97	75	—
Trifolium repens, white clover	97	80	—
Trifolium repens var. *latum* ladino white clover	97	80	—
Trifolium subterraneum, subterranean clover	97	75	—
Hard seeds: In the case of lucerne seed up to 40 per cent hard seeds may be counted in as germinated seeds. In the case of other forage legumes up to 15 per cent may be counted in.			
(*c*) Field Crops:—			
Beta vulgaris var. *macrorhiza* mangold	97	70	—
Brassica napus rape	98	75	—
Brassica oleracea var. *acephala* kale	98	75	—
Brassica oleracea var. *caulorapa* kohlrabi	98	75	—
Brassica oleracea var. *napobrassica*, swedes	98	75	—
Brassica rapa, turnip	98	75	—
Glycine max, soya bean	98	75	—
Gossypium hirsutum, cotton	98	85	—
Hibiscus cannabinus, kenaf	98	80	—
Pisum sativum, dry pea	98	80	—
Raphanus sativus, radish	98	75	—
Ricinus communis, castor	98	80	—
Sorghum species, kaffircorn	98	80	—
Zea mays, maize	98	85	—
(*d*) Vegetables:—			
Allium cepa, onion	98	70	—
Allium porrum, leek	98	65	—
Beta vulgaris var. *cicla*, spinach, beet	97	75	—
Beta vulgaris var. *hortensis*, garden beet	97	75	—
Brassica oleracea var. *botrytis*, broccoli	98	75	—
Brassica oleracea var. *botrytis*, cauliflower	98	75	—
Brassica oleracea var. *capitata*, cabbage	98	75	—
Brassica oleracea var. *caulorapa*, kohlrabi	98	75	—
Brassica oleracea var. *gemmifera*, Brussels sprouts	98	75	—
Brassica pekinensis, Chinese cabbage	98	75	—
Brassica rapa, turnip	97	80	—
Capsicum, species pepper	98	75	—
Cichorium endivia, endive	95	70	—
Citrullus vulgaris, watermelon	98	75	—
Cucumis melo, muskmelon	98	75	—
Cucumis sativus, cucumber	98	75	—
Cucurbita moschata, C. *maxima et* C. *pepo*, squash and pumpkin	98	75	—
Daucus carota, carrot	98	75	—
Lactuca sativa, lettuce	97	65	—
Lycopersicon esculentum, tomato	97	75	—

* Live-seed content shall be determined by multiplying the purity percentage and the germination percentage and dividing by 100.

† With sweet lupins not more than 4 per cent of the seed may contain alkaloid, calculated on a count basis.

	Suiwerheidspersentasie, minstens.	Ontkiemingspersentasie, minstens.	*Lewende saadgehaltepersentasie, minstens.
(*b*) Voerpeulgewasse:—			
†*Lupinus albus*, witlupien	98	75	—
Lupinus angustifolius, blou-lupien	98	75	—
†*Lupinus luteus*, geellupien	98	75	—
Medicago sativa, lusern (alfalfa)	98	90	—
Ornithopus sativus, serradella	96	70	—
Trifolium fragiferum, aarbeiklawer	97	80	—
Trifolium incarnatum, inkarnaatklawer	97	75	—
Trifolium pratense, rooiklawer	97	75	—
Trifolium repens, witklawer	97	80	—
Trifolium repens var. *latum* ladino-witklawer	97	80	—
Trifolium subterraneum, ondergrondse klawer	97	75	—
Harde sade: In die geval van lusernsaad mag tot 40 persent harde sade as ontkiemde sade bygetel word. In die geval van ander voerpeulgewasse mag tot 15 persent harde sade bygetel word.			
(*c*) Akkerbougewasse:—			
Beta vulgaris var. *macrorhiza*, mangelwortel	97	70	—
Brassica napus, weikool	98	75	—
Brassica oleracea var. *acephala*, beeskool	98	75	—
Brassica oleracea var. *caulorapa*, knolkool	98	75	—
Brassica oleracea var. *napobrassica*, Sweedse raap	98	75	—
Brassica rapa, raap	98	75	—
Glycine max, sojaboon	98	75	—
Gossypium hirsutum, katoen	98	85	—
Hibuscus cannabinus, kenaf	98	80	—
Pisum sativum, droë ert	98	80	—
Raphanus sativus, radys	98	75	—
Ricinus communis, kasterolie	98	80	—
Sorghum-spesies, kafferkoring	98	80	—
Zea mays, mielie	98	85	—
(*d*) Groentegewasse:—			
Allium cepa, ui	98	70	—
Alluim porrum, prei	98	65	—
Beta vulgaris var. *cicla*, spinasiebeet	97	75	—
Beta vulgaris var. *hortensis*, tuinbeet	97	75	—
Brassica oleracea var. *botrytis*, brokkoli	98	75	—
Brassica oleracea var. *botrytis*, blomkool	98	75	—
Brassica oleracea var. *capitata*, kopkool	98	75	—
Brassica oleracea var. *caulorapa*, knolkool	98	75	—
Brassica oleracea var. *gemmifera*, Brusselse spruitjies	98	75	—
Brassica pekinensis, Sjinese kool	98	75	—
Brassica rapa, raap	97	80	—
Capsicum-spesie, rissie	98	75	—
Cichorium endivia, andyvie	95	70	—
Citrullus vulgaris, waatlemoen	98	75	—
Cucumis melo, spanspek	98	75	—
Cucumis sativus, kommkommer	98	75	—
Cucurbita moschata, C. *maxima et* C. *pepo*, skorsie en pampoen	98	75	—
Daucus carota, wortel	98	75	—
Lactuca sativa, blaarslaai	97	65	—
Lycopersicon esculentum, tamatie	97	75	—

* Die lewendesaadgehalte word bepaal deur die suiwerheidspersentasie met die ontkiemingspersentasie te vermenigvuldig en dan deur 100 te deel.

† Soetlupiene mag nie meer as 4 persent van die saad alkaloïed, bereken op 'n tellingsbasis, bevat nie.

	Purity Percentage, not less than.	Germination Capacity Percentage, not less than.	*Liveseed Content Percentage, not less than.
Pastinaca sativa, parsnip	96	50	—
Petroselinum crispum, parsley	97	60	—
Phaseolus vulgaris, garden bean dwarf	98	75	—
Phaseolus vulgaris, garden bean runner	98	75	—
Pisum sativum, pea	98	80	—
Raphanus sativus, radish	98	75	—
Solanum melongena var. *esculentum*, egg-plant	98	60	—
Vicia faba, broad bean	98	75	—
Zea mays var. *saccharata*, sweet corn	97	80	—

* Live-seed content shall be determined by multiplying the purity percentage and the germination percentage and dividing by 100.

SECOND ANNEXURE.

CERTIFICATE OF INSPECTOR TAKING SAMPLE OF SEED.

[In terms of section *seventeen* (2) of the Seeds Act, 1961 (Act No. 28 of 1961).]

I, (full name)..... an inspector duly appointed in terms of section *sixteen* of the Seeds Act, 1961 (Act No. 28 of 1961), do hereby certify that—

(1) on..... I took a sample of..... seed at.....

.....

in the presence of the undermentioned witness.....

.....

(2) I have sealed the said sample..... and marked/labelled it as follows.....

.....

.....

(3) on..... the said sample was forwarded for examination, analysis or test to the Seed Analyst.....

.....

(4) the said sample is representative of a seed lot to which the undermentioned particulars apply:—

(*a*) Number of containers.....

(*b*) Weight of seed..... lb.

*(*c*) Containers not marked or labelled in accordance with the requirements of Act No. 28 of 1961, or

*(*d*) Containers marked or labelled as follows:—

(i) Name and address of seller.....

.....

(ii) Kind and variety of seed.....

.....

(iii) Grade.....

(iv) Purity..... %

(v) Germination..... %

(vi) Live-seed content..... %

(vii) Packing code number.....

(viii) Month and year during which the germination of the seed was determined.....

.....

(ix) Certificate number.....

(*e*) Condition of containers.....

.....

.....

.....

.....

(5) .....

.....

.....

.....

Signature of Witness. Signature of Inspector.

Place.....

Date.....

* Delete whichever is not applicable.

	Suiwerheidspersentasie, minstens.	Ontkiemingspersentasie, minstens.	*Lewende saadgehaltepersentasie, minstens.
Pastinaca sativa, witwortel	96	50	—
Petroselinum crispum, pietersilie	97	60	—
Phaseolus vulgaris, tuinboon, stam	98	75	—
Phaseolus vulgaris, tuinboon, rank	98	75	—
Pisum sativum, ert	98	80	—
Raphanus sativus, radys	98	75	—
Solanum melongena var. *esculentum*, eiervrug	98	60	—
Vicia faba, boerboon	98	75	—
Zea mays var. *saccharata*, suikermielie	97	80	—

* Die lewendesaadgehalte word bepaal deur die suiwerheidspersentasie met die onkiemingspersentasie te vermenigvuldig en dan deur 100 te deel.

TWEEDE AANHANGSEL.

SERTIFIKAAT VAN INSPEKTEUR WAT MONSTER VAN SAAD NEEM.

[Ooreenkomstig artikel *sewentien* (2) van die Wet op Saad, 1961 (Wet No. 28 van 1961).]

Ek, (volle naam)..... 'n inspekteur behoorlik aangestel ingevolge artikel *sestien* van die Wet op Saad 1961 (Wet No. 28 van 1961), sertifiseer hierby dat—

(1) ek op..... 'n monster..... saad te.....

.....

geneem het in teenwoordigheid van ondergenoemde getuie .....;

(2) ek genoemde monster verseël het en dit as volg gemerk/geëtiketteer het.....

.....

.....;

(3) genoemde monster vir ondersoek, ontleding of toets op..... gestuur is aan die Saadontleder.....

.....;

(4) genoemde monster verteenwoordigend is van 'n saadlot waarop die volgende besonderhede van toepassing is:—

(*a*) Getal houers.....

(*b*) Gewig van saad..... lb.

*(*c*) Houers nie ooreenkomstig vereistes van Wet No. 28 van 1961 gemerk of geëtiketteer nie, of

*(*d*) Houers as volg gemerk of geëtiketteer:—

(i) Naam en adres van verkoper.....

.....

(ii) Soort en variëteit saad.....

.....

(iii) Graad.....

(iv) Suiwerheid..... %

(v) Ontkieming..... %

(vi) Lewendesaadgehalte..... %

(vii) Verpakkingskodenommer.....

(viii) Maand en jaar waarin ontkieming van saad bepaal is.....

(ix) Sertifikaatnommer.....

(*e*) Toestand van houers.....

.....

.....

.....

.....

(5) .....

.....

.....

.....

Handtekening van getuie. Handtekening van inspekteur.

Plek.....

Datum.....

* Skrap wat nie van toepassing is nie.

THIRD ANNEXURE.

CERTIFICATE OF RESULT OF ANALYSIS OR TEST OF SAMPLE OF SEED BY ANALYST.

[In terms of section *seventeen* (3) of the Seeds Act, 1961 (Act No. 28 of 1961).]

I, (full name)..... an analyst duly appointed in terms of section *sixteen* of the Seeds Act, 1961 (Act No. 28 of 1961), do hereby make oath and state that—

(1) on (date)..... I received a sample of (kind and variety of seed as stated by seller)..... from (name of inspector)..... by (post, rail or hand) .....for analysis and/or test;

(2) the sample was labelled, sealed and marked as follows.....;

(3) I have analysed and/or tested the sample, with the following results:—

A. Established kind and variety of seed.....

B.	(i) Pure seed.....	....%
	(ii) Inert matter.....	....%
	(iii) Seeds of other crops.....	....%
	(iv) Weed seeds.....	....%
	(v) Other.....	....%
	TOTAL.....	100%
C.	(i) Normally germinated.....	....%
	(ii) Hard seeds.....	....%
	(iii) Healthy, not germinated.....	....%
	(iv) Mouldy.....	....%
	(v) Abnormal.....	....%
	(vi) Other.....	....%
	TOTAL.....	100%
D.	Live-seed content.....	....%

(4) .....

.....

Signature of Analyst.

Sworn to before me at..... this.....day of.....19.....The deponent has declared that he/she knows and understands the contents of this affidavit.

Justice of the Peace/
Commissioner of Oaths.

No. R. 1114.] [26 July 1963.

REGULATIONS RELATING TO THE SEALING OF CONTAINERS OF LUCERNE SEED.—THE SEEDS ACT, 1961 (ACT No. 28 OF 1961).

Under the powers vested in him by section *thirty* of the Seeds Act, 1961 (Act No. 28 of 1961), the State President has made the regulations set out in the Schedule hereto, relating to the sealing of containers of lucerne seed.

SCHEDULE.

1. (1) Without having obtained the prior written approval of the Department, no person shall sell any lucerne seed unless every container in which it has been packed, has been sealed by an inspector in terms of regulation 2.

(2) The provisions of sub-regulation (1) shall apply to any container which contains lucerne seed of a weight of one hundred pounds or more.

2. The seal shall be an official seal having at least the State Coat-of-Arms and the wording "Republic of S.A./ Republiek van S.A." imprinted thereon. The seal shall be attached to the rope or twine with which the container is sewn up in such a way that the label is placed between the container and the seal.

3. The label shall contain the wording: "The seed in this container has been inspected and approved by Seed Control, Department of Agricultural Technical Services."

4. Containers may be sealed only—

(i) on condition that the containers are marked according to the provisions of the regulations promulgated under Act No. 28 of 1961 and published in Government Notice No. ..... of ... June, 1963; and

DERDE AANHANGSEL.

SERTIFIKAAT VAN ONTLEDING OF TOETS VAN SAADMONSTER DEUR ONTLEDER.

[Ingevolge artikel *sewentien* (3) van die Wet op Saad, 1961 (Wet No. 28 van 1961).]

Ek, (volle naam)..... 'n ontleder behoorlik aangestel ingevolge artikel *sestien* van die Wet op Saad, 1961 (Wet No. 28 van 1961), verklaar hierby onder eed dat—

(1) ek op (datum)..... 'n monster van (soort en variëteit saad soos gemeld deur verkoper)..... van (naam van inspekteur)..... per (hand, pos, spoor)..... vir ontleding en/of toets ontvang het;

(2) die monster soos volg geëtiketteer, verseël en gemerk was.....

.....

(3) ek die monster ontleed en/of getoets en die volgende resultate verkry het:—

A. Soort en variëteit saad soos vasgestel.....

B.	(i) Suiwer saad.....	....%
	(ii) Onaktiewe stof.....	....%
	(iii) Sade van ander gewasse.....	....%
	(iv) Onkruidsade.....	....%
	(v) Ander.....	....%
	TOTAAL.....	100%
C.	(i) Normaal ontkiem.....	....%
	(ii) Harde sade.....	....%
	(iii) Gesond, nie ontkiem nie.....	....%
	(iv) Muf.....	....%
	(v) Abnormaal.....	....%
	(vi) Ander.....	....%
	TOTAAL.....	100%
D.	Lewendegehaltesaad.....	....%

(4) .....

.....

Handtekening van Ontleder.

Beëdig voor my te..... op hede die.....dag van.....19.....Die deponent verklaar dat hy/sy met die inhoud van hierdie dokument bekend is en dit verstaan.

Vrederegter of Kommissaris
van Ede.

No. R. 1114.] [26 Julie 1963.

REGULASIES MET BETREKKING TOT DIE VERSEËLING VAN HOUERS VAN LUSERNSAAD.—DIE WET OP SAAD, 1961 (WET No. 28 VAN 1961).

Kragtens die bevoegdheid hom verleen by artikel *dertig* van die Wet op Saad, 1961 (Wet No. 28 van 1961), het die Staatspresident die regulasies in die Bylae hiervan vervat, uitgevaardig met betrekking tot die verseëling van houers van lusernsaad.

BYLAE.

1. (1) Sonder die vooraf verkreë skriftelike toestemming van die Departement, mag niemand lusernsaad verkoop nie tensy elke houer waarin dit verpak is deur 'n inspekteur verseël is ooreenkomstig regulasie 2.

(2) Die bepalings van subregulasie (1) is van toepassing op enige houer wat lusernsaad van 'n gewig van een honderd pond of meer bevat.

2. Die seël moet 'n amptelike seël wees waarop minstens die Staatswapen en die bewoording "Republiek van S.A./ Republic of S.A." afgedruk is. Die seël moet geheg word aan die punt van die tou of lyn waarmee die houer toegenaai is en wel op so 'n wyse dat die etiket tussen die houer en die seël aangebring is.

3. Die etiket moet die bewoording: "Die saad in hierdie houer is geïnspekteer en goedgekeur deur Saadbeheer, Departement van Landbou-tegniese Dienste" bevat.

4. Houers kan verseël word slegs—

(i) op voorwaarde dat die houers gemerk is ooreenkomstig die bepalings van die regulasies uitgevaardig kragtens Wet No. 28 van 1961 en bekendgemaak by Goewermentskennisgewing No. ..... van ... Julie 1963; en

(ii) after the inspector has established that the lucerne seed in such containers does meet the specifications for purity, germination capacity and freedom from dodder as marked or claimed by the seller.

OFFENCES AND PENALTIES.

5. Any person who contravenes or fails to comply with any provisions of these regulations shall be liable to a fine not exceeding one hundred rand or to imprisonment for a period not exceeding six months, or to both such fine and such imprisonment.

No. R. 1115.] [26 July 1963.

REGULATIONS RELATING TO THE REGISTRATION OF CLEANERS AND SELLERS OF SEED. —THE SEEDS ACT, 1961 (ACT No. 28 OF 1961).

Under the powers vested in him by section *thirty* of the Seeds Act, 1961 (Act No. 28 of 1961), the State President has made the regulations set out in the Schedule hereto, relating to the registration of cleaners and sellers of seeds.

SCHEDULE.

1. (1) Application for registration as a cleaner or seller of seed shall be made annually to the registering officer—

(*a*) in the case of a cleaner, on the form as set out in Annexure A hereto; and

(*b*) in the case of a seller of seed on the form as set out in Annexure B hereto;

and shall be accompanied by a registration fee of R15.

(2) Any registration granted by the registering officer shall in the year concerned be valid for the period between the first day of April of that year and the thirty-first day of March of the following year, and may be so granted on application made at any time before the fifteenth day of March preceding such first day of April: Provided that the registering officer, in his discretion, and subject to the payment of a late registration fee of R5, in addition to the registration fee referred to in sub-regulation (1), may permit the submission of an application for registration after such fifteenth day of March: Provided further that for the period between the commencement of these regulations and the thirty-first day of March next following, the registering officer may after payment of the registration fee referred to in sub-regulation (1), permit an application to be made at any time within one month after such commencement, without payment of the said late registration fee.

(3) Where application for registration is made by a person who is not already carrying on business as a cleaner or seller of seed, such application shall be accompanied by the registration fee referred to in sub-regulation (1), and may be made at any time before he so commences business without payment of a late registration fee.

(4) If the registering officer grants an application for registration he shall issue to the applicant a registration certificate in the form set out in Annexure C hereto: Provided that where such applicant was registered for the immediately preceding year of registration the registering officer shall not be required to issue a registration certificate again, but shall notify such registration by means of a receipt issued in respect of the registration fee concerned, or by letter or by both, and in respect of the current period, such certificate shall be read with such receipt or letter or with both, as the case may be, as proof of registration.

2. It shall be a prerequisite to the granting of registration that during the period of twelve months immediately preceding the date of receipt of the application by the registering officer the applicant shall not have been convicted on two or more occasions of one or more contraventions of the Seeds Act, 1961.

(ii) nadat die inspekteur vasgestel het dat die lusernsaad in sodanige houers wel voldoen aan die spesifikasies ten opsigte van suiwerheid, kiemkrag en doddervryheid soos deur die verkoper op of aan sodanige houers gemerk.

OORTREDING EN STRAFBEPALING.

5. Iemand wat 'n bepaling van hierdie regulasies oortree of versuim om daaraan te voldoen, is strafbaar met 'n boete van hoogstens eenhonderd rand of gevangenisstraf vir 'n tydperk van hoogstens ses maande, of met sowel dié boete as dié gevangenisstraf.

No. R. 1115.] [26 Julie 1963.

REGULASIES MET BETREKKING TOT DIE REGISTRASIE VAN SKOONMAKERS EN VERKOPERS VAN SAAD.—DIE WET OP SAAD, 1961 (WET No. 28 VAN 1961).

Kragtens die bevoegdheid hom verleen by artikel *dertig* van die Wet op Saad, 1961 (Wet No. 28 van 1961), het die Staatspresident die regulasies in die Bylae hiervan vervat, uitgevaardig met betrekking tot die registrasie van skoonmakers en verkopers van saad.

BYLAE.

1. (1) Aansoek om registrasie as 'n skoonmaker of verkoper van saad moet jaarliks by die registrasiebeampte gedoen word—

(*a*) in die geval van 'n skoonmaker, op die vorm soos in Aanhangsel A hiervan vervat; en

(*b*) in die geval van 'n verkoper van saad, op die vorm soos in Aanhangsel B hiervan vervat;

en moet vergesel gaan van 'n registrasiegeld van R15.

(2) 'n Registrasie deur die registrasiebeampte toegestaan is in die betrokke jaar van krag gedurende die tydperk tussen die eerste dag van April van daardie jaar en die een-en-dertigste dag van Maart van die volgende jaar, en kan aldus toegestaan word as aansoek gedoen word te eniger tyd voor die vyftiende dag van Maart wat sodanige eerste dag van April voorafgaan: Met dien verstande dat die registrasiebeampte na goeddunke, en onderworpe aan die betaling van 'n laatregistrasiegeld van R5, behalwe die registrasiegeld in subregulasie (1) genoem, die indiening van 'n aansoek om registrasie na die vyftiende dag van Maart kan toelaat: Voorts met dien verstande dat die registrasiebeampte ten opsigte van die tydperk tussen die inwerkingtreding van hierdie regulasies en die daaropvolgende een-en-dertigste dag van Maart, na betaling van die registrasiegeld in subregulasie (1) genoem, kan toelaat dat aansoek te eniger tyd binne 'n maand na sodanige inwerkingtreding gedoen word sonder betaling van genoemde laatregistrasiegeld.

(3) Waar aansoek om registrasie gedoen word deur 'n persoon wat nie alreeds besigheid as 'n skoonmaker of verkoper van saad dryf nie, moet sodanige aansoek van die registrasiegeld in subregulasie (1) genoem, vergesel gaan en kan sodanige aansoek gedoen word te eniger tyd voordat hy aldus besigheid begin dryf, sonder betaling van 'n laatregistrasiegeld.

(4) Indien die registrasiebeampte 'n aansoek om registrasie toestaan, moet hy aan die aansoeker 'n registrasiesertifikaat uitreik in die vorm in Aanhangsel C hiervan uiteengesit: Met dien verstande dat waar sodanige aansoeker vir die onmiddellik voorafgaande jaar van registrasie geregistreer was, die registrasiebeampte nie verplig is om weer 'n registrasiesertifikaat uit te reik nie, maar van sodanige registrasie moet kennis gee deur middel van 'n kwitansie uitgereik ten opsigte van die betrokke registrasiegeld, of deur 'n brief of deur albei, en ten opsigte van die lopende tydperk moet sodanige sertifikaat met sodanige kwitansie of brief of albei, na gelang van die geval, as bewys van registrasie gelees word.

2. Dit is 'n voorvereiste vir die toestaan van registrasie dat die aansoeker gedurende die tydperk van 12 maande wat die datum van ontvangs van die aansoek deur die registrasiebeampte onmiddellik voorafgaan, nie by twee of meer geleenthede weens een of meer oortredings van die Wet op Saad, 1961, skuldig bevind is nie.

3. Any registration of a cleaner shall be subject to the following conditions: —

(*a*) That he shall have at his disposal adequate and effective facilities for the storage and satisfactory cleaning of the kinds and varieties of seed he is to handle;

(*b*) that where he is also to clean seed intended solely for use as food or stock feed or for industrial purposes, such seed shall be stored separately from any other seed;

(*c*) that he shall prevent the admixture of any one kind or variety of seed to any other kind or variety thereof, whether during the cleaning thereof or not;

except in the case of pasture- and lawn mixtures or mixtures prescribed by the buyer;

(*d*) that any person employed by him to operate a cleaning machine shall have sufficient knowledge of the cleaning of seed or shall be under effective supervision of a person with such knowledge;

(*e*) that any place where seed is to be stored, shall be kept in a sanitary condition by effective measures against insects and rodents;

(*f*) that provision shall be made for effective lighting and ventilation in any place where seed is to be cleaned;

(*g*) that records in accordance with the directions of the registering officer shall be kept in connection with the cleaning of seed;

(*h*) that he shall submit such returns in regard to the seed cleaned by him as may be required by the registering officer; and

(*i*) that he shall comply with the provisions of the seeds Act, 1961, and the regulations made thereunder.

4. Any registration of a seller of seed shall be subject to the following conditions: —

(*a*) That he shall have at his disposal adequate facilities for the storage of the kinds and varieties of seed he is to handle;

(*b*) that seed intended solely for use as food or stock food or for industrial purposes shall be kept apart from any other seed and that any seed whatsoever shall be stored separately from any fungicide, insecticide or any other substance whatsoever likely to contaminate or otherwise detrimentally affect seed;

(*c*) that he shall prevent the admixture of any kind or variety of seed to any other kind or variety thereof;

except in the case of pasture- and lawn mixtures or mixtures prescribed by the buyer.

(*d*) that any person employed by him to sell seed shall have sufficient knowledge of the seed he is to handle or shall be under effective supervision of a person with such knowledge;

(*e*) that any place where seed is to be stored, shall be kept in a sanitary condition by effective measures against insects and rodents;

(*f*) that provision shall be made for effective lighting and ventilation in any place where seed is to be stored;

(*g*) that seed containers shall be kept in a neat condition and properly labelled in accordance with the provisions of the Seeds Act, 1961, and the regulations made thereunder;

(*h*) that seed containers shall be so stored that easy access may be had to each seed lot;

(*i*) that he shall submit such returns in regard to the seed handled by him as may be required by the registering officer; and

(*j*) that he shall comply with the provisions of the Seeds Act, 1961, and the regulations made thereunder.

5. No person whose registration has been cancelled, may be registered again in respect of the year for which that registration was granted.

6. If registration is cancelled, the person concerned shall surrender his registration certificate to the registering officer within fourteen days after having been notified

3. 'n Registrasie van 'n skoonmaker is aan die volgende voorwaardes onderworpe: —

(*a*) Dat hy voldoende en doeltreffende fasiliteite vir die opberging en bevredigende skoonmaak van die soorte en variëteite saad wat hy gaan hanteer, tot sy beskikking het;

(*b*) dat waar hy ook saad gaan skoonmaak wat alleen vir gebruik as voedsel of veevoer of vir nywerheidsdoeleindes bedoel is, sodanige saad apart van enige ander saad opgeberg word;

(*c*) dat hy die bymenging van 'n soort of variëteit saad met enige ander soort of variëteit daarvan hetsy gedurende die skoonmaak daarvan al dan nie, voorkom;

uitgesonderd in die geval van weidings- en perkmengsels of mengsels soos deur die koper voorgeskryf;

(*d*) dat 'n persoon deur hom in diens geneem om 'n skoonmaakmasjien te bedien, oor genoegsame kennis van die skoonmaak van saad beskik of onder doeltreffende toesig staan van 'n persoon met sodanige kennis;

(*e*) dat 'n plek waar saad opgeberg gaan word, in 'n sanitêre toestand gehou sal word deur doeltreffende maatreëls teen insekte en knaagdiere toe te pas;

(*f*) dat in 'n plek waar saad skoongemaak gaan word, voorsiening vir doeltreffende beligting en ventilasie gemaak word;

(*g*) dat rekords ooreenkomstig die voorskrifte van die registrasiebeampte gehou word in verband met die skoonmaak van saad;

(*h*) dat hy die opgawes ten opsigte van die saad deur hom skoongemaak wat die registrasiebeampte mag vereis, indien; en

(*i*) dat hy aan die bepalings van die Wet op Saad, 1961, en die regulasies daarkragtens uitgevaardig, voldoen.

4. 'n Registrasie van 'n verkoper van saad is aan die volgende voorwaardes onderworpe: —

(*a*) Dat hy voldoende fasiliteite vir die opberging van die soorte en variëteite saad wat hy gaan hanteer, tot sy beskikking het;

(*b*) dat saad wat alleen vir gebruik as voedsel of veevoer of vir nywerheidsdoeleindes bedoel is, apart van ander saad gehou word en dat watter saad ook al opgeberg word dit apart van 'n swamdoder, insekdoder of watter ander stof ook al wat vermoedelik saad sal bederf of dit nadelig sal aantas, gehou word;

(*c*) dat hy die bymenging van 'n soort of variëteit saad met enige ander soort of variëteit sal voorkom;

uitgesonderd in die geval van weidings- en perkmengsels of mengsels soos deur die koper voorgeskryf;

(*d*) dat 'n persoon deur hom in diens geneem om saad te verkoop, oor genoegsame kennis beskik van die saad wat hy gaan hanteer of onder die doeltreffende toesig staan van 'n persoon met sodanige kennis;

(*e*) dat 'n plek waar saad opgeberg gaan word, in 'n sanitêre toestand gehou word deur doeltreffende maatreëls teen insekte en knaagdiere te tref;

(*f*) dat in 'n plek waar saad opgeberg gaan word, voorsiening vir doeltreffende beligting en ventilasie gemaak word;

(*g*) dat saadhouers in 'n netjiese toestand gehou word en behoorlik ooreenkomstig die bepalings van die Wet op Saad, 1961, en die regulasies daarkragtens uitgevaardig, geëtiketteer word;

(*h*) dat saadhouers so opgeberg word dat maklike toegang tot elke saadlot verkry kan word;

(*i*) dat hy die opgawes ten opsigte van die saad deur hom verkoop wat die registrasiebeampte mag vereis, indien; en

(*j*) dat hy aan die bepalings van die Wet op Saad, 1961, en die regulasies daarkragtens uitgevaardig, voldoen.

5. Geen persoon wie se registrasie ingetrek is, mag ten opsigte van die jaar waarvoor daardie registrasie toegestaan is, herregistreer word nie.

6. Indien registrasie ingetrek word, moet die betrokke persoon binne veertien dae nadat hy van sodanige intrekking in kennis gestel is, sy registrasiesertifikaat aan die

of such cancellation, and no registration fee or late registration fee which he has already paid, shall be refunded to him.

7. (1) Any person who wishes to appeal in terms of section *six* of the Seeds Act, 1961, to appear against the rejection of his application for registration as a cleaner or seller of seed, or against the cancellation of his registration as such shall submit to the Minister a written notice of appeal within six weeks after he has been notified of such rejection or cancellation. Such notice of appeal shall set out the arguments of the appellant against the decision of the registering officer and shall be accompanied by the original or a copy of the reasons for the decision of the registering officer supplied in terms of section *five* of the Act.

(2) The registering officer shall furnish his reasons for the rejection of an application for registration or for the cancellation of registration within fourteen days after being requested therefor.

(3) Any notification in terms of sub-regulation (1) or (2) shall be deemed to have been given on the day when it was delivered, or if it was despatched through the post, on the day that it was posted.

(4) After consideration of the representations of the appellant, the Minister may in his discretion extend the period referred to in sub-regulation (1) within which an appeal may be noted.

ANNEXURE A.

APPLICATION FOR REGISTRATION AS A CLEANER OF SEED.

[In terms of the provisions of the Seeds Act, 1961 (Act No. 28 of 1961).]

First Application.	Renewal Application.

(Make cross in appropriate space).

I, the undersigned,_____
(name of applicant)

of_____
(address of applicant)

1. do apply herewith on behalf of_____
(name and address of firm)
to be registered as a

CLEANER OF SEED

for the period 1st April, 19____, to 31st March, 19____. My existing registration No. is SF/_____.

2. declare that the information supplied hereunder is true and correct:—
   (*a*) Capacity of applicant with regard to the business mentioned under 1. (director, manager, etc.)_____
   (*b*) Kinds of declared seed which are handled. (If space here is insufficient attach separate list)_____
   (*c*) Types of machines (not trade names) and number of each on hand for cleaning of seed_____
   (*d*) (i) Type of building in which seed is cleaned_____
   (ii) Floor area of building/part of building in which seed is handled_____ sq. ft.
   (*e*) (i) Name(s) of person(s) in charge of cleaning of seed_____
   (ii) Experience and qualifications in seed cleaning of person(s) mentioned under (i)_____
   (*f*) Is seed for commodity purposes handled in the same building and cleaned with the same machines as other seed? (If "yes", which kinds?)_____
   (*g*) Is seed cleaned on behalf of yourself or other parties or both?_____
   (*h*) (i) Are the necessary precautions taken against admixture of seed? (Yes/No*).
   (ii) Is the place of storage of the seed kept in a sanitary condition? (Yes/No*).
   (iii) Are the seed cleaning machines properly illuminated? (Yes/No*).
   (*i*) Is a proper record system in connection with the cleaning of seed being maintained? (Yes/No*).
3. undertake to submit returns of kinds and quantities of seed cleaned, when so requested by the registering officer;
4. enclose herewith the amount of R15, being the registration fee.

Date_____ Signature of Applicant.

* Delete whichever is not applicable.

registrasiebeampte oorhandig, en geen registrasiegeld of laatregistrasiegeld wat hy alreeds betaal het, word aan hom terugbetaal nie.

7. (1) 'n Persoon wat kragtens artikel *ses* van die Wet op Saad, 1961, teen die weiering van sy aansoek om registrasie as 'n skoonmaker of verkoper van saad of teen die intrekking van sy registrasie as sodanige appèl aanteken, moet binne ses weke nadat hy van sodanige weiering of intrekking in kennis gestel is, aan die Minister 'n skriftelike kennisgewing van appèl voorlê. In sodanige kennisgewing van appèl moet die argumente van die appellant teen die beslissing van die registrasiebeampte vervat wees, en dit moet van die oorspronklike of 'n afskrif van die redes vir die beslissing van die registrasiebeampte ingevolge artikel *vyf* van genoemde Wet, vergesel gaan.

(2) Die registrasiebeampte moet sy redes vir die weiering van 'n aansoek om registrasie of vir die intrekking van registrasie verstrek binne veertien dae nadat hy daarom gevra is.

(3) 'n Mededeling ingevolge subregulasie (1) of (2) word geag gegee te gewees het op die dag waarop dit afgelewer is of indien dit per pos versend is, op die dag waarop dit gepos is.

(4) Na oorweging van die vertoë van die appellant kan die Minister na goeddunke die tydperk in subregulasie (1) genoem waarbinne 'n appèl aangeteken kan word, verleng.

AANHANGSEL A.

AANSOEK OM REGISTRASIE AS 'N SKOONMAKER VAN SAAD.

[Ingevolge die bepalings van die Wet op Saad, 1961 (Wet No. 28 van 1961).]

Eerste aansoek.	Hernuwingsaansoek.

(Trek kruisie in toepaslike ruimte).

Ek, die ondergetekende,_____
(naam van aansoeker).

van_____
(adres van aansoeker).

1. Doen hierby aansoek namens_____
(naam en adres van firma).
om as 'n

SKOONMAKER VAN SAAD

geregistreer te word vir die tydperk 1 April 19____ tot 31 Maart 19____. My bestaande registrasienommer is SF/_____.

2. verklaar dat die inligting wat ek hieronder verstrek, waar en juis is:—
   (*a*) Hoedanigheid van aansoeker met betrekking tot die besigheid onder 1. genoem (direkteur, bestuurder, ens.)_____
   (*b*) Soorte verklaarde saad wat gehanteer word. (Indien ruimte hier onvoldoende is, heg aparte lys aan)_____
   (*c*) Tipes masjiene (nie handelsname nie) en getal van elk wat vir skoonmaak van saad voorhande is_____
   (*d*) (i) Tipe gebou waarin saad skoongemaak word_____
   (ii) Vloeroppervlakte van gebou/gedeelte van gebou waarin saad gehanteer word_____ vk. vt.
   (*e*) (i) Naam (name) van persoon (persone) in beheer van die skoonmaak van saad_____
   (ii) Ondervinding en kwalifikasies in skoonmaak van saad van persoon (persone) onder (i) genoem_____
   (*f*) Word saad vir kommoditeitsdoeleindes in dieselfde gebou gehanteer en met dieselfde masjiene skoongemaak as ander saad? (Indien „ja", watter soorte?)_____
   (*g*) Word saad ten behoewe van uself of ander partye of albei skoongemaak?_____
   (*h*) (i) Word die nodige voorsorgsmaatreëls teen bymenging van saad getref? (Ja/Nee*).
   (ii) Word die opbergplek van die saad in 'n sanitêre toestand gehou? (Ja/Nee*).
   (iii) Is die skoonmaakmasjiene behoorlik belig? (Ja/Nee*).
   (*i*) Word 'n behoorlike rekordstelsel in verband met die skoonmaak van saad in stand gehou? (Ja/Nee*).
3. verbind my om, wanneer die registrasiebeampte daarom vra, opgawes te verstrek van die soorte en hoeveelhede saad skoongemaak;
4. sluit hierby in die bedrag van R15 vir die registrasiegeld.

Datum_____ Handtekening van Aansoeker.

* Skrap wat nie van toepassing is nie.

ANNEXURE B.

APPLICATION FOR REGISTRATION AS A SELLER OF SEED.

[In terms of the provisions of the Seeds Act, 1961 (Act No. 28 of 1961).]

First Application.	Renewal Application.

(Make cross in appropriate space).

I, the undersigned, _____
(name of applicant)

of _____
(address of applicant)

1. do apply herewith on behalf of _____
_____
(name and address of firm)
to be registered as a

SELLER OF SEED

for the period 1st April, 19____, to 31st March, 19____. My existing registration No. is SF/_____.

2. declare that the information supplied hereunder is true and correct:—
   (a) Capacity of applicant with regard to the business mentioned under 1. (director, manager, etc.)_____
   (b) Kinds of declared seeds handled. (If space here is insufficient, attach separate list)_____
   (c) (i) Type of building in which seed is handled_____
   (ii) Floor area of building in which seed is handled _____sq. ft.
   (d) Are other items than seed also handled in the same business? (If "yes", furnish particulars)_____
   (e) Is seed for commodity purposes handled in the same building as other seed? (If "yes", which kinds?)_____
   (f) (i) Is seed stored separately from seed for commodity purposes and other products, such as insecticides, etc.? (Yes/No*).
   (ii) Are the necessary precautions taken against admixture of seed? (Yes/No*)
   (iii) Is the place of storage of the seed kept in a sanitary condition? (Yes/No*).
   (iv) Is the place of storage of seed properly illuminated and ventilated? (Yes/No*).
   (v) Are the containers of seed stored and marked in such a manner that easy identification of each seed lot is possible? (Yes/No*).
   (g) Is a proper record system in connection with the receipt and sale of seed being maintained? (Yes/No*).
   (h) Type of containers in which seed is packed for sale_____
   (i) The most important sources from where seed is procured (import, local certified, etc.)_____
   (j) Do the persons in your employ have a sufficient knowledge of the kinds of seed you handle? (Yes/No*).
   (k) Describe the facilities available for testing, examination and analysis of seed_____
3. undertake to submit returns of kinds and quantities of seed sold, when so requested by the registration officer;
4. enclose herewith the amount of R15, being the registration fee.

Date _____ Signature of Applicant.

* Delete whichever is not applicable.

ANNEXURE C.
(State Coat-of-Arms).

DEPARTMENT OF AGRICULTURAL TECHNICAL SERVICES.

CERTIFICATE OF REGISTRATION.

It is certified herewith that _____

_____

Address _____

is registered as a

_____OF SEED

in terms of the provisions of the Seeds Act, 1961 (Act No. 28 of 1961).

Registration No. SF/_____

Date of Issue _____ Signature of Registration Officer.

AANHANGSEL B.

AANSOEK OM REGISTRASIE AS 'N VERKOPER VAN SAAD.

[Ingevolge die bepalings van die Wet op Saad, 1961 (Wet No. 28 van 1961).]

Eerste aansoek.	Hernuwingsaansoek.

Ek, die ondergetekende, _____
(naam van aansoeker).

van _____
(adres van aansoeker)

1. doen hierby aansoek namens _____
_____
(naam en adres van firma)
om as 'n

VERKOPER VAN SAAD

geregistreer te word vir die tydperk 1 April 19____ tot 31 Maart 19____. My bestaande registrasienommer is SF/_____

2. verklaar dat die inligting wat ek hieronder verstrek, waar en juis is:—
   (a) Hoedanigheid van aansoeker met betrekking tot die besigheid onder 1. genoem (direkteur, bestuurder, ens.)_____
   (b) Soorte verklaarde saad wat gehanteer word. (Indien ruimte hier onvoldoende is, heg aparte lys aan)_____
   (c) (i) Tipe gebou waarin saad gehanteer word_____
   (ii) Vloeroppervlakte van gebou waarin saad gehanteer word _____vk. vt.
   (d) Word ander items as saad ook in dieselfde besigheid gehanteer? (Indien „ja", verstrek besonderhede)_____
   (e) Word saad vir kommoditeitsdoeleindes in dieselfde gebou as ander saad gehanteer? (Indien „ja", watter soorte?)_____
   (f) (i) Word saad apart van saad vir kommoditeitsdoeleindes en ander produkte soos insekdoders, ens. opgeberg? (Ja/Nee*).
   (ii) Word die nodige voorsorgsmaatreëls teen bymenging van saad getref? (Ja/Nee*).
   (iii) Word die opbergplek van die saad in 'n sanitêre toestand gehou? (Ja/Nee*).
   (iv) Is die opbergplek van saad behoorlik belig en geventileer? (Ja/Nee*).
   (v) Is die houers van saad op so 'n wyse opgeberg en gemerk dat maklike identifisering van elke saadlot moontlik is? (Ja/Nee*).
   (g) Word 'n doeltreffende rekordstelsel in verband met die ontvangs en verkoop van saad in stand gehou? (Ja/Nee*).
   (h) Tipe houers waarin saad vir verkoop verpak word_____
   (i) Die belangrikste bronne vanwaar saad aangekoop word (invoer, plaaslik gesertifiseer, ens.)_____
   (j) Beskik die persone in u diens oor voldoende kennis van die soorte saad wat u hanteer? (Ja/Nee*).
   (k) Beskryf die fasiliteite wat vir die toets, ondersoek en ontleding van saad beskikbaar is_____
3. verbind my om, wanneer die registrasiebeampte daarom vra, opgawes te verstrek van soorte en hoeveelhede verkoop;
4. sluit hierby in die bedrag van R15 vir die registrasiegeld.

Datum _____ Handtekening van Aansoeker.

* Skrap wat nie van toepassing is nie.

AANHANGSEL C.
(Staatswapen.)

DEPARTEMENT VAN LANDBOU-TEGNIESE DIENSTE.

SERTIFIKAAT VAN REGISTRASIE.

Hierby word gesertifiseer dat _____

_____

adres _____

ooreenkomstig die bepalings van die Wet op Saad, 1961 (Wet No. 28 van 1961), as 'n

_____VAN SAAD

geregistreer is.

Registrasienommer SF/_____

Datum van uitreiking _____

Handtekening van Registrasiebeampte.

No. R. 1116.] [26 July 1963.

SEEDS ACT, 1961 (ACT No. 28 OF 1961).—NAMES OF PLANT VARIETIES INCLUDED IN THE VARIETAL LIST KEPT IN TERMS OF SECTION *EIGHT* OF THE ACT.

It is hereby notified in terms of the provisions of section *ten* of the Seeds Act, 1961 (Act No. 28 of 1961), that the plant varieties set out in the Schedule hereto have been included in the varietal list kept in terms of section *eight* of the said Act.

No. R. 1116.] [26 Julie 1963.

WET OP SAAD, 1961 (WET No. 28 VAN 1961).—NAME VAN PLANTVARIËTEITE OPGENEEM IN DIE VARIËTEITLYS GEHOU INGEVOLGE ARTIKEL *AGT* VAN DIE WET.

Hierby word ingevolge die bepalings van artikel *tien* van die Wet op Saad, 1961 (Wet No. 28 van 1961), bekendgemaak dat die plantvariëteite in die Bylae hiervan genoem in die variëteitlys gehou ingevolge artikel *agt* van genoemde Wet, opgeneem is.

SCHEDULE.—*BYLAE.*

(*a*) FORAGE GRASSES.—*VOERGRASSE.*

Bromus enermis Leys (Smooth Brome/*Gladde bronus*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Achenbach	—
Common	—
Elsberry	—
Fischer	—
Lincoln	—

Bromus wildenowii (*B. catharticus*) Vahl. (Rescue grass/*Reddingsgras*).

Vatiety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Nakuru	—

Cenchrus cilliaris L. (Blue Buffalo Grass/*Bloubuffelsgras*) (Katstertbuffel).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Molopo	—
U.S.A. Strain	—

Chloris gayana Kunth. (Rhodes Grass/*Rhodesgras*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Common	—
Giant	—
Katambora	—
Local/*Plaaslik*	—
Nzoia	—

Dactylis glomerata L. (Rough Cocksfoot/*Kropaargras*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Akaroa	—
Danish	—
S. 26	—
S. 37	—
S. 143	—

Digitaria smutsii Stent. (Smuts Finger Grass/*Smutsvingergras*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Irene	—
Northam	—

Eragrostis tef (Zucc) Trotter [E. abyssinica (Jack) Link.]

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Ordinary Brown	Gewone Bruin.
Union Brown	Unie Bruin.
Union White	Unie Wit.

Eragrostis curvula (Schrad) Nees (Weeping Love Grass/*Oulandsgras*)

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
American	—
Ermelo	—
Grootfontein	—
Kromdraai	—
Witbank	—

Festuca arundinacea Schreb. (Tall Fescue/*Langswenkgras*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Alta	—
Kentucky 31	—
New Zealand	—

Festuca pratensis Huds. (Meadow Fescue/*Langblomswenkgras*).
All varieties/*Alle variëteite.*

Lolium multiflorum Lam. (Italian Rye Grass/*Italiaanse raaigras*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Italian S. 22	—

Lolium pernenne L. (Perennial Rye Grass/*Meerjarige raaigras*).
All varieties/*Alle variëteite.*

Paspalum dilatatum Poir (Dallis Grass/*Gewone paspalum*).
All varieties/*Alle variëteite.*

Paspalum urvillei Stoud. (Vasey Grass/*Vasey-paspalum*).
All varieties/*Alle variëteite.*

Phalaris tuberosa L. (Bulb Canary Grass/*Knolkanariegras*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Common	—
Perennial Canary	—
Stenoptera	—

Poa pratensis L. (Kentucky Bluegrass/*Kentucky-blougras*).
All varieties/*Alle variëteite.*

Setaria sphacelate (Schumach.) Stapf. (Common Bristle Grass/*Gewone Setaria*).

Variety Name/Variëteitsnaam.	*Synonym/Sinoniem.*
Kazungulu	—

Sorghum almum (L.) Parodi (Columbus Grass/*Columbusgras*).
All Varieties/*Alle variëteite.*

Sorghum species/spesies (Perennial Sweet Sorgrass/*Meerjarige soetsorgras*).
All varieties/*Alle variëteite.*

Sorghum sudanense (Piper) Stapf (Sudan and Sweet Sudan/*Soedan en Soetsoedan*).
All varieties/*Alle variëteite.*

(*b*) FORAGE LEGUMES.—*VOERPEULGEWASSE.*

Lupinus albus L. (White Lupin/*Witlupien*).

Variety Name/Variëteitsnaam.	*Synonum/Sinoniem.*
White Fodder (sweet/*soet*)	—

Lupinus angustifolius (Blue Lupin/*Bloulupien*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Bianco (Sweet/*Soet*)	—
Blue Swedish (Sweet/*Soet*)	—
Jakkalsfontein (bitter)	—
Ligvoet (bitter)	—
Mixed/*Gemeng* (bitter)	—
S.E. Blou I (bitter)	—
Svalof's Borre (sweet/*soet*)	—

Lupinus Luteus (Yellow Lupin/*Geellupien*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
S.E. Geel I (sweet/*soet*)	—
Weiko Type/*Weiko-tipe* (sweet/*soet*)	—

Medicago sativa L. (Lucerne/*Lusern*).

Variety Name/Variëteitsnaam.	*Synonym/Sinoniem.*
S.A. Standaard	S.A. Standard.

Ornithopus sativus Link. (Serredella).
All varieties/*Alle variëteite.*

Trifolium fragiferum L. (Strawberry Clover/*Aarbeiklawer*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
O'Connor's	—
Palestine	—

Trifolium incarnatum L. (Crimson Clover/*Inkarnaatklawer*.
All varieties/*Alle variëteite.*

Trifolium pratense L. (Red Clover/*Rooiklawer*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
American Early Red	—
Australian Red	—
Bread Red Med. Ear. S. 151	—
Chillian Early Red	—
Early Kewland Red	—
Giant Red	—
Kewland Red	—
Late Flowering Red	—
Late Mammoth American Red	—
Late Montgomery New Zealand	—
Montgomery Late Red	—
New Zealand Early Red	—
S. 1 Perennial Red	—

Trifolium repens L. (White Clover/*Witklawer*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Aberysthwith S. 100	—
Ladino	—
New Zealand White	—
New Zealand Wild White	—
Permanent Pasture	—
Tongola Irrigation White	—
White S. 100	—
Wild White S. 184	—

Trifolium repens L. *var. latum.* (Ladino White Clover/*Ladino-wit klawer*).
All varieties/*Alle variëteite.*

Trifolium subterraneum L. (Subterranean Clover/*Ondergrondse klawer*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Bucchus Marsh	—
Clare	—
Early Dwalganup	—
Geraldton	—
Marrar	—
Mt. Barker mid-season	—
Tallarook	—
Woogenellup	—
Yarloop	—

(c) FIELD CROPS.—*AKKERBOUGEWASSE.*

Beta vulgaris L. *var. macrorhiza* (Mangold/*Mangelwortel*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Golden Tankard	—
Half Sugar Giant Rose	—
Hunsballe	—
Long Red	—
Mammoth Long Red	—
Otofte Red	—
Pajbjerg Rex 10	—
Yellow Globe	—

Brassica napus L. (Rape/*Weikool*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Dwarf Essex	Broad-leaved sowing.
Giant English	—
Giant Essex	Kangaroo.

Brassica oleracea L. *var. acephala* DC (Kale/*Beeskool*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Chou Moellier	—
Hungry Gap	—
Scotch Green Curled	—
Thousand Headed	—

Brassica oleracea var. caulorapa DC (Kohlrabi/*Knolkool*).

All varieties/*Alle variëteite.*

Brassica oleracea var. napobrassica (Swede/*Sweedse raap*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
American Purple Top	—
Bangholm	Mammoth Purple Top.
Best of All	—
Champion Purple Top	—

Brassica rapa L. (Turnip/*Raap*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Aberdeen Green Top Yellow Flesh	—
Aberdeen Purple Top Yellow Flesh	—
American Purple Top White Flesh	—
Devonshire Greystone	—
Green Globe	—
Imperial Green Globe	—
Mammoth Purple Top	—
Pommeranian White Globe	—
Scotch Green Top	—
Schotch Purple Top	—
White Globe	—

Glycine max. (L.) Merr. (Soybean/*Sojaboon*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Blyvoor	—
Brownies 101	—
Geduld	—
Hernon 109	—
Masterpiece	—
N. 49/212	—
Saunders	—
Swazi Shatterproof	—

Gossypium hirsutum L. (Cotton/*Katoen*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Albar 637	—
Acala 4-42	—
Cape Acala	—
Improved Bancroft	—
Kapel A. 2106	—
Loco B. 5160	—
Muka A. 7215	—

Hibiscus cannabinus L. (Kenaf/*Stokroos*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Cuba 108	—
Cubano	—
Ja 3/68	—
Purfo	—
Purja	—
Salvador	—

Pisum sativum L. (Dried pea/*Droë ert*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Annonay	—
Basuto	—
Black Eyed Susan	Swartbekkie.
Canners 105	—
Caractacus	—
Greenfield	Groen landert.
Harrison's Glory	—
Mbeya	—
Oranje Kroon	—
Satelliet TP	Satellite TP.
Tringa	—

Raphanus sativus L. (Radish/*Radys*).

All varieties/*Alle variëteite.*

Ricinus communis L. (Castor bean/*Kasterolie*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
1. Hybrids/*Basters:*—	
B. 415	H. 415.
Cimmaron	—
D. 1	—
D. 2	—
Variety Names/Variëtietsname.	*Synonyms/Sinonieme.*
Gnomba	—
H. 55	Hazera No. 1.
H. 415	B. 415
Kafim	—
Hazera No. 1	H. 55.
M. 13	—
M. 384	—
Pacific Improved Hybrid 4	—
Pacific Hybrid 6	—
Pacific Hybrid D. 25	—
Pacific Hybrid D. 30	—
Pacific 137D	—
Pacific Hybrid 150	—
Pacific Hybrid 192	—
Pacific Hybrid 199	—
Pacific 201 D	—
Pacific Hybrid 243	—
2. Open-pollinated varieties/*Oopbestuifde variëteite:*—	
	Synonym/Sinonieme.
Gunson 1118	—
Gunsons S/56	—
Gunson UC. 53	—
N.R.S.	—

Sorghum species/spesies (Kaffircorn/*Kafferkoring*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
1. Hybrids/*Basters:*—	
DC. 33	—
DC. 34	—
DC. 36	—
DC. 37	—
DC. 39	—
DC. 40	—
DC. 55	—
DC. 59	—
DC. 99	—
DC. 109	—
DC. 176	—
DC. 500F	—
Hazera 610	RS. 610
NK. 125	—
NK. 135	—
NK. 140	—
NK. 145	—
NK. 150	—
NK. 202	—
NK. 210	—
NK. 222	—
NK. 227	—
NK. 230	—
NK. 283	—
NK. 300	—
NK. 310	—
NK. 320	—
NK. 330	—
2. Open-polinated varieties/*Oopbestuifde variëteite:*—	
Barnard Rooi	—
Framida	—
Hegari	—
Maltacorn 58	—
Martin	—
Radar	Herman Hattingh.
Ranger	—
Red Mixed	—
Swazi	Swazi Rooi.
Voëlproef	—
Barotse	—
Vorster	—
Wit Kafferkoring	—
Ramakothla	—

Zea mays L. (Maize/*Mielie*).

(a) Group Dents and Flints/*Groep Duikpit en Rondepit:*—

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
White-seeded/*Witsadig:*—	
1. Hybrids/*Basters:*—	
EK × K64r	—
NPP × K64r	—
PL. 10	—
PP × K64r	—
Pretoria PP × K64r	—
S.A. 5	—
S.A. 9	—
S.A. 9N	—
S.A. 11	—
S.A. 33	—
S.A.B.I.—1	—
S.A.B.I.—111	—

2. Open-pollinated varieties/*Oopbestuifde variëteite.*

	Synonyms/Sinonieme.
Anveld	—
American White Flint	—
Blits Kalaharie	—
Boesman Wit	Bushman White, Kango, Wit Kango.
Early King	—
Hickory King	—
Towa Silver Mine	—
Kalabrid	—
Kalaharie Early Pearl	—
Kango	Wit Kango, Boesman Wit.
Ladysmith White Pearl	—
Mick's Success	Durr.
Oakhamton Special	—
Oakleigh (White/*Wit*)	—
Potchefstroom Pearl	Potchefstroom Pêrel.
Robyn	—
Silver King	—
Topbrid	—
Wisconsin White Dent	—

Yellow-seeded/*Geelsadig*:—

1. Hybrids/*Basters*:—

S.A. 4	—
S.A. 60	—
S.A. 100	—
S.A. 200	—

2. Open-pollinated varieties/*Oopbestuifde variëteite*:—

Bushman Yellow	Boesman Geel.
Cincinnati	—
Golden Beauty	—
Jardine Yellow	Jardine Geel.
Kroonstad Robyn	—
Mardonian	—
Natal Geel	Natal Yellow.
Natal 8 Row	Natal 8 Ry—New England.
Oakleigh	—
Peter Blythe	—
Sahara	—
Teko	—

(*b*) Group Maize/*Groep Broodmielies*:—
All varieties/*Alle variëteite.*

(*c*) Group Popcorn/*Groep Springmielies* (*Kiepiemielies*).
All varieties/*Alle variëteite.*

(*d*) VEGETABLES.—*GROENTEGEWASSE.*

Allium cepa L. (Onion/*Ui*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Australian Brown	Australiese Bruin.
Bermuda Yellow	Bermuda Geel.
Blood-red Bottle Shaped	—
Bombay Red	—
Caledon Globe	—
Cape Yellow Globe	—
Cape Yellow Straw Coloured	Kaapse Geel Strooikleur.
Copper King	—
De Wildt	—
Early Cape Flat	Vroeë Kaapse Plat.
Early Grano	Vroeë Grano.
Early White Queen	—
Early Yellow Flat Bermuda	—
Globe Straw	—
Hojem	—
Italian Red	—
Karoo Late	—
Lemon Rocca	—
Paris Silver Skin	—
Pickling	—
Prizetaker	—
Red Rocco	—
Silver King	—
Silver Skin Pickling	—
South Port Red Globe	—
South Port Yellow Globe	—
Spring	—
Spring White Welsh	—
Texas Grano	—
White Barletta	—
White Flat Mammoth	—
White Tripoli	—

Allium porrum L. (Leek/*Prei*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Broad Flag	—
Carentan	—
Giant Winter	—
Italian Giant	—
Mammoth Italian	—
Musselburg	—
Prizetaker	—

Beta vulgaris L. *var. cicla* (L.) Aell. (Spinach Beet, Swiss Chard/*Spinasiebeet, Snybeet*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Dark Green White Ribbed	—
Fordhook Giant	—
Green Cutting	—
Large White Ribbed	—
Luculus	—
Rhubarb Chard	—
Yellow Cutting	—

Beta vulgaris L. var. *hortensis* (Garden beet/*Tuinbeet*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Crimson Globe	—
Crosby's Egyptian	Crosby's Egipties.
Detroit Dark Red	Detroit Donkerrooi.
Detroit Dark Red Short Top	Detroit Donkerrooi, Korttop.
Early Wonder	—
Eclipse	—
Flat Egyptian	Plat Egipties.
Halflong	Halflank.

Brassica oleracea L. var. *botrytis* (Cauliflower/*Blomkool*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
All Saints Early	—
Alpha	—
Cape Invincible	—
City Market	—
Dania	—
Danish Giant	—
Doble's Early	—
Dominant	—
Early Autumn Giant	—
Early Dwarf Erfurt	—
Early Italian Giant	—
Early Primus Improved	—
Extra Early Six Weeks	—
Flora Blanca	—
Gilt Edge	—
Late Italian Giant	—
Late Metropole	—
Le Cerf	—
McDonald's Early	—
Monarch	—
Neapolitan	—
Reliance	—
Snowball	—
Snowdrift	—
Southern Cross	—
Veitch's Autumn Giant Early	—
Veitch's Autumn Giant Late	—
Victory	—

Brassica oleracea L. var. *botrytis* L. (Broccoli/*Brokkoli*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Cauliflower Heading	—
Green Sprouting Calabresa (-sse)	—
Green Sprouting Early	—
Green Sprouting Medium	—
Large White	—
Large White Mammoth	—
Purple Sprouting	—
St. Valentine	—
Veitch's Self-protecting	—

Brassica oleracea L. var. *capitata* (Cabbage/*Kopkool*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
All Head Early	—
All Seasons	—
All the Year Round	—
Ball head	—
Brunswick	—
Cantonner Witkop	—
Cape Spitzkool	Kaapse Spitskool Sugarloaf.
Cape Spitz Somerkool	Slamse Kool.
Castle	—
Charleston Wakefield	—
Copenhagen Market	Kopenhaagse Mark.
Danish Ball	—
Ditmarsh	—
Drumhead	—
Early Blood Red	—
Early Flat Dutch	—
Early Jersey Wakefield	—
Early Main Crop	—
Early Market	—
Early Triumph	—
Erstling	—
Forty's Masterpiece	—
Giant Drumhead	—
Glory of Enkhuizen	—
Golden Acre	—
January King	—
Langedijker	—
Langendyk Red	—
Large Blood Red Drumhead	—
Late Drumhead	—
Late Flat Dutch	—
Late Premium	—
Main Crop	—

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Mammoth Flat Dutch	—
Mammoth Rock Red	—
Marion Market Yellows Resistant	—
Nemenia	—
Oxheart	—
Perfection Drumhead	—
Prize Drumhead Red Dutch	—
Red Dutch	—
Red Drumhead	—
Red Rock	—
Robinson's Drumhead	—
Savoy Chieftain	—
Savoy Drumhead	—
Savoy Perfection	—
Slamse Kool	Cape Spitz Somerkool.
Special Glory	—
Steadfast	—
Stein's Early Flat Dutch	—
Stonehead	—
Success	—
Seccession	—
Sugar Loaf	Cape Spitz.
Surehead	—
Ulm Early	—
White Gluckstadter	—

Brassica oleracea L. var. *caulorapa* D.C. (Kohlrabi/*Knolkool*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Blou Spek	—
Delikatesse	—
Early Green	—
Large Green	—
Large Purple	—
Optimus Blou	—
Purple Vienna	—
White Globe	—
White Vienna	—

Brassica oleracea L. var. *gemmifera* Zenker. (Brussels Sprouts/*Brusselse spruitjies*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Becker	Roodnerf.
Beemster	—
Bredase	—
Cambridge Special	—
Covent Garden	—
Filbasket	—
Half-dwarf Paris	—
Jade Cross	—
Lierse	—
Long Island	—
Matchless	—
Odense Market	—
Roodnerf	Becker.
Rouse Lench	—
Vroeë Dwerg	—

Brassica pekinensis (Chinese Cabbage/*Sjinese Kool*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Chihili	—
Petsai	—
Wong Bok	—

Brassica rapa L. (Turnip/*Raap*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
American Purple Top	—
Best of All	—
Early Flat Red Milan	—
Early Flat White Milan	—
Early Purple Top Globe	—
Early Snowball	—
Early White Stone	—
Golden Ball	—
Plat-gele Meiraap	—
Plat-witte Meiraap	—
Purple King	—
Purple Top White Globe	—
Red Top White Globe	—
Table Swede	—
White American Strap Leave	—

Capsicum species/*spesies* (Peppers/*Rissie*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Allbig	—
Anaheim Giant Chili	—
Aneheim Small Hot	—
Bullnose	Large Bell.
California Sweet	—
Californian Wonder	—
Chili	—
Chinese Giant	—
Dwarf Small Red	—
Florida Giant	—
Keystone Resistant Giant	—
Keystone Wonder Giant	—
Large Bell	Bullnose.
Large Early Neapolitan	—
Long Red Cayenne	—
Neapolitan	—
Nocera Red	—

Variety Names/Alle variëteite.	*Synonums/Sinonieme.*
Oxheart	—
Pacific Bell	—
Ruby Giant	—
Ruby King	—
World Beater	—
Yolo Wonder	—

Cichorium endivia L. (Endive/*Andyvie*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Batavian Green	—
Broad Leaved Batavian	—
Escarolle	—
Florida Green Curled	—
Nummer 5	—
White Curled	—
White Ribbed	—

Citrullus vulgaris Schrad. (watermelon/*waatlemoen*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Belly	Florida Giant, Cannon Ball, Black Diamond.
Black Diamond	Belly, Florida Giant, Cannon Ball.
Blacklee	—
Black Stone	—
Cannon Ball	Black Diamond, Florida Giant, Belly.
Cape Mountain Sweet	—
Congo	—
Charleston Grey	—
Dixie Belle	Stone Mountain.
Dixie Queen	—
Early Canada	—
Excel	—
Fairfax	—
Florida Favourite	—
Florida Giant	Black Diamond, Cannon Ball, Belly.
Garrison	—
Georgia Rattlesnake	—
Greystone	—
Hawkesbury	—
Icebox	—
Icecream	Peerless.
Kleckly Sweet	Wonder.
King and Queen	—
Klondike	—
Klondike Striped Blue Ribbon	—
Kudu	—
Missouri Queen	—
New Hampshire Midget	—
Peacock	—
Peerless	Icecream.
Rattlesnake	—
Shipper	—
Stone Mountain Sweet	Dixie Belle.
Sugar Baby	—
Sweetheart	—
Tom Watson	—
Van Riebeeck	—
Wonder	Kleckly Sweet.

Cucumis melo L. (Muskmelon or Canteloupe/*Spanspek*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Bay view	Cape, Kaapse.
Bender's Surprise	—
Cape	Bay View.
Cape Winter	Kaapse Winter, Honey Dew Pink Flesh.
Emerald Gem	—
Hale's Best	—
Hearts of Gold	—
Honeycomb	—
Honey Dew Green Flesh	—
Honey Dew Pink Flesh	Cape Winter, Kaapse Winter.
Honey Rock	—
Imperial	—
Montreal Market	—
Netted Gem	Rocky Ford.
New Giant	—
New Market	—
New Yorker	—
Queen of Colorado	—
Rio Gold	—
Rocky Ford	Netted Gem.
Smith's Perfect	—
Sulpher Resistant	—

Cucumis sativus L. (Cucumber/*Komkommer*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
A. & C	Colorado.
Ashley	—
Beth Alpha	—
Black Diamond	—
Burpee Hybrid F1	—
Challenger F1	—
Chigago Pickling	—
Clarke's Special	—

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Colorado	A. & C.
Cool and Crisp	—
Cubit	—
Early Fortune	—
Early White Spine	—
Fletcher	—
Fordhook Famous	—
Heinz Pickling	—
London Long Green	—
Long Fellow	—
Long Green	—
Long Marketer	—
Marketer	—
National Pickling	—
Palmetto	—
Paris Gherkin	—
Special Rust Resistant	—
Staysgreen	—
Stono	—
Straight Eight	—
Table Green	—
Vaughan	—
West Indian Gherkin	—

Cucurbita moschata Duchesne, *C. maxima Duchesne et C. pepo* L. (Squash and pumpkin/*Skorsie en pampoen*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Acorn	Table Queen.
Big Tom	—
Blue Hubbard	Blou Hubbard.
Buttercup	—
Butternut	—
Cushaw Striped	—
Caserta	—
Cattle Melon	—
Connecticut Field	—
Ceylon's Pampoen	—
Crookneck Yellow	Golden Crookneck.
Cushaw Golden	—
Flat White Boer	Plat wit Boer.
Frazerdale	—
Giant Crookneck	—
Giant Italian Crookneck	—
Golden Delicious	—
Golden Hubbard	Geel Hubbard.
Golden (Yellow) Custard	Geel Tert.
Grahamstown Marrow	—
Green Hubbard	Groen Hubbard.
Green Hubbard Warted	—
Green Hubbard Chicago Warted	—
Iron Bark	—
Kentucky Field	—
King of Mammoth	—
Large Cheese	—
Little Gem	Orange Gem, Lemoen-pampoentjie.
Long Black	—
Long Green Bush	—
Long White Bush	—
McDonald's Nkulu	—
Orange Gem	Little Gem, Lemoen-pampoentjie.
Pie	Small Sugar.
Queensland Blue	—
Queensland Green Bush	—
Short Green Bush	—
Small Sugar	Pie.
Table Queen	Acorn.
Turk's Cap	Warren Turban.
Venice Market	—
Warrent Turban	Turk's Cap.
White Custard	Wit tert.
White Scallop	—
Winter Luxury	—
Zucchini	—

Daucus carota L. (carrot/*geelwortel*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Altringham	Large Red; St. Valery.
Amsterdam	—
Cape Market	Kaapse Mark.
Chantenay	—
Chantenay Long	Chantenay Lank.
Chantenay Red Core	Chantenay Rooipit.
Danvers Half Long	Danvers Halflank.
Forcing	—
Imperator	—
James Intermediate	—
Large Red	Altrinhams; St. Valery.
Morse's Bunching	Short Horn.
Nantes	—
Oxheart	—
St. Valery	Large Red; Altring-ham.
Short Horn	Morse's Bunching.
White Belgian	—

Lactuca sativa L. (Lettuce/*Slaai*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
All the yeard Round	—
Big Boston	Butterhead.
Butterhead	Big Boston.
Chicken Lettuce	—
City of Eden	—
Cos Longon White	Paris White.
Cos Paris White	Longan White.
Dagbreek	—
Drumhead	—
Golden City	—
Great Lakes	—
Hubbard's Market	Mammoth Butter.
Iceberg	—
Imperial	Webbs Wonderful; New York.
London White	—
Mammoth Butter	Hubbard's Market.
Marvel	—
May Queen	Mei Koningin.
Mignonette Bronze	—
New York	Webbs Wonderful; Imperial.
Prizehead	—
Spearhead	—
Webb's Wonderful	New York; Imperial.

Lycopersicon esculentum Mill. (tomato/*tamatie*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Ace	—
Beauty	Stone.
Beefsteak	Ponderosa; Crimson Cushion.
Best of All	—
Bide's Recruit	—
Bonny Best	—
Break O'Day	—
Canner No. 1402	—
Crimson Cushion	Ponderosa; Beefsteak.
Danish Export	Joffre.
Durbot	—
Dwarf Bush Bellevue	—
Earliana	—
Early Pak	—
Golden Queen	—
Goldmine	—
Greater Baltimore	—
Grothren's Globe	—
Harrison's Systoncross New	—
Homestead	—
Hortus 5	—
Houtbaai	—
Indiana Greater Baltimore	—
Indian River	—
Joffre	Danish Export.
King Humbert	—
Kondine Red	—
Manalucie	—
Marglobe	—
Marmande	—
Marvel	—
Marvel of the Market	—
Matchless	—
Money Maker	—
Norton	—
Oxheart	—
Pearson	—
Perfection	—
Ponderosa	Beefstead, Crimson Cushion.
Potentate	—
Pritchard	—
Red Cherry	Rooi Kersie.
Red Khaki	Rooi Kakie.
Red Pear	Rooi Peer.
Roma	—
Rutgers	—
San Marzano	—
Sioux	—
Southland	—
Stokesdale	Grothem's Globe.
Stone	Beauty.
Stoner's Masterpiece	—
St. Pierre	—
Sunneva	—
Sunrise	—
Urbana	—
Valiant	—
Weshaven	—
Wheatlei's	—
Wiltmaster	—
Yellow Cherry	Geel Kersie
Yellow Pear	Geel Peer.

Pastinaca sativa L. (Parsnip/*Witwortel*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Guernsey	Student.
Hollow Crown	—
Short and Sweet	—
Student	Guernsey.

Petroselinum crispum (Mill.) Nym. (parsley/*pietersielie*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Moss Curled	—
Turnip Rooted	—
Plain leaved	—

Phaseolus vulgaris L. (Garden bean dwarf/*Tuinboon-stam*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Afrikaner	Masterpiece Victory.
Birene D'or	—
Black Wonder	Black Prince.
Brittle Wax	—
Brown Beauty	—
Burpee Stringless	—
Canadian Wonder	—
Contender	—
Double Dutch Princess	Dubbele Wit Nerfloos.
Flageolot	—
Florida Belle	—
Furore	—
Giant Green Stringless	—
Golden Podded Wax	Pencil Podded Black Wax.
Golden Podded Topnotch	—
Granda	Streamliner, Multipod.
Heinrich's Riesen	—
Konserva	—
Kudu Stringless	Burpee Stringless.
La Favorita	—
Landreth Stringless	—
Long Tom	The Prince, Longfellow.
Longval	—
Masterpiece	Victory; Afrikaner.
Mont D'or	—
Multipod	Streamliner; Granda.
Pearl Grean	—
Pencil Podded Black Wax	Golden Podded Wax.
Plentiful	—
Prado	—
Processor	—
Refugee	—
Saxa	—
Seminole	—
Slendergreen	—
Streamliner	Multipod, Granda.
Stringless Green Pod	—
Super Metis	—
Surecrop	—
Tendercrop	—
Tendergreen	—
Tenderlong	—
The Prince	Long Tom, Longfellow.
Top Crop	—
Top Crop (White Seeded)	—
Top Notch	—
Victory	Masterpiece; Afrikaner.
Victory Stringless	—
Waternaar	—
Widusa	—

Phaseolus vulgaris L. (Garden bean runner/*Rankboon*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Abundance	McCaslan Pole; Morse's Pole.
Aromata	—
Blue Lake	White Creaseback Pole.
Blue Peter	—
Canfreezer	—
Eksteen Runner	Lazy Housewife; Gellman Runner.
Epicure Runner	—
Everbearing	Kentucky Wonder.
Gellman Runner	Eksteen Runner; Lazy Housewife.
Green Savage	—
Kentucky Wonder	Everbearing.
Kentucky Wonder (White-seeded)	—
Lazy Housewife	Gellman Runner; Eksteen Runner.
McCaslan Pole	Abundance; Morse's Pole.
Yard	—
Mombascher Spek	—
Morse's Pole	McAslans Pole, Abundance.
Ros Peters	—
White Creaseback Pole	Blue Lake.

Pisum sativum L. (Garden pea/*Tuinert*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Alaska	Express.
Alderman	—
Edible Sugar Peas	—
Eminent	Petit Provencal, Meteor, Matador.
Greenfeast	Lincoln.
Juwel	—
Kelvedon Monarch	—
Kelvedon Wonder	—
Lancet	—
Laxton's Progress	—
Laxton's Superb	—
Little Marvel	—
Lincoln	Greenfeast.
Mammoth Luscious	—
Matador	Meteor, Peit Provencal, Eminent.
Meteor	Petit Provenoal, Matador Eminent.
Onward	—
Onward (Early)	—
Perfected Freezer	—
Perfection	—
Perfection (dark seeded)	—
Petit Provencal	Meteor, Matador, Eminent.
Pride	—
Pride of the Market	—
Progress No. 9	—
Senator	—
Sprinter	—
Stratagem	—
Telephone	—
Wiehahn's Crescent	—
William Massey	—
Yola	—
Zenit	—

Raphanus sativus L. (Radish/*Radys*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Black Spanish (long)	—
Black Spanish (round)	—
Capriccio	Frech Breakfast.
Cherry Belle	—
China Rose	—
Crimson Giant	—
Crimson Globe	—
Early Scarlet Round	—
French Breakfast	Capriccio.
Giant Globe Red	—
Icicle	Ramanas, Long Black Spanish.
Long Red	—
Long Scarlet	—
Paris Beauty	—
Ramanas	Long Black Spanish, Icicle.
Round Red	Saxa, Ronde Rooi.
Round White	Snowflake.
Saxa	Round Red, Ronde Rooi.
Scarlet Globe Early	—
Scarlet Turnip	—
Snowflake	Round White.
Sparkler	—
White Delicious	—
White Turnip	—

Solanum melongena L. var. *esculentum* Nees. (egg-fruit/*eiervrug*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Black Beauty	—
Florida Giant	—
Florida Highbush	—
Florida Market	—
Long Purple	Lang Pers.
New York	—
Round Purple	Ronde Pers.

Vicia faba L. (broad been/*boerboon*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Aquadulce	—
Broad Long Pod	—
Driemaal Wit	—
Dubbel Wit	—
Early Long Pod	—
Giant Windsor	—
Hang-down Extra Long Pod	—
Witkiem	—

Zea mays L. var. *Saccharata* Bailey (sweetcorn/*suikermielie*).

Variety Names/Variëteitsname.	*Synonyms/Sinonieme.*
Carmel Cross	—
Country Gentleman	—
Golden Bantam	—
Golden Cross Bantam	—
North Star	—
Stowell's Evergreen	—
Stowell's Evergreen Baster	—
SM. 2	—
SM. 3	—
Tendergold	—

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