THE SEEDS ACT, 2003

(No. 18 of 2003)

THE SEEDS REGULATIONS, 2007

Made under section 33

ARRANGEMENT OF SECTIONS

PART I PRELIMINARY PROVISIONS

Regulation Title

- 1. Short title and commencement date.
- 2. Interpretation.

PART II REGISTRATION OF SEED DEALERS

3. Submission of application

PART III VARIETY REALEASE, REGISTRATION AND DEREGISTRATION

- 4. Restriction for variety release.
- 5. Establishment of the sub-Committees.
- 6. Composition and meeting of the NVRC and NPT-TC.
- 7. Application for the variety release and procedure for conducting NPT.
- 8. Variety registration.
- 9. Variety deregistration.

PART IV SEED CLASSES AND STANDARD

- 10. Class name and standards.
- 11. Additional requirements with respect to standard.

PART V MARKING AND LABELING

- 12. Restriction to use variety name.
- 13. Necessary information in marking and labeling.
- 14. General labeling requirements.
- 15. Application of labeling requirements.
- 16. Labeling of the seeds specified in Tables of the First Schedule.
- 17. Labeling of mixture of seed.
- 18. Labeling of roots, tubers, and pyrethrum seed.
- 19. Labeling of onion sets and multiplier onions.
- 20. Labeling of forage seed.
- 21. Labeling of mixtures of seed specified in Tables 8 and 9 of the First Schedule.
- 22. Official Tag.
- 23. Inter-agency labels.
- 24. General provision with respect to official and inter-agency labels.
- 25. Chief Seeds Certification Officer to authorize use of official or interagency certification tags.

PART VI SEED CERTIFICATION

- 26. Restriction on uncertified seed.
- 27. Seed crop inspection.
- 28. Appeal against results of field inspection.
- 29. Harvesting of seed.
- 30. Seed processing.
- 31. Storage of processed seed.
- 32. Seed for sale.
- 33. Seed importation.
- 34. Seed exportation.
- 35. Pre and post control plots.

PART VII SEED SAMPLING AND TESTING

- 36. Sampling of seeds.
- 37. Sampling intensity.
- 38. Seeds testing.
- 39. Exemption.
- 40. Fees.
- 41. Appeals.
- 42. Authorization of Inspectors, Samplers and Analysts.
- 43. Suspension or cancellation of authorization.
- 44. Change of variety name.
- 45. Detention and stop sale order.

- 46. Offences.
- 47. Retention.
- 48. Prohibited, restricted and noxious seeds.
- 49. Revocation.

THE SEEDS ACT, 2003

(No. 18 of 2003)

THE SEEDS REGULATIONS, 2006

Made under section 33

PART I PRELIMINARY PROVISIONS

Short title and commencement date

1. These Regulations may be cited as the Seeds Regulations, 2006 and shall come into operation on the date of their publication.

Interpretation

2. -(1) In these Regulations, unless the context otherwise requires –

Act. No 18

"Act" means the Seed Act, 2003;

"authentic sample" means a sample for the released variety kept or maintained by a recognized gene bank for future reference;

"authorisation" means a formal of a person or organization as specified in these Regulations;

"authorized Analyst" means a person who has been authorized to undertake testing of seeds by the Tanzania Official Seed Certification Institute for the purposes of analyzing seeds;

"authorized field Inspector " means a person authorized to undertake field inspection by the Tanzania Official Seed Certification Institute;

"authorized Inspector " means a person authorized to undertake inspection of seeds by the Tanzania Official Seed Certification Institute;

"authorized laboratory " means a laboratory authorized by the Tanzania Official Seed Certification Institute for purposes of testing seeds;

"authorized sampler" means a person who has been authorized to undertake sampling of seeds by the Tanzania Official Seed Certification Institute for purposes of sampling seeds;

"authorized seeds Inspector" means a person authorized to undertake seeds inspection by the Tanzania Official Seed Certification Institute;

Act No.22 of 2002 "breeder" shall have a meaning ascribed to it under the Plant Breeders' Rights

Act:

- "certificate of registration" means a certificate issued by the Director certifying that the holder of the said certificate is registered as a seeds dealer pursuant to section 16 of the Act;
- "Chief Seed Certification Officer" means a person appointed and designated as Chief Seeds Certification Officer pursuant to paragraph 8 of the Schedule to the Act, and shall head the Tanzania Official Seed Certification Institute;
- "Chief Seed Quality Controller" means the Director or any other person appointed by him under section 8 (2) of the Act;
- "composite sample" means a combination of primary samples drawn from the same seed lot and placed in a suitable container;
- "DUS" means Distinctness, Uniformity and Stability;
- "fasten" with respect to package means sealing in such a manner that it is impossible to open the package, without leaving evidence of it having been opened;
- "germination in respect to seed" means the emergency and development of the seedling to a stage where the aspect of its essential structures indicates whether or not it is able to develop further into a satisfactory plant under favorable condition;
- "inert matter" means all seed-like structures from both crop and weed plants and other matter which is not defined as pure seed or other seeds;
- "Institute" means the Tanzania Official Seed Certification Institute established by section 10 of the Act;
- "inter-agency certification tag" means an official tag in respect of seeds that are certified by a Recognized Certification Agency;
- "ISTA" refers to International Seed Testing Association;
- "lot number or designation" means a number, mark, symbol or test number that identifies a seeds lot;
- "Ministry" means the Ministry responsible for agriculture;
- "NPT" means the National Performance Trial;
- "NPT-TC" means the National Performance Trial Technical Committee;
- "NVRC" means the National Variety Release Committee;
- "OECD" means Organization of Economic Cooperation and Development;
- "official laboratory" means a seed testing laboratory under the management of the Tanzania Official Seed Certification Institute;
- "official sample" means a sample of seeds that has been drawn by an Inspector in the prescribed manner;
- "official tag" means a tag in respect of seed that is derived from a crop grown in Tanzania and classified by the Tanzania Official Seed Certification Institute;
- "other seed", means seed units of any plant species other than that of pure seed;
- "Permanent Secretary" means the permanent secretary in the Ministry for the time being responsible for agriculture;
- "primary sample" means each probe, handful of Seeds drawn from a seeds lot as a sample and when a seeds lot is sampled either in containers or bulk, several primary samples are drawn from different containers or from

different places in the bulk;

- "pure seed" means the species stated by applicant or found to predominate in the test and shall include all botanical varieties and cultivars of that species;
- "release" means discharge for commercial multiplication, production or sale of seed or plant varieties;
- "seed conditioning" means preparation by cleaning, processing, packing, treating or changing in any other manner the nature of a seeds lot;
- "seed lot" means a specified quantity of seeds, each portion of which is within reasonable limits, uniform with respect to species, variety, purity, germination, and other quality requirements;
- "Seed Testing Certificate" means a document issued by Tanzania Official Seed Certification or authorized seeds testing laboratory or a recognized seeds certification agency, certifying that the seeds identified therein meets the specified laboratory standards;
- "seed certification" means a legally sanctioned system for quality control in the process of producing, processing and marketing of seed for the purposes of maintaining and ensuring quality and genetic purity;
- "seed processing" means treatment of seed other than testing which the seeds is subjected to after harvesting;
- "seed production" means operations leading up to and including harvesting of the seeds from the seeds field:
 - "Seed Testing Report" means a document issued by an official or authorize seed testing laboratory stating the results of the laboratory analysis requested;
- "seed testing" means the examination of sample of seeds with a view to determine its quality;
- "submitted sample" means a composite sample or portion of a composite sample of a size appropriate for tests submitted to a testing station for quality tests;
- "TOSCI" means Tanzania Official Seed Certification Institute established under section 10 of the Act;
- "undesirable seed" means seeds that are light, undersized, off-colour, shrunken, immature, damaged, diseased, injured, sprouted or frosted seed;
- "UPOV" means Union for Convention on Protection for New Varieties;
- "varietal blend" means a mixture seed that contains two or more varieties of the same plant species;
- "variety name" includes a word, a number or a letter or combination of number and letter used to designate a variety; and
- "working sample" means a portion of a submitted sample on which a quality test is made.

PART II REGISTRATION OF SEED DEALERS

Submission of application

3.-(1) An application for the registration as seed dealer shall be submitted to the Director on Form SR I set out in the Fifth Schedule to these Regulations.

- (2) Each application shall be accompanied by the appropriate fees as set out in the Sixth Schedule to these Regulations.
- (3) The Director shall register the applicant and issue a registration certificate contained as set out in Form SR II in the Fifth Schedule to these Regulations upon being satisfied that the applicant has complied with the requirements for registration.

PART III VARIETY RELEASE, REGISTRATION AND DEREGISTRATION

Restriction for variety release

4. No variety shall be released in Tanzania unless it has passed DUS test, evaluated through the National Performance Trial and recommended for release by the National Seed Committee.

Establishment of sub- Committees

- **5.-**(1) There are hereby established sub-Committees of the National Seed Committee to be known as the National Variety Release Committee (NVRC) and the National Performance Trial Technical Committee (NPT-TC).
- (2) The National Variety Release Committee shall be responsible for reviewing recommendations from the National Performance Trial Technical Committee and recommend for variety release to the National Seed Committee.

Composition and meetings of the NVRC and NPT-TC

- **6.-**(1) The National Variety Release Committee shall be composed of the following members:-
 - (a) the Director for the time being responsible for crop development who shall be the Chairman;
 - (b) the Director for the time being responsible for research in the Ministry;
 - (c) one officer responsible for co-ordination and supervision of plant quarantine services in the country;
 - (d) one officer responsible for co-ordination and supervision of seeds industry in the Ministry, who shall be the Secretary;
 - (e) Chief Seed Certification Officer;
 - (f) Curator of the gene bank at the National Plant Genetic Resources Centre:
 - (g) head of section responsible for National Performance Trial within the TOSCI;
 - (h) one plant breeder from agricultural universities to be appointed by the Permanent Secretary;
 - (i) one pathologist from research institute within the Ministry responsible for agriculture to be appointed by the Permanent Secretary;
 - (j) Registrar of Plant Breeders' Rights;
 - (k) a representative from Tanzania Seed Trade Association to be appointed by the Permanent Secretary upon recommendation by the respective association;
 - (1) Chief Executive Officer responsible for Agricultural Seed Agency

- (m) a representative from the Plant Breeders' Association to be appointed by the Permanent Secretary upon recommendation by the respective association; and
- (n) a representative from farmers association to be appointed by the Permanent Secretary upon recommendation by the respective association.
- (2) The National Performance Trial Technical Committee shall be composed of the following members:-
 - (a) Chief Seed Certification Officer, who shall be the Chairman;
 - (b) one Seed technologist from department responsible for coordination and supervision of seeds industry in the Ministry to be appointed by the Permanent Secretary;
 - (c) one plant breeder from the department responsible for research in the Ministry to be appointed by the Permanent Secretary;
 - (d) head of section responsible for National Performance Trial within TOSCI, who shall be the Secretary;
 - (e) one plant pathologist from an agricultural university to be appointed by the Permanent Secretary, upon consultation with agricultural universities;
 - (f) one plant entomologist from any higher learning institution to be appointed by the Permanent Secretary, upon consultation with higher learning institutions;
 - (g) one plant breeder from plantation crops research institution to be appointed by the Permanent Secretary, upon consultation with respective institutions; and
 - (h) one seed producer representing Tanzania Seeds Trade Association to be appointed by the Permanent Secretary, upon consultation with respective associations;
- (3) The National Variety Release Committee and the National Performance Trial Technical Committee may co-opt any person to attend its meetings.
- (4) The National Variety Release Committee and the National Performance Trial Technical Committee shall regulate their own procedures for conducting meetings.

Application for variety release and procedure for conducting NPT

- **7.-**(1) Any person who intends to release a variety shall be required to submit to the Tanzania Official Seed Certification Institute an application for DUS test and NPT, on Form SR IIIA and SR IIIB respectively, as set out in the Fifth Schedule to these Regulations.
- (2) An application for DUS test shall be made one season prior to the application for NPT and shall be supported by the following:-
 - (a) sufficient seed sample for the first season DUS test;
 - (b) variety description;
 - (c) application fees and DUS testing fees as set out in the Sixth Schedule to these Regulations; and
 - (d) on-farm trial and farmers assessment data.

- (3) Upon receiving the application and materials, TOSCI shall conduct a DUS test, repot the results to the applicant and issue the DUS test certificate for the qualified application on Form SR IV as set out in the Fifth Schedule to these Regulations.
 - (4) The application for NPT test shall be supported with the following:-
 - (a) a minimum of two recent previous seasons advanced yield trial data from not less than three recognized testing sites in Tanzania or any other country which is in agreement for harmonization of seeds policy and legislations with Tanzania, as set out in the Seventh Schedule to these Regulations:
 - (b) sufficient seed sample for conducting NPT and second DUS test;
 - (c) fees for the NPT and second DUS test; and
 - (d) any other additional information that may be required for determination of the merits of the candidate variety.
- (5) TOSCI shall conduct NPT for a minimum of one season in at least three sites as set out in the Seventh Schedule to these Regulations, and shall conduct second DUS test and submit the report to NPT-TC for review.
- (6) TOSCI shall develop procedures and conditions for conducting DUS test and NPT for perennial crops.
- (7) Upon completion of review of the NPT report, NPT-TC Secretary shall report the results to the applicant and present the NPT data and the recommendations of the NPT-TC to the NVRC on Form SR V as set out in the Fifth Schedule to these Regulations.
- (8) The National Variety Release Committee shall review the recommendations of the NPT-TC and advise the National Seed Committee.
- (9) In order for a candidate variety to be recommended for release to the National Seeds Committee, a breeder shall be required to submit to TOSCI an authentic sample of pre-basic seed for reference purpose.
- (10) The amount of authentic sample referred to in sub- regulation (9) shall be:-
 - (a) four kilograms for cereals, pulses or any other big seed crops; or
 - (b) one hundred grams for small seed crops species
- (11) TOSCI shall have discretion to determine the amount of authentic sample needed for plant species other than those referred under sub-regulation (10).
- (12) A breeder shall be required to replenish the authentic sample as it may be required by TOSCI.

Variety registration

- **8.-**(1) The Director shall register and issue a Certificate of Registration to the Applicant once his variety is approved by Minister pursuant to Section 21 of the Act.
- (2) The Certificate of Registration of the varieties shall be on Form SR VI as set out in Fifth Schedule to these Regulations.
- (3) The Director shall enter the information hereunder in the National Variety Catalogue upon registration:-
 - (a) name of registrant;
 - (b) variety name;

- (c) plant species;
- (d) registration number,
- (e) registration date;
- (f) date of release;
- (g) name of breeder;
- (h) origin of the variety;
- (i) any other characteristics;
- (j) area of adaptation;
- (k) duration of maturity;
- (l) yield potential;
- (m) tolerance to insect pest;
- (n) disease tolerance;
- (o) end use;
- (p) agency responsible for maintenance; and
- (q) any other information deemed necessary.

Variety deregistration

- **9.-**(1) the Director may, in consultation with the National Seeds Committee, deregister a variety upon proof that the variety is no longer conforming to its original description or has lost its qualitative and quantitative attributes for which it was released.
- (2) Authentic seed sample of deregistered variety shall be sent to the national gene bank for conservation.

PART IV SEED CLASSES AND STANDARDS

Class names and standards

10. Seed classes and standards for plant species for the purposes of these Regulations shall be as set out in the tables of class standard set out in the First Schedule to these Regulations.

Additional requirements with respect to standards

- 11.-(1) In addition to conditions set out under regulation 10, requirements prescribed by sub-regulation, (2), (3) and (4) of this regulation shall apply with respect to the standards of the appropriate plant species specified in the tables of class standards set out in the First Schedule to these Regulations.
 - (2) Seed of every plant species shall: -
 - (a) not contain any objectionable weed seed as provided in the Eight Schedule to these Regulations;
 - (b) if classified with the name of Tanzania seed class, not be mixed with any other seed class; and
 - (c) for each seed lot sold as "Pre- basic seed", "Basic seed", "Certified 1" or "Certified 2:
 - (i) be uniform;
 - (ii) not containing moisture in excess of thirteen percent or such greater percentage as the Chief Seed Certification Officer may, prescribe for seed of a specified plant species; and

- (iii) be free from undesirable seed and inert matter within the percentage allowed under these Regulations.
- (3) Any seeds offered for sale shall be subjected to a test or tests after seven months from the date on which the last test was performed to determine the percentage of germination required to be shown on the label thereof;
- (4) Without prejudice to the provision of sub-regulation (3), the Chief Seed Certification Officer may, prescribe longer or shorter periods for re-testing.
- (5) It shall be the responsibility of seed dealer to call an Inspector for resampling for the purposes of re-testing and re-sealing of seed lots whose validity of germination test results have expired.
- (6) Any seed dealer who contravenes the provisions of this regulation commits an offence.

PART V MARKING AND LABELING

Restrictions to use variety name

- **12.-**(1) No person shall mark or label a package of seed with a variety name unless that seed is of the variety to which the variety name refers.
- (2) No person shall alter the name of a variety on the label of any seed container.
- (3) Except for the mixture of lawn, turf grass or forage seed as specified in Tables 8, 9 and 11 set out in First Schedule to these Regulations, no person shall label a package of a mixture of seed with a variety name unless he is authorized in that behalf by the Chief Seed Certification Officer pursuant to Regulation 23, and the seeds to which the variety name refers is one of Tanzania seed class.

Necessary information in marking and labeling

- 13.-(1) The information required by these Regulations on the label or outside of a package of seed shall be conspicuously, legibly and indelibly written or printed in both English and Swahili, and shall appear on one exposed face of the package or label and shall be of a size and colour that can be easily read.
- (2) No label shall contain any incorrect or misleading information, mark or brand name that might be construed as a variety name.
- (3) For purposes of these Regulations, the seed certification seal and the tag colours described under this sub-regulation shall be used as follows-
 - (a) the seed certification seal shall be applied on all tags relating to seed of "Pre- basic", "Basic", "Certified 1" or "Certified 2" classes as classified in the Second Schedule to these Regulations;
 - (b) in the case of tag on a package containing Pre- basic Seeds, *white* with diagonal violet colour shall be used, with the word "Pre-basic" conspicuously applied across one side of the tag;
 - (c) in the case of tag on a package containing Basic seed, *white* colour shall be used, with the word "Basic" conspicuously applied across one side of the tag;
 - (d) in the case of a tag on a package containing "Certified 1" seed, *Blue* colour shall be used, with the word "Certified 1" or "C₁"

- conspicuously applied across one side of the tag;
- (e) in the case of a tag on a package containing "Certified 2" seed, *Red* colour shall be used, with the word "Certified 2" or "C₂" conspicuously applied across one side of the tag;
- (f) in the case of label on a package containing standard seed, the tag shall be *yellow* with the word "Standard" conspicuously applied across one side of the tag;
- (4) The seed certification seal referred to in sub- regulation (3), shall be printed words thereon "Tanzania Certified Seeds" and for standard seed, the seal shall be printed with the words "Tanzania Standard Seed" and shall be of such material, shape, size as the Minister may approve.

General labeling requirements

- **14.-**(1) Every package of seed marked with a class name shall have on its label a description that specifies the seed standard as provided for in these Regulations.
- (2) Where the seed is a mixture or blend of two or more original seed lot of certified seed, the word "BLEND" preceded by the two digit seed year designation;
- (3) Whenever seed is treated with a poisonous material it shall be thoroughly stained with a conspicuous contrasting colour to show that the seed has been treated and the container of such seed shall be marked or attached a conspicuous label reading as follows:-

"POISONOUS: DO NOT USE AS FOOD, FEED OR OIL; or SUMU: MBEGU HIZI SIO KWA MATUMIZI YA CHAKULA CHA BINADAMU AU WANYAMA.

"TREATED WITH......or "IMEWEKWA SUMU YA.....:- (Name of poisonous material or substance in bold letters in Swahili and English).

- (4) Seed for sale shall be packed in packages unless-
- (a) it is delivered in a bulk container that is labeled in accordance with these Regulations and accompanied with other relevant information for importation of seed as provided under regulation 33; or
- (b) it meets the following conditions:-
 - (i) it is of one of the Tanzania seed classes and is on transit within Tanzania and accompanied by a transport order issued by Tanzania Official Seed Certification Institute or an authorized Inspector on Form SR IX as set out in the Fifth Schedule to these Regulations; and
 - (ii) it bears an inter-agency certification label pursuant to Regulation 23.
- (5) No person, other than the ultimate user, shall remove label, seal or open mechanically sewn or closed package of the seed.
- (6) Where certified seed lots are re- packaged, the re-packing shall be done only with the approval of the Chief Seed Certification Officer.
- Application of labeling requirements
- **15.** The labeling requirements prescribed under regulations, 10, 11, 12, 13 and 14 shall apply to seed of all plant species specified in these Regulations.

Labeling of seed specified in

16.-(1) Every package of seed, offered for sale, of the plant species

Tables of the First Schedule

specified in Tables 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, or 15, 18 and 19 set out in the First Schedule to these Regulations shall be labeled with the following information-

- (a) the name and address of the seed dealer;
- (b) the name of the plant species;
- (c) the name of the variety of the seed;
- (d) seed class;
- (e) lot number;
- (f) weight of the package;
- (g) month and year of germination test;
- (h) in the case of seed that is imported, the name of the country of production; and in the case of seed that is a blend of two or more varieties, the name of each of the component varieties.
- (2) For the purpose of sub regulation (1), seeds provided hereunder shall be kind of seeds for purposes of these Regulations:
 - (a) "open pollinated", is a seed produced by means other than controlled and selective breeding;
 - (b) "varietal cross", is a seed of the first generation of a cross between two named open pollinated varieties, or an open pollinated variety and a hybrid;
 - (c) "top cross", being seed of the first generation of a controlled cross between a named open pollinated variety and an inbred line;
 - (d) "hybrid", is a seed of the first generation of a cross between two or more inbred lines or their combination including single crosses, double crosses and three-way crosses;
 - (e) "composite variety", is a seed derived from selected strains which have been allowed to freely inter-pollinate;
 - (f) "inbred line", is a seed derived from a relatively homogeneous line produced by inbreeding and selection;
 - (g) "synthetic variety", is a seed produced through a combination of several intercrosses of genotypes which have been previously tested for their combining ability;
 - (h) "single cross hybrid", is a seed obtained by crossing two unrelated homozygous strains to obtain uniform and enhanced trait expression in the first generation;
 - (i) "a three way cross hybrid", is a seed obtained by crossing three unrelated homozygous stains to obtain uniform and enhanced trait expression in the first generation heterozygote; and
 - (j) "a double cross hybrid", is a seed obtained by crossing four unrelated homozygous strains or two unrelated single cross hybrids to obtain uniform and enhanced trait expression in the first generation heterozygote.

Labeling of mixtures of seed

- 17. Every package of a mixture of seed, offered for sale, of the specified in the Table 11 set out in the First Schedule of these Regulations shall be labeled with:
 - (a) the name and address of the dealer;

- (b) seed class;
- (c) the name and percentage by weight of each in the mixture, in order of its predominance;
- (d) the name of the variety of each plant species in the mixture.
- (e) germination percentage of each component of the mixture, in order of its predominance;
- (f) month and year of germination test; and
- (g) in the case of seed that is imported, the name of the country of production;

Labeling of roots, tubers, and pyrethrum seed

- 18. Every package of seed, offered for sale, of the plant species specified on Table 16 set out in the First Schedule to these Regulations shall be labeled with:
 - (a) the name and address of the dealer;
 - (b) the name of the plant species;
 - (c) the name of the variety roots or cuttings, as the case may be;
 - (d) seed class and year of production;
 - (e) germination or sprouting percentage if applicable;
 - (f) month and year of germination or sprouting test; and
 - (g) lot number.

Labeling of onion sets and multiplier onions

- 19. Every package of onion sets and multiplier onions offered for sale shall be labeled
- with:
- (a) the name and address of the dealer;
- (b) the term "onion sets" or "multiplier onions";
- (c) class of the onion sets and multiplier onions as set out in Table 17 of the First Schedule to these Regulations;
- (d) germination or sprouting percentage;
- (e) lot number;
- (f) month and year of germination test; and
- (g) in the case imported, the name of the country of production.

Labeling of forage seed

- **20.** Every package of seed, offered for sale, of plant species specified in Tables 8 and 9 set out in the First Schedule to these Regulations, shall be labeled with:
 - (a) the name and address of the dealer;
 - (b) the name of the plant species;
 - (c) seed class;
 - (d) variety name;
 - (e) country of production if it is imported;
 - (f) germination percentage;
 - (g) lot number; and
 - (h) month and year of germination test.

Labeling mixtures of Seed specified in Tables 8 and 9 of First Schedule 21.-(1) Every package of a mixture of forage seed offered for sale, of the plant species specified in Tables 8 and 9 set out in First Schedule to these

Regulations shall be labeled with:

- (i) the name and address of the dealer;
- (ii) seed class:
- (iii) the name and percentage by weight of each in the mixture, in order of its predominance;
- (iv) the name of the variety of each plant species in the mixture.
- (v) germination percentage of each component of the mixture, in order of its predominance;
- (vi) month and year of germination test; and
- (vii) in the case of seed that is imported, the name of the country of production;
- (2) The information stated on a package or label pursuant to paragraphs (b), (c) and (d) of sub regulation (1) of this regulation shall be on the same face of the package or label and shall be of the same type of printing or lettering.

Official tag

- **22.-**(1) Every package of seed produced in Tanzania and classified with the name of one of the Tanzania seed class shall be fastened and tagged with an official tag authorized by the Chief Seed Certification Officer.
- (2) The domestic tag referred to under sub-regulation (1) shall contain the:
 - (a) name of the plant species;
 - (b) name of the variety;
 - (c) seed class;
 - (d) serial number of the label or tag;
 - (e) seed certificate number; and
 - (f) lot number.
- (3) The tags referred to under sub-regulation (1) shall be supplied only to seed dealers applying for these tags and furnishing an Inspector with-
 - (a) a declaration of the grower declaring that the seed to which the tags are to be applied is derived from the crop in respect of which the final field inspection results specified in form SR VIII B set out in the Fifth Schedule to these Regulations; and
 - (b) a declaration of the applicant, if the applicant is not the grower, declaring that the seed referred to in the grower's declaration is the seed to which the labels are to be applied and that the seed has not been mixed or contaminated while in the possession of the applicant.
 - (4) The tag for standard seed, shall contain the:
 - (a) name of the seed;
 - (b) name of the variety of the seed;
 - (c) name of the class of the seed:
 - (d) serial number of the tag; and
 - (e) lot number.

Inter-agency labels

23.–(1) Every package of seed of foreign origin classified with the name of the Tanzania seed class shall be fastened and tagged with an inter-agency certification tag authorized by the Chief Seed Certification Officer;

Provided that, for any package of seed which originates from an East African Community member country, *grey* colour shall be used.

- (2) The inter-agency certification tag referred under sub-regulation (1) shall contain the:
 - (a) name of the plant specie;
 - (b) name of the variety;
 - (c) seed class;
 - (d) name of the country of production;
 - (e) serial number of the tag; and
 - (f) lot number.
- (3) Inter-agency certification tags referred to under sub-regulation (1) shall be supplied only if the seed dealer applying for these tags furnishes an Inspector with-
 - (a) seed inspection report from a certification agency recognized by the Tanzania Seed Certification Institute; and
 - (b) particulars of the information on the tag of the foreign certification agency.

General provisions with respect to official and inter-agency labels

- **24.-**(1) An official tag or inter-agency certification tag shall only be applied to containers for which the tags were issued.
- (2) Except where the Chief Seed Certification Officer directs otherwise, an official or inter-agency certification tag shall not contain anything other than the information required by regulations 18 or 19.
- (3) An official tag or inter-agency certification label shall be affixed to a seed container by an Inspector

Chief Seeds Certification Officer to authorize use of official or interagency certification tags

- **25.-**(1) The Chief Seed Certification Officer may, authorize any seed dealer to affix an official tag to seed of one of the Tanzania seed class, if that person:-
 - (a) has seed processing equipment and facilities adequate for the proper processing of seed;
 - (b) has adequate facilities to maintain the identity of different seed lots; and shall return to the Chief Seed Certification Officer on request by him any label supplied pursuant to regulations 18 or 19.
- (2) Where the Chief Seed Certification Officer is of the opinion that the seed dealer authorized to affix official labels pursuant to sub-regulation (1) is not complying with the provisions of regulations 18, 19 and 20 of these Regulations, the Chief Seed Certification Officer may withdraw the authority granted under sub-regulation (1).

PART VI SEED CERTIFICATION

Restrictions

26.-(1) No seed shall be certified unless, it has been produced, inspected,

on uncertified seed

- sampled, tested, and complied with the standards set out in the First Schedule to these Regulations.
- (2) Varieties released in Tanzania pursuant to regulation 4 shall be eligible for certification.
- (3) Seed shall be classified in four classes as set out in the Second Schedule of these Regulations.
- (4) Minister may make rules and procedures for certification and control of Quality Declared Seed and tree seed.

Seed crop inspection

- **27.-**(1) Every seed grower or his agent shall, within thirty days after a seed crop is planted, apply for field inspection by completing Form SR VII set out in Fifth Schedule of these Regulations upon payment of fees set out in Sixth Schedule to these Regulations.
- (2) An application of field inspection may be refused by the Tanzania Official Seed Certification Institute if it is made thirty days after planting.
- (3) A field inspection for the purpose of certification shall be conducted by the field inspector or authorized Inspector and shall be confined to the field of a registered seed producer.
- (4) In inspecting the field, the Inspector or the authorized inspector shall ensure that all field standards as provided in Part II set out in the First Schedule to these Regulations are complied with.
- (5) The Field Inspector or authorized inspector shall have powers to enter into any field registered for inspection and shall not approve any field or part thereof if satisfied that it does not meet the prescribed field standards.
- (6) The Field Inspector or the Authorized Inspector shall visit each unit of certification and conduct at least a minimum number of inspections required for each seed crop.
- (7) The Field Inspector or Authorized Inspector shall make proper counts of plants or heads of plants as deemed necessary fit and the minimum counting shall be:
 - (a) up to two hectares, five counts shall be used; and
 - (b) for each addition of two hectares up to fifty hectares, one more count shall be needed,
 - beyond fifty hectares, one additional count shall be needed for every four hectares.
- (8) The minimum number of plants or heads per count required for each crop shall be as set out in the Fourth Schedule to these Regulations.
- (9) Inspection may include pre-planting, nursery, pre-harvest, post harvest and storage facilities.
- (10) It shall be the responsibility of the seed grower to observe the recommended cultural practices at every stage of seed production for each unit of certification.
- (11) Upon completion of every field inspection, the Inspector or Authorised Inspector may advise the seed grower on any non-compliance of the inspection and in case there is a need to undertake re-inspection, the seed grower shall bear the cost of such re-inspection.
- (12) The result of each field inspection shall be issued on Form SR VIIIA set out in the Fifth Schedule to these Regulations; and shall be signed by both the

Inspector and the grower or his representative.

(13) Upon completion of the field inspection, the Inspector shall accord appropriate class any seed crop which meets the standards and fill in a Final Inspection Result in Form SR VIIIB as set out in the Fifth Schedule to these Regulations and the results shall be signed by both field inspector and the grower or his dully authorized representative.

Appeal against the result of field inspection

- **28-**(1) Where a registered grower or his agent disagrees with the results of any field inspection, he may appeal within seven days from the date of the issuance of the results of the inspection to the Chief Seed Certification Officer.
- (2) The Chief Seed Certification Officer shall determine the appeal and issue his decision in writing within fourteen days from the date of receipt of the appeal.
- (3) Where the Chief Seed Certification Officer is satisfied with the grounds of appeal, he shall approve for a re-inspection.
 - (4) Re-inspection shall be carried out by the team comprising of –
 - (a) one senior Inspector;
 - (b) one breeder; and
 - (c) the aggrieved seed producer or his dully appointed representative.
- (5) The aggrieved grower shall pay the re-inspection fee which shall be refunded to him in case the re-inspection is proved to be in his favour.

Harvesting of seed

- **29.-**(1) The seed grower shall ensure that the seed quality is maintained during harvesting and transportation to the processing plants.
- (2) Where the processing plant is located far from the seed field, seed grower shall ensure that transportation of seed is done under close supervision of an Inspector or Authorised Field Inspector and after obtaining a transport order in Form SR IX as set out in the Fifth Schedule to these Regulations.
- (3) Before seeds are transported the Inspector or a person authorised shall mark the container with indelible ink.

Seed processing

- **30.-**(1) A registered seed processor shall processes only seeds from the approved fields or seeds permitted to be imported into Tanzania.
- (2) Every seed processor shall notify the Chief Seed Certification Officer or any authorized officer before processing any seed lots and upon such notification, the Chief Seed Certification Officer or authorized officer shall issue a work order to the dealer in Form SR X set out in the Fifth Schedule to these Regulations.
- (3) The Seed Inspector or authorized Seed Inspector may enter and inspect the premises for seed processing.
- (4) The processed seed shall be properly marked and stored separately in identifiable seed lots.

Storage of processed seed

- **31.**–(1) Each container or bag of processed seed in every lot shall be properly labeled and identified.
- (2) Seed lot shall be kept in a way to ensure the limits set for moisture and other quality attributes.

Seed for sale

32.-(1) No seed shall be offered for sale unless it is certified in accordance to

these Regulations or rules made under regulation 26(4).

- (2) Every seed dealer shall be responsible for the quality of any seed he sells or offers for sale.
- (3) A seed dealer may appoint an agent or a stockist with knowledge, ability and appropriate facilities to maintain the quality and viability of the seed offered for sale.
- (4) The agent or stockist appointed pursuant to sub-regulation (3), shall have a valid registration certificate for dealing with seed business issued by the Director pursuant to Section 16 of the Act.
- (5) Where a Seed Inspector or an authorized inspector has reasonable grounds to believe that any seed or seed lots is being sold without having reached minimum prescribed standards or in violation of any provisions of the Act and these Regulations, may immediately issue a stop sale order on Form SR XI set out in the Fifth Schedule to these Regulations.

Seed importation

- **33.-**(1) Every seed dealer who, intends to import seed into Tanzania, shall submit to the Director a notice of intention to import such seed on Form SR XII set out in the Fifth Schedule to these Regulations.
 - (2) the notice under sub-regulation (1) shall specify:-
 - (a) name and address of importer;
 - (b) country of origin;
 - (c) name and address of importer;
 - (d) the quantity of seed;
 - (e) expected date of arrival of consignment; and
 - (f) the species and the cultivar.
- (3) Upon receipt of such notice, the Director shall issue a seed import permit in Form SR XIII set out in the Fifth Schedule to these Regulations.
- (4) Any seed imported under this regulation shall not be sold unless its quality has been examined and approved by TOSCI or any other certification agency which is in bilateral agreement with Tanzania as regard to seed certification.
- (5) Any imported seed shall be accompanied by certificate of quality issued by a Recognized Certification Agency, phytosanitary certificate and shall meet Tanzanian quarantine requirements as provided in the Plant Protection Act.

Seed exportation

- **34.-**(1) Any seed dealer who intends to export seed from Tanzania, shall submit to the Director a notice of intention to export on Form SR XIV set out in the Fifth Schedule to these Regulations.
- (2) The notice under sub-regulation (1) shall be accompanied with an import permit from the country to which seed is exported and shall specify the quantity, plant species and variety to be exported.
- (3) Upon receipt of such notice, the Director shall issue seed export permit on Form SR XV set out in the Fifth Schedule to these Regulations.
- (4) The exporter shall ensure compliance with all conditions for export of seed as provided in the Plant Protection Act.

Pre and post control plots

35.- (1) Any seed lots officially sampled and tested pursuant to these Regulations shall be grown in post control plots in accordance with OECD seed

scheme.

- (2) Control plots referred to under sub-regulations (1) shall be open for examination and assessment by all parties interested in the seed industry.
- (3) Upon completion of the examination and assessment of control plots, the Field Inspector or Authorized Inspector shall write a report on the number of off-types, other varieties, variety identity, purity, diseased plants and other diversions observed in the plots.

PART VII SEED SAMPLING AND TESTING

Sampling of Seeds

- **36.-**(1) Any seed sample for testing shall be taken by a Seed Inspector or Authorised Inspector in accordance with the requirements prescribed under these Regulations.
- (2) The sample referred to under sub- regulation (1) shall be provided to the Seed Inspector or Authorized Inspector free of charge for purposes of laboratory seed testing and post control planting and examination.
- (3) Where an Inspector requires a larger amount of seed sample as he considers it necessary for satisfactory testing, re-testing or analysis, the size of each sample shall comply with the particulars set out in the Third Schedule to these Regulations.
 - (4) Each seed sample shall bear a unique sample number for reference.
- (5) Seed lots shall be created at the time of sampling and shall not exceed the maximum weights prescribed in these Regulations.
- (6) Where automatic samplers have not been installed, a seed dealer shall arrange the packages in such a way to enable the seed Inspector or Authorized Inspector to reach all packages and draw samples.
- (7) Sampling of seed lots shall be conducted in accordance with the current Rules of ISTA.
- (8) Seed from different fields of the same class, species and variety which have passed field inspection and which can be traceable, may be blended and bulked to constitute one seed lot.
- (9) The seed dealer shall provide reliable scales for ascertaining the weight of a seed lot.
- (10) The seed dealer shall pay appropriate fees for seed sampling as set out in the Sixth Schedule to these Regulations.

Sampling intensity

- **37.-**(1) When sampling seed lots in a container that can be sealed, the sampling intensity hereunder shall be taken as the minimum requirements:-
 - (a) seed not exceeding 500 kg.- five primary samples shall be taken except that for small lots not exceeding 50 kg. three or four samples may be taken;
 - (b) seed exceeding 500 kg. but not exceeding 3,000 kg. one primary sample for every 300 kg. shall be taken, so however, that not less than five primary samples shall be taken;
 - (c) seed exceeding 3,000 kg but not exceeding 20,000 kg. one primary sample for every 500 kg. shall be taken, so however, that not less than

- 10 primary samples shall be taken; and
- (d) seed in bulk shall be sampled at random locations and the samples shall be drawn from varying depths.
- (2) For seeds lots in bags or other containers up to 100kg capacity, samples shall be taken at random locations and the intensity hereunder shall be taken as the minimum requirements:-
 - (a) from 1-4 containers, three primary samples from each container;
 - (b) from 5-8 containers, two primary samples from each container;
 - (c) from 9 -15 containers, one primary sample from each container;
 - (d) from 16 -30 containers, 15 primary samples total;
 - (e) from 31 -59 containers, 20 primary samples total;
 - (f) from 60 or more containers, 30 primary samples total.

Seeds testing

- **38.-**(1) Seed testing for the purpose of certification shall be conducted by an official seed testing laboratory or any authorized laboratory.
- (2) Any sample drawn or by the Seed Inspector or Authorized Inspector or taken by any private individual shall be submitted to the seed testing laboratory together with Form SR XVI set out in the Fifth Schedule to these Regulations.
 - (3) Seed testing laboratory shall:-
 - (a) test seed in accordance with the ISTA Rules;
 - (b) in case for samples submitted by the Seed Inspector or Authorized Inspector, record results of the seed test on a certificate in Form SR XVII set out in the Fifth Schedule to these Regulations;
 - (c) in case of samples submitted by the private individual, record results of seed testing report on Form SR XVIII set out in the same Schedule; and
 - (d) store the sample under optimal storage conditions for at least twelve months from the date the test results certificate was issued.
- (4) Notwithstanding the provision of sub- regulation 3(d), the testing laboratory shall not be held responsible for any deterioration of the sample that may occur.

PART VIII MISCELLANEOUS

Exemption

39. The Minister may by order published in the Gazette, exempt some seed or class of seeds from the provisions of these Regulations.

Fees

- **40.-**(1) The fees set out in the Sixth Schedule to these Regulations shall be payable in respect of all services as provided therein.
- (2) The fee for any service shall be paid at the time when the application for a particular service is made.
- (3) The Minister may, by notice in the *Gazette*, remit in whole or in part any fees payable by any person in respect of any service, if he is satisfied that it is in the public interest to do so.

Appeals

41.-(1) Any person who is aggrieved by the decision of any officer or the National Performance Trial-Technical Committee or National Variety Release Committee in the administration of the Act or these Regulations, may appeal to the

National Seed Committee.

- (2) Any person who is aggrieved by the decision of the National Seed Committee may appeal to the Minister within fourteen days upon receipt of such decision.
- (3) Any appeal whose time limit has not been specifically provided under the Act or these Regulations shall be made to the Minister within fourteen days from the date of receiving of a particular decision.

Authorisatio n of Inspectors, Samplers and Analysts

- **42.-**(1) Any person who wishes to be authorized as seed testing laboratory, an Inspector, Seed Sampler, or Analyst for the purposes of these Regulations, shall apply in writing to the Chief Seed Certification Officer to that effect.
- (2) The application made under sub-regulation (1) shall be accompanied with documentary evidence showing that the Applicant is knowledgeable of the principles and practices of seed testing, field or seed inspection, seed conditioning or seed sampling.
- (3) The application under sub-regulation (1) shall be accompanied with appropriate fees as set out in Sixth Schedule to these Regulations.
- (4) The Chief seed Certification Officer may after recommendation of the Management Committee of TOSCI and upon satisfied that the Applicant is capable to be authorised as an Inspector, Sampler or Analyst issue an authorisation Certificate on Form SR XIX set out in Fifth Schedule to these Regulations.
- (5) TOSCI shall from time to time issue guidelines and other requirements as regard to the authorisation of Inspectors, Samplers, Analysts and seed laboratories.
- (6) The Chief Seed Certification Officer shall renew annually the authorisation upon payment of the prescribed annual fees as set out in Sixth Schedule to these Regulations.
- (7) Authorisation referred under this regulation shall be limited to the activities for which the authority has been granted.

Suspension or cancellation of authorisation

- **43.-**(1) The Chief Seeds Certification Officer may suspend or cancel the authorisation issued under regulation 42, if:-
 - (a) a false or misleading information has been submitted in support of the application for the authorisation; or
 - (b) the authorised person has not complied with the provisions of the Act or these Regulations; or
 - (c) the authorised person has not paid the applicable annual fee before 1st January of the year in respect of which the authorisation is to be renewed; or
 - (d) the authorised person has provided or maintained false or misleading records or samples in respect of any seed.
- (2) The Chief Seed Certification Officer shall not suspend or cancel the authorisation under this regulation unless:-
 - (a) the authorized person has been informed in writing the reasons for suspension or cancellation;
 - (b) the authorized person has been given an opportunity to be heard, either

- by written or oral representations, in respect of the suspension or cancellation; and
- (c) the authorized person has been issued with a fourteen days prior notice of intention to suspend or cancel the authorisation.
- (3) A suspension of an authorisation shall remain in effect until:-
- (a) the Chief Seeds Certification Officer has been satisfied that the suspended person has taken corrective measures; and
- (b) the Chief Seeds Certification Officer notifies the suspend person in writing that the suspension has been lifted.

Change of variety name

- **44.-**(1) The Director may after consultation with the National Seed Committee, approve change in variety name.
- (2) the variety name may be changed pursuant to this regulation, if the Director is satisfied by the information received from the breeder that justifies change in variety name.
- (3) Change of variety name shall come into effect on the date on which the Director approves.

Detentions and stop sale order

- **45.-**(1) Any seed or package seized pursuant to subsection (4) of section 22 of the Act may be detained by an Inspector at any place by attaching a detention tag or mark to:-
 - (a) where only the seed is seized, the package provided by the institute and in which the seed is placed;
 - (b) where only the package is seized, the package;
 - (c) where the package and the seed are seized, the package; and
 - (d) where a seed lot in packages is seized, at least one package of the seed lot.
- (2) On attaching a detention tag or mark to the appropriate package referred to in sub-regulation (1), the Seed Inspector or an authorised inspector shall issue a stop sale order as provide under regulation 32 (5) to the person entitled to possession, at the time of seizure, of the seed or package, as the case may be.
- (3) No person shall alter or remove a detention tag or mark attached to a package or sells any seed or package detained pursuant to these Regulations.
- (4) No person shall move any seed or package detained pursuant to sub-regulation (1), except where an inspector issues a written authorization indicating that the seed or package shall be placed in a safer or more convenient location.
- (5) Upon issuance of detention order, an inspector shall take or cause to be taken a sample of each seed lot that has been detained.
- (6) Where any seed has been placed under detention or stop sale by an inspector under this regulation, the owner or the person in possession of that seed may apply to the inspector for the release of the seed.
- (7) No seed under detention or stop sale order shall be released unless the person applying for the release has fulfilled to the satisfaction of the Chief Seed Certification Officer all the requirements of the Act and these Regulations.
- (8) On release from detention of the seed or package, an inspector shall issue a notice of release to the person who was in the possession of the detained seed.
 - (9) Any Seeds or package forfeited to the Government under the provisions

of the Act or these Regulations shall be disposed of in such manner as the Chief Seeds Quality Controller may, with the approval of the Minister, direct.

(10) Costs incidental to the detention shall be payable and recoverable from the person whose seed have been detained.

Offence

46. Any person who contravenes the provision of these Regulations commits an offence, except as otherwise provided, be liable upon conviction to a fine not less than one million shillings but not exceeding five million shillings or to imprisonment for a term not exceeding one year or to both.

Retention

47. The Minister may, after consulting the Minister for Finance determine the amount of money to be retained for TOSCI from collections made by TOSCI in discharging its duties under the Act and these Regulations.

Prohibited, restricted and noxious seeds

48. The seeds set out in the Eighth Schedule to these Regulations shall be deemed as prohibited, restricted and noxious weed seeds for the purpose of these Regulations.

Revocation of GN.No.29 of 1976 **49.** The Seed Regulations 1976, are hereby revoked

FIRST SCHEDULE

(Made under Regulations 10)

TABLES OF STANDARDS SEED

PART I: LABORATORY STANDARDS

TABLE 1

Applicable to:

- (a) Wheat including hybrid Triticum aestivum L. and
- (b) Wheat durum Triticum durum Desf.

Factor Class			
	Basic	Certified1	Certified2"
	%	%	%
Pure Seed (Minimum)	99.0	99.0	99.0
Other Seed (Maximum)	0.9	0.9	0.9
Inert Matter (Maximum)	0.9	0.9	1.0
Moisture Content (Maximum)	13.0	13.0	15.0
Germination (Minimum)	85	85	85
Objectionable Weed Seed (Maximum)	0.0	0.0	0.0
Restricted Noxious Weed Seed (Maximum)	4 per kg.	4 per kg.	4 per kg.

TABLE 2

Applicable to:

- (a) Barley Hordeum vulgare L, H. distichon L.
- (b) Oat Avena sativa L.A. nuda L.

Standard	Class			
	Basic	Certified 1	Certified 2	
	%	%	%	
Pure Seed (Minimum)	99.0	99.0	99.0	
Total Seed other (Maximum)	0.1	0.1	0.1	
Other Crop Seed (Maximum)	0.0	0.0	0.0	
Inert Matter (Maximum)	0.9	0.9	0.9	
Objectionable Weed Seed (Maximum)	0.0	0.0	0.0	
Restricted Noxious Weed Seed (Maximum)	4 per kg.	4 per kg	4 per kg	
Moisture Content (Maximum)	13.0	13.0	15.0	
Germination (Minimum)	85	85	85	

TABLE 3

Applicable to: Rice (Paddy) – Oryza sativa L.

Factor	Class		
	Basic	Certified 1	Certified 2
	%	%	%
Pure Seed (Minimum)	98.0	98.0	98.0
Other Seed (Maximum)	0.1	0.1	0.1
Inert Matter (Maximum)	1.9	1.9	1.9
Moisture Content (Maximum)	13.0	13.0	13.0
Germination (Minimum)	80	80	80
Blast – Pyricularia oryzae (Maximum)	1.0	0.2	0.2
Bacterial Leaf Blight – <i>Xanthomonas oryzae</i> (Maximum)	1.0	2.0	2.0
White Tip Nematode – <i>Alphelenchoides besseyi</i> (maximum)	0.0	0.0	0.0
Objectionable Weed Seed (Maximum)	0.0 0.0		0.0
Restricted Noxious Weed Seed (Maximum)	4 per kg.	4 per kg	4 per kg

TABLE 4

 $\label{eq:applicable} Applicable \ to: \\ Sorghum \ (includes \ hybrid \ sorghum) - Sorghum \ bicolor \ (L.) \ Moench$

Factor	Class			
	Basic	Certified 1	Certified 2	
	%		%	
Pure seed(maximum)	98.0	98.0	98.0	
Other Seed (Maximum)	0.1	0.1	0.1	
Inert Matter (Maximum)	1.9	1.9	1.9	
Moisture Content (Maximum)	11.0	11.0	11.0	
Germination (Minimum)	75	75	75	
Objectionable Weed Seed (Maximum)	0.0	0.0	0.0	
Restricted Noxious Weed Seed (Maximum)	4 per kg.	4 per kg	4 per kg	

TABLE 5

Applicable to:

(a) Maize open-pollinated - *Zea mays* L.

Factor	Class		
	Basic	Certified 1	Certified 2
	%	%	%
Pure Seeds (Minimum)	99.0	99.0	99.0
Other Seed (Maximum)	0.1	0.1	0.1
Inert Matter (Maximum)	0.9	0.9	0.9
Moisture Content (Maximum)	13.0	13.0	13.0
Germination (Minimum)	90.0	90	90

(b) Maize (hybrid)

Factor	Class		
-	Basic	Certified 1	
	%	%	
Pure Seeds (Minimum)	99.0	99.0	
Other Seed (Maximum)	0.1	0.1	
Inert Matter (Maximum)	0.9	0.9	
Moisture Content (Maximum)	13.0	13.0	
Germination (Minimum)	90	90	

TABLE 6

Applicable to:

Soybean – *Glycine max*.

Factor	Factor Class		
_	Basic	Certified 1	Certified 2
	%	%	%
Pure Seeds (Minimum)	98.0	98.0	98.0
Other Seed (Maximum)	0.1	0.1	0.1
Inert Matter (Maximum)	1.9	1.9	1.9
Moisture Content (Maximum)	14.0	14.0	14.0
Germination (Minimum)	75	75	75

Applicable to: Millet

(a) Pearl Millet,— Pennisetum glaucum (L.) R. Br. Emend Stuntz

Standard	Class		
	Basic	Certified 1	Certified 2"
	%	%	%
Pure Seeds (Minimum)	98.0	98.0	98.0
Other Seed (Maximum)	0.1	0.1	0.1
Inert Matter (Maximum)	1.9	1.9	1.9
Moisture Content (Maximum)	12.0	12.0	12.0
Germination (Minimum)	75	75	75

TABLE 7

(b) Finger Millet, –	Eleusine	carocana
----------------------	----------	----------

Factor	Factor Standards for each Class		lass
-	Basic	Certified I	Certified2""
	%	%	%
Pure Seeds (Minimum)	97.0	97.0	97.0
Other Seed (Maximum)	0.2	0.2	0.2
Inert Matter (Maximum)	2.8	2.8	2.8
Germination (Minimum)	75	75	75
Objectionable Weed Seed (Maximum)	0.0	0.0	0.0
Restricted Noxious Weed Seed (Maximum)	4 per kg.	4 per kg	4 per kg

TABLE 8

Applicable to:

- (a) Alfalfa Medicago sativa
- (b) White Clover, incl. Ladino *Trifolium repens*
- (c) Glycine Glycine javanica
- (d) Lance Crotalaria Crotalaria lanceolata.
- (e) Showy Crotalaria Crotalaria spectabilis
- (f) Slender Crotalaria - Crotalaria intermedia
- (g) Striate Clotalaria Crotalaria mucronata var. striata
- (h) Sunn Crotalaria Crotalaria juncea
- (i) Kudzu – Pueraria phaseloides
- (j) Lupines Lupinus spp.
 (k) Seradella Ornithopus sativus.
- Tall Tick Clover (Kuru vine) Desmodium spp. (l)
- (m) Siratro Phaseolus atropurpureus.

Factor	Class		
	Basic	Certified1	Certified2
	%	%	%
Pure Seeds (Minimum)	98.0	98.0	97.0
Other Seed (Maximum)	0.2	0.2	0.2
Inert Matter (Maximum)	1.8	1.8	2.8
Moisture Content (Maximum)	13.0	13.0	13.0
Germination (Minimum)	50	50	50

TABLE 9 STANDARDS FOR EACH SEED CLASS

Applicable to:

Forage Crops and Grasses

	Percent Inert Matter		Percent Seeds	Weed	Percent	Pure Seeds	Percent Germination
	Basic and Certified1	Certi fied 2	Basic and Certified 1	Certifi ed2	Basic and Certifi ed1	Certified 2	Basic, "Certified1" and Certified2
Pennisetum clandestinum	3.8	4.5	0.2	0.5	96.0	95.0	75
Rhodes Grass – Chloris gayana	34.8	39.5	0.2	0.5	65.0	60.0	65
Dolichos spp	9.8	11.5	0.2	0.5	90.0	88.0	75
Stylo – Stylosanthos gracilis	2.8	3.5	0.2	0.5	97.0	96.0	65
Hypanheris rhufa	4.8	6.5	0.2	0.5	95.0	93.0	75
African foxtail grass -	9.8	14.5	0.2	0.5	90.0	85.0	65
Cenchrus ciliaris							
Teff Grass – Eragrostis teff	1.8	2.5	0.2	0.4	98.0	97.0	75
Sand Lovegrass - Eragrostis	1.8	2.5	0.2	0.5	98.0	97.0	75
trichoide							
Euchleana mecinana	7.8	9.5	0.2	0.5	92.0	90.0	75
Digitaria smutsii	2.8	4.5	0.2	0.5	97.0	95.0	65
Eragrostis chloromelas	1.8	2.5	0.2	0.5	98.0	97.0	75
Weeping Lovegrass -	1.8	2.5	0.2	0.5	98.0	97.0	75

Eragrostis urvula							
Bothriochloa insulpta	9.8	14.5	0.2	0.5	90.0	85.0	60
Guines Grass - Panicum	4.8	7.5	0.2	0.5	95.0	92.0	60
maximum							
Blue panicgrass - Panicum	4.8	7.5	0.2	0.5	95.0	92.0	60
antidotale							
Green panicgrass - Panicum							
maximum var trichoglume	4.8	7.5	0.2	0.5	95.0	92.0	60
Panicum coloratum	4.8	7.5	0.2	0.5	95.0	92.0	60
Vine mesquite - Panicum	4.8	7.5	0.2	0.5	95.0	92.0	60
obtusum							
Switchgrass - Panicum	4.8	7.5	0.2	0.5	95.0	92.0	60
virgatum							
Melinis minufiflora	4.8	9.5	0.2	0.5	95.0	90.0	60
Pennisetum typhoida	3.8	4.5	0.2	0.5	96.0	95.0	75
Setaria sphacelate	9.8	14.5	0.2	0.5	90.0	85.0	60
Setaria splendida	9.8	14.5	0.2	0.5	90.0	85.0	60
Columbus grass - Sorghum	3.8	7.5	0.2	0.5	96.0	92.0	75
alum							
Napier grass - Pennisetum	3.8	4.5	0.2	0.5	96.0	95.0	75
purpureum							
Bermuda grass - Cynodon	3.8	4.5	0.2	0.5	96.0	95.0	75
dactylon							
Themeda triandra	4.8	7.5	0.2	0.5	95.0	92.0	60
Lovegrass – Eragrostis	1.8	2.5	0.2	0.5	98.0	97.0	75
superba							
Cynodon plectostachyus	3.8	4.5	0.2	0.5	96.0	95.0	75
Lovegrass – Brachiaria	4.8	7.5	0.2	0.5	95.0	92.0	70
brizantha							
Trypsacum laxum	4.8	7.5	0.2	0.5	95.0	92.0	70
Brachiaria ruziziensis	4.8	7.5	0.2	0.5	95.0	92.0	70
Centro – Centrosema	1.8	2.5	0.2	0.5	98.0	97.0	65
pubescens							
Stylosanthes humilis	2.8	3.5	0.2	0.5	97.0	96.0	65
Stylosanthes mucronata	2.8	3.5	0.2	0.5	97.0	96.0	65
Clitoria ternatea	3.8	5.5	0.2	0.5	96.0	94.0	65

Note: Other crop seed contents shall not exceed as follows:-

For Basic and "Certified1" class 0.5

For Certified 2 class 1.0

TABLE 10

Applicable to:

- (a) Sunflower Helianthus annuus.
- (b) Safflower Carthamus tinctorius.

Factor		Class	
	Basic	Certified1	Certified2
	%	%	%
Pure Seed (Minimum)	99.0	99.0	99.0
Other Seed (Maximum)	0.1	0.1	0.1
Inert Matter (Maximum)	0.9	0.9	0.9
Moisture Content (Maximum)	10.0	10.0	10.0
Germination (Minimum)	85	85	85

TABLE 11

Applicable to mixture of forage seed of two or more of the seed listed in Table 8 and 9 of this Schedule.

"Mixture" means each component present in excess of 5 per cent of the whole.

	Maximum number of seed per Kg. except where otherwise stated			Minimum percentage germination	
Class Name	Objectionable	Restricted	Weed seed	Each ingredient	
			%		%
Certified 1, Certified 2	None	4 per kg	1.5		60

Note:-

- 1. Mixtures of grass seed not designated by the sender as lawn or turf grass mixtures shall be classified under this table.
- 2. Percentage purity and germination of each component in the order of predominance shall be stated on the seed label.

TABLE 12

Applicable to:

- (a) Cotton Gossypium spp.
- (b) Kenaf Hibiscus cannabinus
- (c) Roselle Hibiscus sabdariffa

Factor		Class	
	Basic	Certified 1	Certified 2
	%	%	%
Pure Seed (Minimum)	98.0	98.0	98.0
Total Weed Seed (Maximum)	None	0.0	0.1
Other Crop Seeds (Maximum)	0.0	0.1	0.1
Inert Matter (Maximum)	2.0	0.9	0.9
Objectionable Weed Seed (Maximum)	None	None	None

Restricted Noxious Weed Seed (Maximum)	None	None	4 per kg
Moisture Content (Maximum)	10.0	10.0	10.0
Germination (Minimum)	70	70	70
Bacteria Blight – Xanthomonas malvacearum (Maximum)	0.5	1.0	2.0

TABLE 13

Applicable to:

- (a) Groundnut Arachis hypogaea
- (b) Bambara Nut Voandzeia subterranea

Factor		Class	
	Basic	Certified1	Certified2
	%	%	%
Pure Seeds (Minimum)	98.0	97.0	97.0
Other Seeds (Maximum)	0.1	0.1	0.1
Inert Matter (shelled) (Maximum)	1.9	2.9	2.9
Moisture Content (Maximum)	12.0	12.0	12.0
Germination (minimum)	75	75	75

TABLE 14

Applicable to:

(a) Sesame – Sesamum indicum

- Nicotiana rustica.

Tobacco Mosaic Virus (Maximum)

Factor	Class		
-	Basic	Certified1	Certified2
	%	%	9/
Pure Seed (Minimum)	98.0	98.0	97.0
Total Weed Seed (Maximum)	0.1	0.2	0.3
Other Crop Seed (Maximum)	0.1	0.2	0.3
Inert Matter (Maximum)	1.9	2.9	2.3
Objectionable Weed Seed (Maximum)	None	None	Non
Restricted Noxious Weed Seed (Maximum)	4 per kg	4 per kg	4 per k
Moisture Content (Maximum)	10.0	10.0	10.0
Germination (Minimum)	80	80	8

ClassFactor Basic Certified1 Certified2 % % Pure Seeds (Minimum) 98.0 97.0 97.0 Other Seed (Maximum) 0.1 0.1 0.2 2.0 Inert Matter (Maximum) 2.0 3.0 Moisture Content (Maximum)... 12.0 12.0 12.0 80 80 Germination (Minimum) 80 Anthracnose (Maximum) None None None Angullar Leaf Spot – Pseudomonas angulata (Maximum)... None None None Frog-Eye or Green Spot – *Cercospora nicotianae* (Maximum) None None None

TABLE 15

None

None

None

Applicable to:

- (a) Bean, common Phaseolus vulgaris
- (b) Bean, broad Vicia faba
- (c) Bean, Lima Phaseolus lunatis var. macrocarpus
- (d) Bean, runner Phaseolus cocecineus
- (e) Chick pea Cicer arietinum
- (f) Cowpea Vigna unguiculata
- (g) Mung Bean Phaseolus aureus
- (h) Banavist Bean Dolichos lablab
- (i) Hyacinth Bean -Lablab niger
- (j) Sword Bean Canavalia ensiformis
 (k) Blackgram Phaseolus mungo
- (l) Greengram Phaseolus aureus (m) Pigeon pea – Cajanus cajan
- (n) Pea perennial Lathyrus spp
- (o) Castor bean Ricinus communis

Factor	Class		
-	Basic	Certified1	Certified2
	%	%	%
Pure Seeds (Minimum)	99.0	99.0	99.0
Other Seeds (Maximum)	0.1	0.1	0.1
Inert Matter (Maximum)	0.9	0.9	0.9
Moisture Content (Maximum)	10.0	10.0	10.0
Germination (Minimum)	80	80	80
Common Bacteria Blight – Xanthomonas phaseoli (Maximum	None	None	None
Anthracnose – Coletotrichum lindemunthianum (Maximum)	None	None	None
Bean Common Mosaic Virus (B.C.M.V.)	0.1	0.1	0.1
Halo Blight – Pseudomonas phaseoli	0.1	0.1	0.1

TABLE 16

A: Applicable to:

Irish potatoes - Solanum tuberosum

Factor		Class	
	Basic	Certified 1	Certified 2
	%	%	%
Pure Seeds (Minimum)	99.0	98.0	97.0
Soft rot – Sclerotium rolfsii	0.0	0.1	0.1
Dry rot – Fusarium wilt	0.5	1.0	1.0
Common scab – Streptomyes scabies*coverage of tuber in 50kg	1.0	2.0	2.0
bag Black scurf - Rhizoctonia solani**	1.0	5.0	5.0

- 1. *Even if a single tuber in a lot is detected to have standard scab the entire seed lot shall be treated with the recommended chemical before declaring it fit for certification. Any Seeds lot having more than 5% scabbed tubers will not be certified even after treatment.
- 2. **A tuber is considered having black scurfed if 10% or more of its surface in scurfed.

 If more than 5% of the tubers are scurfed the total lot is rejected. Seeds lots carrying scurf, with recommended chemicals before being considered fit for certification purposes.
 Seed potato shall be classified into 3 sizes for the different/classes of seeds***.

Measurements in mm

	Hill seed potato	Plain seed potato
Small ****	30-40	25-35
Medium	41-50	36-45
Large	Above 51	Above 46

- 3. ***Size of the tuber will be decided on the basis of mean of two width of tuber at the middle and that of length.
- 4. **** In a seed lot tuber not conforming to specific size of seed should not be more than 5% by number. The seed material shall be reasonably clean, health, firm and shall conform to the characteristics of the variety, cut, bruised, misshaped, cracked tubers or those damaged by insects, slugs or worms shall not exceed 1% by weight; Tubers showing greenish pigment are best for seed purposes. Total number of diseased tubers shall not be more than 5% by number in each case.
- B: Applicable to:
 - (a) Ginger Zingiber officinalis
 - $(b) \quad {\sf Cardamom} \quad \textit{Elittaria cardamomum}$
 - (c) Pyrethrum Chysanthemum cinerarieafolium

Factor	Class

Basic	Certified1	Certified2'
%	%	%
98	98	97
None	None	None
1.0	1.0	2.0
95	95	95
2.0	2.0	2.0
2.0	2.0	2.0
2.0	2.0	2.0
2.0	2.0	2.0
2.0	2.0	2.0
2.0	2.0	2.0
2.0	2.0	2.0
None	None	None
None	None	None
	% 98 None 1.0 95 2.0 2.0 2.0 2.0 2.0 None	% % 98 98 None None 1.0 1.0 95 95 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 None None

C: Applicable to: Cassava Manihot utilisima Sweet potato Ipomea batatas

Factor	Class		
	Basic	Certified1	Certified 2
	%	%	%
Other varieties (Maximum)	0.1	0.2	0.2
Storage rot	None	None	None
Black rot - Ceratocystis fumbriata	None	None	None
Pure living cutting (Minimum)	95	95	95
Scurf - Monilochaetes unfuscans	None	0.1	0.1
Wilt (vascular wilt) - Fusarium oxysporum	None	0.1	0.1
Nematode	0.2	0.5	0.5
Wire worm	1	5	5
Sweet potato weevil - Cylasfor micarius	None	None	None
Foot rot – Plenodomus destruens	None	None	None
Leaf spot - Ercospora bataticala	None	None	None
Soft rot - Rhizopus stoloniferi	None	None	None
Cassava mealybug	None	None	None
Cassava mosaic	None	None	None

TABLE 17

Applicable to:

Onion Sets and Multiplier Onions (including Garlic).

1	2	3	4
Class Name	Size in diameter	Purity	General Quality
1. Standard seeds	10 - 20 mm	98 per cent	Mature, well cured s

Mature, well cured sound, free from decay and dry, free from tops, dirt leaves, free from other foreign matter, disease, moulds, insect, mechanical, frost damage, sprouted and soft bulbs when classified.

Note: The size standards under Column 2 do not apply to multiplier onions,

- 2. Onion sets may be labeled "pin-head" onion sets when they conform to the standards specified in this table and when the diameter of the sets is not more than 20 mm".
- 3. The following are the generally accepted identification and distinction between *onion sets and onion multipliers. Onion sets:* (*Allium cepa*) small bulbs or "sets" grown from Seeds used to plant for the production of mature onions. Since *A. cepa* is perennial, in the temperate zone, the sets are produced one season for planting in the next season. They are in practical sense just very small onions.
 - Onion multipliers: (A. cepa, var: varagratum). The example variety produces branching at the base of the bulb which, when divided, can be used as propagating material for planting. The practical example in Tanzania is the Spring onion.
 - In the general *Allium* there are at least four basic means of propagation: Seeds, Cloves, Topsets, and Multipliers. Seeds: to produce mature onions, or for the production of *transplants* or sets. (*Allium cepa*).
 - Bulb segments or *cloves:* (A. sativum) Garlic. The separation of segments of the garlic bulb provides the usual propagation material. Seldom is garlic Seeds used.
 - Top sets are the small bulb-like planting material produced in the flower cluster, sometimes in conjunction with Seeds. (A. cepa, var. vivaparum).
 - Multipliers are the division of the branching at the base of the crown, which are used for propagation. (A cepa, var; aggregatum) Spring onions.

TABLE 18

Applicable to:

Vegetable Crops.

MINIMUM STANDARDS APPLICABLE TO SEED CLASSSES

- Objectionable Weed Seed: None
 Restricted Noxious Weed Seed: Maximum allowed shall be 4 Seed per kg
 Total Weed Seed: The maximum by weight shall not exceed 1 per cent.

											Purity	Germination
											(Minimum)	(Minimum)
											%	%
African Ca	ıbbage	:									98.0	70
African Eg	gplan	t									98.0	70
Amaranths	S										95.0	70
Beans (all	types)	١									98.0	80
Beet (Incl.	Swiss	s char	d)								98.0	65
Broccoli											98.0	75
Brussels S	prouts										98.0	80
Cabbage											98.0	80
Carrot											98.0	60
Cauliflowe	er										98.0	70
Celery											99.0	60
Cucumber											98.0	70
Eggplant											98.0	70
Kale											98.0	70
Kohlrabi											98.0	80
Leek		• • •									98.0	70
Lettuce											98.0	75
Marrow											98.0	75
Muskmelo										• • •	98.0	75
Nightshad	e			• • •	• • •		• • •	• • •			98.0	60
Okra											98.0	70
Onion										• • •	98.0	70
Parsley		• • •									98.0	70
Parsnip										•••	98.0	60
Peas	•••	• • •	• • •	• • •	• • •	• • •	• • •	• • •	• • • •	• • •	99.0	80
Pepper	• • •	• • •	• • •	• • •	• • •	• • •	• • •	• • •	• • •	• • •	98.0	60
Pumpkin	• • •	• • •	• • •	• • •	•••	• • •	•••	• • •	• • •	• • •	99.0	60
Radish	• • •	• • •	• • •	• • •	• • •	• • •	• • •	• • •		• • •	98.0	70
Spinach	• • •	•••	• • •	• • •	• • •	• • •	• • •	• • •	• • •		98.0	60
Squash	• • •	• • •	• • •	• • •	• • •	• • •	• • •	• • •	• • •	• • •	99.0	75
Sweet Cor	n.									• • •	98.0	80
Tomato	• • •	• • •	• • •	• • •	• • •	• • •	• • •		• • •	• • •	98.0	75
Turnip	• • •	• • •	• • •		• • •	• • •	• • •	• • •		•••	98.0	70
Watermelo	n										98.0	60

- Objectionable Weed Seed: None
 Restricted Noxious Weed Seed: Maximum allowed shall be 10 Seed per kg
 Total Weed Seed: The maximum by weight shall not exceed 1.5 per cent.
 Minimum Seeds Standards shall be as follows:-

		Minimum Purity	Minimum Germination
A. CEREAL CROPS:		%	%
Maize (open pollinated)		95.0	80
Wheat		95.0	80
Sorghum		95.0	65
Rice		95.0	70
Oats		95.0	80
Barley		95.0	80
Millet		95.0	65
B. GRAIN LEGUME AND PULSE	S:		
Cow peas		97.0	70
Bean, Mung		97.0	70
Bean, Broad		97.0	70
Bean, Banavist		97.0	70
Bean, Hyacinth		97.0	70
Bean, Sword		97.0	70
Bean – Other s		97.0	70
Pigeon Pea		97.0	70
Pea – Lathyrus spp		97.0	70
Pea – Field and Garden		97.0	70
Bambara Nut		97.0	70
Greengram		97.0	70
Blackgram		97.0	70
Chickpea		97.0	70
Lentil		97.0	70
Lupines		95.0	70
		Minimum	Minimum Germination
		Purity %	Germination %
C. OIL CROPS:		70	70
Carrhaan		97.0	70
Groundnut		97.0	70
Sesame		95.0	70
Sunflower		95.0	65
Safflower		95.0	65
Castor Bean		97.0	75
Rape		95.0	65
LinSeeds		95.0	65
Cashew Nuts		99.0	80
Macadamia Nuts		99.0	80
Coconuts		99.0	80
Oil Palm		98.0	80
Dram Stick		98.0	80
D. EIDDE CDODS			
D. FIBRE CROPS:		05.0	7.
Cotton		95.0	75 75
Kenaf		95.0	75 75
Roselle		95.0	75
E. DRUG/STIMULANT CROPS:			
		97.0	85
- J		27.0	03

	Tobacco	97.0	75
	Coffee	99.0	80
	Tea	97.0	75
F.	VEGETABLE CROPS:		
	Tomato	97.0	70
	African Cabbage	97.0	70
	A.C.: F. 1	97.0	70
	A d	95.0	70
	NT 1 . 1 . 1		
	Nightshade	97.0	60
	Onion	97.0	60
	Eggplant	97.0	65
	Okra	97.0	70
	Cabbage	95.0	75
	Cauliflower	95.0	75
	Collards	95.0	75
	Day and P	95.0	75
		95.0	75
	Brussels Sprout		
	Pepper	97.0	55
	Celery	95.0	50
	Cucumber	95.0	70
	Squash, Pumpkin	95.0	70
	Spinach	95.0	55
	Carrot	95.0	55
	Turnip	95.0	75
	****	95.0	60
	Muskmelon	95.0	60
	Radish (including beet)	95.0	65
	Swiss Chard	95.0	60
G.	FRUIT CROPS		
	Sweet Oranges – Citrus sinensis	98.0	80
	Mandarine - C. reticulata	98.0	80
	Lemon - C. limon	98.0	80
	Lime - C. aurantifolia	98.0	80
	Grapefruit - C. paradisi	98.0	80
	Pummelo - C. grandis	98.0	80
	Peaches - Prunus persica	98.0	75
	Plums - P. domestica	98.0	75
	Apricot - P. armenica	98.0	75
	Custard Apple - Annona reticulata	98.0	80
	Sweetsop A. squamosa	98.0	80
	Mango - Mangifera indica	99.0	75
	2 83	99.0	80
	Avocado - Persea americana Guaya - Paidium guaigna		
	Guava - Psidium guajava	97.0	75 70
	Pineapple - Ananas comosus	98.0	70
	Banana - Musa spp.	98.0	95
	Apple - Malus sylvestris	98.0	90
	Pears - Pyrus communis	98.0	90
	Grapes - Vitis vinifera	98.0	90
	Papaya - Carica papaya	95.0	70
	Passion Fruit - Passiflora edulis	97.0	70
	· ·	95.0	70
		95.0 95.0	70 70
	Kumquat - Fortunella japonica	97.0	75 70
	Litchi/Lychee - Litchi chinensis	95.0	70
	Longan - Euphoria longana	90.0	70
	Loquat - Eriobotrya japonica	90.0	70
	Pomegranate – Punica granatum	95.0	80
	Raspberry - Rubus spp.	95.0	80
	Rose Apple - Syzygium jambos	95.0	80
	Tree Tomato - Cyphomandra betacea	98.0	70
	Tamarind - Tamarindus indica	98.0	70
	Straw Berry - Fragaria ananassa	95.0	80

Committee According to the According to	00.0	70
Carambora - Averrhoa carambola	90.0 95.0	70 70
Fig - Ficus spp.	93.0	70
H. GRASSES,FORAGE AND GREEN MANURE CROPS:		
African Foxtail Grass – Cenchrus ciliaris	80.0	50
Centro – Centrsema pubescens	950	50
Columbus Grass – Sorghum almum	95.0	70
Guinea Grass – Panicum maximum	90.0	50
Kuru vine – Desmodium intatum	95.0	50
	,	
Rhode Grass – Chloris gayana	60.0	50
Siratro – Phaseolus atropurpureus	95.0	50
Stylo – Stylosanthes gayanensis	95.0	50
Lance Crotalaria – Crotalaria lanceolata	95.0	70
Striate Crotalaria - Crotalaria mucronate var, Striata	95.0	70
Showy Crotalaria – Crotalaria spectabilis	95.0	70
Kudzu – Pueraria phaseoloides	95.0	50
Teff Grass – Eragrostis teff	95.0	50
Weeping – Eragrostis teff	95.0	50
Pennisetum clandestinum	95.0	60
Dolichos spp	85.0	60
Hyparenia rufa	90.0	50
Sand Lovegrass – Eragrostis trichoides	90.0	50
Euchleana mecinana	90.0	50
Digitaria smutsii	90.0	50
Eragrostis chloromelas	90.0	50
Bothriochloa insulpta	80.0	50
Blue panicgrass – Panicum antidotale	90.0	50
Green Panicgrass – Panicum maximum var. trichoglume	90.0	50
Panicum coloratum	85.0	40
Vine Mesquite – Panicum obtusum	80.0	50
Switchgrass – Pancicum virgatum	85.0	50
Melinis minufiflora	85.0	50
Pennisetum typhoides	95.0	50
Setaria sphacelate	80.0	50
Setaria splendida	85.0	50
Napier Grass – Pennisetum purpureum	90.0	50
Bermuda Grass – Cynodon dactylon	90.0	50
Cyndon plectostachyus	90.0	50
Themeda triandra	90.0	50
Lovegrass – Eragrostis superba	90.0	50
Brachiaria brizantha	90.0	50
Trypsacum laxum	90.0	50
Brachiaria ruziziensis	90.0	50
Stylosanthes humilis	90.0	50
Clitoria ternatea	90.0	50
Alfafa – Medicago sativa	95.0	70
Glycine – Glycine favanica	95.0	60
Lupine spp	95.0	70
White Clover incl. Ladino – Trifolium repens	95.0	70
Serradella – Ornithopus sativus	95.0	70
Slender Leaf Crotalaria – Crotalaris intermedia	95.0	70
Sunn Crotalaria – Crotalaria juncea	95.0	70

TABLE 20

CERTIFIED TREE AND SHRUB SEED

Basic Seed of tree shall be Seed from trees of proven genetic superiority as defined under the Act and Rules made by the Minister under Regulation 26 (4) herein.

(a) "Certified 1" tree and shrub Seed shall be the Seeds progeny grown from basic tree or trees and shrubs.

(b)	(b) "Certified 2" Seeds shall be the Seeds progeny grown from either "Certified1" or basic tree Seed.					

PART II: FIELD STANDARDS

TABLE 1

Applicable to:

- (a) Wheat including hybrid *Triticum aestivum* L.
- (b) Wheat durum Triticum durum Desf.
- (c) Barley Hodeum vulgare L.H. distichon (d) Oats Avena sativa L., A. nuda L.

Factor	Class			
	Basic	Certified1	Certified2	
Land (seasons before)	1	1	1	
Isolation (m)	5	5	5	
No. of inspection (minimum)	2	2	2	
Off- type (count in 100m ²)	1	6	6	
Other crop (inseparable) (%)	0	0.05	0.05	
Objectionable Weed Seed (no.)	0	0	0	
Diseases – (number per 100m²) - Kernel Bunt (plant)	0	$1/100 \text{ m}^2$	$1/100 \text{ m}^2$	
- Loose smut (plant)	$1/100 \text{ m}^2$	$1/100 \text{ m}^2$	$1/100 \text{ m}^2$	
- Ear cockle (percentage)	$1/100 \text{ m}^2$	$1/100 \text{ m}^2$	$1/100 \text{ m}^2$	

TABLE 2

Applicable to:

Lowland Rice (Paddy) - Oryza sativa

Factor		Class			
	Basic	Certified1	Certified2		
Land (seasons before)	2	2	2		
Isolation (m)	5	5	5		
No. of inspection (minimum)	2	2	2		
Off- type (%)	0.01	0.1	0.1		
Other Crop (inseparable) (%)	0	0.05	0.05		
Objectionable Weed Seed (no.)	0	0	0		
Red rice / Wild rice (%)	0	0.1	0.1		
Diseases – (number per 100m ²) – <i>Rice Blast</i> (plant)	0	$1/100 \text{ m}^2$	$1/100 \text{ m}^2$		
- Bacterial leaf blight (plant)	$1/100 \text{ m}^2$	$1/100 \text{ m}^2$	$1/100 \text{ m}^2$		
- White tip Nematode (percentage)	$1/100 \text{ m}^2$	$1/100 \text{ m}^2$	$1/100 \text{ m}^2$		

TABLE 3

Applicable to:

Upland Rice (Paddy) – Oryza sativa

Factor	Class			
_	Basic	Certified1	Certified2	
Land (seasons before)	1	1	1	
Isolation (m)	5	5	5	
No. of inspection (minimum)	2	2	2	
Off- type (%)	0.01	0.1	0.1	
Other Crop (inseparable) (%.)	0	0.05	0.05	
Objectionable Weed Seed (no.)	0	0	0	
Diseases – (number per 100m^2) – Rice Blast (plant)	0	$1/100 \text{ m}^2$	$1/100 \text{ m}^2$	
- Bacterial leaf blight (plant)	$1/100 \text{ m}^2$	$1/100 \text{ m}^2$	$1/100 \text{ m}^2$	
- White tip Nematode (percentage)	$1/100 \text{ m}^2$	$1/100 \text{ m}^2$	$1/100 \text{ m}^2$	

Factor	Class				
	Basic	Certified1	Certified2		
Land (seasons before)	2	2	2		
Isolation (m)	400	200	200		
No. of inspection (minimum)	2	2	2		
Off- type (%)	0.0	0.5	0.5		
Diseases					
-Bunt	1/1000plants	2/1000plants	2/1000plants		
-Mildew	1/1000plants	2/1000plants	2/1000plants		
-Ergot	0	0	0		
-Head/covered smut	1/1000plants	/2/1000plants	2/1000plants		
-Kernel smut	1/1000plants	2/1000plants	2/1000plants		

TABLE 5

Applicable to:
(a) Maize open-pollinated - Zea mays L.

Factor	Class		
	Basic	Certified1	Certifie2"
Land (seasons before)	1	1	1
Isolation (m)	400	200	200
No. of inspection (minimum)	3	2	2
Off- type (%)	0.1	0.5	0.5

(b) Maize (hybrid)

Factor	Cross Class	
		Certified1
Land (seasons before)	1	1
Isolation (m)	400	200
No. of inspection (minimum)	5	3
Seeds parent shedding pollen (Selfing) (%)	0	1
Silk of first pollen control inspection (%)	2	2
Seeds parent at any one inspection (%)	0.5	
Seeds parent at any three inspections (%)	2	2
Off- type (%)	0	0.1

TABLE 6

Applicable to:
Soybean – Glycine max.

Factor	Basic	Certified1	Certified2
Land (seasons before)	1	1	1
Isolation (m)	5	4	4
No. of inspection (minimum)	2	2	2
Off- type (%)	0.1	1.0	1.0
Diseases – (number per 100 m ²) – Soya Bean Mosaic	0	1.0	2
■ Bacterial Pustule (plant)	0	0	0
■ Bacterial Blight (percentage)	0	0	0
■ Leaf spot (plants)	1	2	2
■ Anthracnose (plants)	1	2	2
■ Charcoal rot (plant)	1	2	2

TABLE 7

Applicable to: Millet

(a) Millet, pearl – Pennisetum glaucum (L.) R. Br. Emend Stuntz

-			
Factor	Basic	Certified1	Certified2
Land (seasons before)	1	1	1
Isolation (m)	500	300	300
No. of inspection (minimum)	2	2	2
Off- type (%)	0.5	1.0	1.0
Diseases – (%) – <i>Green ear</i>	0.05	0.1	0.1
- <i>Ergot</i> (plant)	0.02	0.05	0.05
- Green smut (percentage)	0.05	0.1	0.1

(b) Millet, Finger – Eleusine carocana

Factor	Basic	Certified1	Certified2
Land (seasons before)	1	1	1
Isolation (m)	25	10	10
No. of inspection (minimum)	2	2	2
Off- type (%)	0.05	0.1	0.1

TABLE 8

Applicable to:

- (n) Alfalfa Medicago sativa
- (o) Clover, White, incl. Ladino Trifolium repens
- (p) Glycine Glycine javanica
- (q) Lance Crotalaria Crotalaria lanceolata.
- (r) Showy Crotalaria Crotalaria spectabilis
- (s) Slender Crotalaria Crotalaria intermedia
- (t) Striate Clotalaria Crotalaria mucronata var. striata
- (u) Sunn Crotalaria Crotalaria juncea
- (v) Kudzu Pueraria phaseloides
- (w) Lupines Lupinus spp.
- (x) Seradella Ornithopus sativus.
- (y) Tall Tick Clover (Kuru vine) Desmodium spp.
- (z) Siratro Phaseolus atropurpureus.

Factor	Basic	Certified1	Certified2
	%	%	%
Land (seasons before)	2	1	1
Isolation (m)	5	4	4
No. of inspection (minimum)	3	2	2
Off- type (%)	2.0	3.0	3.0

TABLE 9STANDARDS FOR EACH SEED CLASS

Applicable to:

Forage Grasses and Crops

Factor	Basic	Certified1	Certified2

Land (seasons before)	1	1	1
Isolation (m)	400	200	200
No. of inspection (minimum)	3	2	2
Off- type (%)	2.0	3.0	3.0

TABLE 10

Applicable to:

- (a) Sunflower *Helianthus annuus*.
- (b) Safflower Carthamus tinctorius.

Factor	Basic	Certified1	Certified2
Land (seasons before)	1	1	1
Isolation (m)	1700	1000	1000
No. of inspection (minimum)	2	2	2
Off- type (%)	0.1	0.2	0.3

TABLE 11

Applicable to:

- (a) Cotton Gossypium spp.
 (b) Kenaf Hibiscus cannabinus
 (c) Roselle Hibiscus sabdariffa

Factor	Class		
	Basic	Certified 1	Certified 2
Land (seasons before)	2	2	2
Isolation (m) (if contaminating source is of same species)	200	100	100
Isolation (m) (if contaminating source is of different species)	450	300	300
No. of inspection (minimum)	3	3	3
Off- type (%)	0.01	0.02	0.05
Bacterial Blight (Minimum)	0.5	1.0	2.0

TABLE 12

Applicable to:

- (a) Groundnut Arachis hypogaea
- (b) Bambara Nut Voandzeia subterranea

Factor		Class	
	Basic	Certified1	Certified2
Land (seasons before)	1	1	1
Isolation (m)	5	3	3
No. of inspection (minimum)	2	2	2
Off- type (%)	0.1	0.5	0.5

TABLE 13

Applicable to:

(a) Sesame – Sesamum indicum

Factor		Class	
	Basic	Certified1	Certified2
Land (seasons before)	1	1	1
Isolation (m)	5	3	3
No. of inspection (minimum)	2	2	2
Off- type (%)	0.2	0.5	0.5

(b) Tobacco – Nicotiana tabacum - Nicotiana rustica.

Factor	Basic	Certified1	Certified2
Land (seasons before)	1	1	1
Isolation (m)	100	50	50
No. of inspection (minimum)	2	2	2
Off- type (%)	none	0.05	0.1

TABLE 14

Applicable to:

- (a) Bean, Common Phaseolus vulgaris
- (b) Bean, Broad Vicia faba
- (c) Bean, Lima Phaseolus lunatis var. macrocarpus
- (d) Bean, Runner Phaseolus cocecineus
- (e) Chick Pea Cicer arietinum
- (f) Cow Pea Vigna unguiculata (L) walp.
- (g) Mung Bean Phaseolus aureus
- (h) Banavist Bean Dolichos lablab
- (i) Hyacinth Bean -Lablab niger
- $(j)\ Sword\ Bean-{\it Canavalia\ ensiformis}$
- (k) Blackgram –Phaseolus mungo
- (1) Greengram -Phaseolus aureus
- (m) Pigeon Pea Cajanus cajan
- (n) Pea perennial *Lathyrus spp*
- (o) Castor Bean Ricinus communis

Factor	Basic	Certified1	Certified2
Land (seasons before)	1	1	1
Isolation (m)	25	10	10
No. of inspection (minimum)	2	2	2
Off- type (%)	0.1	0.5	0.5
Diseases – (%) - Mosaic virus	0.1	1.0	1.0
- Anthracnose	0.02	0.02	0.02
- Halo Blight	0.01	0.01	0.01
- Common Blight	0.02	0.02	0.02

TABLE 15

A: Applicable to:

Irish potatoes - Solanum tuberosum

Factor	Basic	Certified 1	Certified2
Land (seasons before)	5	3	3
Isolation (m)	100	50	50
No. of inspection (minimum)	4	4	4
Off- type (number in 100 plants)	0	2	2
Diseases (%)			
Bacterial wilt	0	0	0
Wart	0	0	0
Golden Nematode	0	0	0
Ring rot	0	0	0
Potato spindle	0	0	0
Mycoplasma	1:1000	1:100	1:100
Black leg	0	0	0
Potato Virus Y	2 per 1000 plants	10 per 1000	10 per 1000
		plants	plants
Spindle Mottle Virus	13 per 100 plants	13 per 1000	13 per 100
		plants	0plants
Fusarium wilt	0	2 per 1000 plants	2 per 1000
			plants
Verticilium wilt	0	2 per 1000 plants	3 per 1000
			plants

SECOND SCHEDULE

 $(Made\ under\ Regulation\ 26(3))$

SEED CLASSES

Code	Classes	Seeds parents	Colour of
			labels
Pb	Pre- basic	Progeny of parent stock	white with
			diagonal
			violet
В	Basic	Progeny of certified pre- basic Seeds or certified pre-	White
		basic Seeds	
C_1	Cert.1 st gen.	Progeny of certified pre- basic Seeds or certified	Blue
		basic Seeds	
C_2	Cert. 2 nd gen.	Progeny of certified basic Seeds or certified 1st	Red
		generation Seeds	

 $N.B: On \ authorization \ of \ the \ Minister, \ Standard \ seed \ may \ be \ labeled \ yellow \ and \ its \ code \ shall \ be \ Std.$ Seed

THIRD SCHEDULE

(Made under Regulation 36 (3))

(SAMPLE WEIGHTS FOR ALL CLASSES)

	Minimum weight for submitted sample (gm)	Minimum weight for purity analysis(gm)	Minimum weight for examination for other Seeds (gm)
A CEREAL CROPS:			
Maize - Zea mays	1,000	900	1,000
Wheat - Triticum aestivum	1,000	120	1,000
Wheat - Triticum durum	1,000	120	1,000
Sorghum - Sorghum bicolor	900	90	900
Rice - Oryza sativa	700	70	700
Barley - Hordeum vulgare	1,000	120	1,000
Millet- Eleusine carocana	60	6	60
Oats - Avena sativa	1,000	120	1,000
B GRAIN LEGUME AND PULSES:			
Cow peas- Vigna unguiculata	1,000	400	1,000
-V. sinensis, V.catiag	1,000	700	1,000
Field/ Common beans - Phaseolus vulgaris	1,000	700	1,000
Mung bean - Vigna aureus	1,000	250	1,000
Phaseolus angularis	1,000	400	1,000
Banavist beans - Dolichos lablab	1,000	700	1,000
Hyacinth beans- Lablab niger	1,000	900	1,000
Sword beans - Canavalia ensiformis	1,000	400	1,000
Pigeon pea - Cajanus cajan	1,000	300	1,000
Chickpea - Cicer arietinum	1,000	1,000	1,000
Broad beans - Vicia faba	1,000	1000	1,000

	Garden pea - Pisum sativum	1000	900	1000
	Bambara nut - Voandzeia subterranean	1,000	400	1,000
	Greengram - Phaseolus aureus	1,000	400	1,000
	Blackgram - Phaseolus mungo	1,000	700	1,000
C	OIL CROPS:			
	Soya beans - Glycine max	1,000	500	1,000
	Groundnut - Arachia hypogaea	1,000	1000	1,000
	Sesame - Sesamum indicum	70	7	70
	Sunflower - Helianthus annuus	1,000	200	1,000
	Safflower - Carthamus tinctorius	900	90	900
	Castor - Ricinus communis	1,000	500	1,000
	Cashew nuts – Anacardium occidentale	1,000	1,000	1,000
	Macadamia nuts – Macadamia integrifolia	1,000	1,000	1,000
	Oil palm	500	400	500
	Coconuts	20	15	20
	Gram stick – Moringa oleifera	200	150	200
D	FIBRE CROPS:			
	Cotton Coccunium can	1 000	250	1 000
	Cotton - Gossypium spp Kenaf - Hibiscus cannabinus	1,000 700	350 70	1,000 700
		700 700	70 70	700
	Roselle - Hibiscus sabdariffa	700	70	700
Е	DRUG/STIMULANT CROPS:			
	Pyrethrum - <i>Chysanthemum cinerariaefolium</i>	100	10	100
	Tobacco - Nicotiana tabacum	5	0.5	5
	- Nicotiana rustica	25	0.5	25
	Coffee – Coffea spp.	1,000	400	1,000
	Tea – Camellia sinensis			
	Constant The character of the constant of the	1 000	400	1 000
	Cocoa – Theobroma cacao	1,000	400	1,000
F	VEGETARI E CROPS:			
F	VEGETABLE CROPS: African explant - Solanum macrocarnum	15	7	10
F	African eggplant - Solanum macrocarpum	15 5	7 0.5	10 5
F	African eggplant - Solanum macrocarpum Amaranth - Amaranthus spp	5	0.5	5
F	African eggplant - Solanum macrocarpum Amaranth - Amaranthus spp African cabbage - Brassica carinata	5 100	0.5 10	5 100
F	African eggplant - Solanum macrocarpum Amaranth - Amaranthus spp	5 100 5	0.5 10 0.5	5 100 5
F	African eggplant - Solanum macrocarpum	5 100 5 15	0.5 10 0.5 7	5 100 5 10
F	African eggplant - Solanum macrocarpum Amaranth - Amaranthus spp African cabbage – Brassica carinata Nightshade - Solanum vilosum Tomato - Lycopersicon lycopersicum Onion - Allium cepa	5 100 5 15 80	0.5 10 0.5 7 8	5 100 5 10 80
F	African eggplant - Solanum macrocarpum	5 100 5 15 80 150	0.5 10 0.5 7 8 15	5 100 5 10 80 150
F	African eggplant - Solanum macrocarpum	5 100 5 15 80 150 1,000	0.5 10 0.5 7 8 15 140	5 100 5 10 80 150 1,000
F	African eggplant - Solanum macrocarpum	5 100 5 15 80 150 1,000 100	0.5 10 0.5 7 8 15 140	5 100 5 10 80 150 1,000
F	African eggplant - Solanum macrocarpum	5 100 5 15 80 150 1,000 100	0.5 10 0.5 7 8 15 140	5 100 5 10 80 150 1,000
F	African eggplant - Solanum macrocarpum Amaranth - Amaranthus spp African cabbage - Brassica carinata Nightshade - Solanum vilosum Tomato - Lycopersicon lycopersicum Onion - Allium cepa Egg plant - Solanum melongena Okra - Abelmoschus esculentus L. Cabbage - Brassica oleracea var. capitata Cauliflower - Brassica oleracea var. botrytis Sprouting brocoli -Brassica oleracea var. italica	5 100 5 15 80 150 1,000 100	0.5 10 0.5 7 8 15 140 10	5 100 5 10 80 150 1,000 100
F	African eggplant - Solanum macrocarpum	5 100 5 15 80 150 1,000 100 100	0.5 10 0.5 7 8 15 140 10	5 100 5 10 80 150 1,000 100 100
F	African eggplant - Solanum macrocarpum Amaranth - Amaranthus spp African cabbage - Brassica carinata Nightshade - Solanum vilosum Tomato - Lycopersicon lycopersicum Onion - Allium cepa Egg plant - Solanum melongena Okra - Abelmoschus esculentus L. Cabbage - Brassica oleracea var. capitata Cauliflower - Brassica oleracea var. italica Brussels Sprout - Brassica oleracea var. germifera	5 100 5 15 80 150 1,000 100 100	0.5 10 0.5 7 8 15 140 10	5 100 5 10 80 150 1,000 100 100
F	African eggplant - Solanum macrocarpum Amaranth - Amaranthus spp African cabbage - Brassica carinata Nightshade - Solanum vilosum Tomato - Lycopersicon lycopersicum Onion - Allium cepa Egg plant - Solanum melongena Okra - Abelmoschus esculentus L. Cabbage - Brassica oleracea var. capitata Cauliflower - Brassica oleracea var. italica Brussels Sprout - Brassica oleracea var. germifera Chinese Cabbage - Brassica campestris sub-var. pekinensis	5 100 5 15 80 150 1,000 100 100 100	0.5 10 0.5 7 8 15 140 10 10	5 100 5 10 80 150 1,000 100 100 100
F	African eggplant - Solanum macrocarpum Amaranth - Amaranthus spp African cabbage - Brassica carinata Nightshade - Solanum vilosum Tomato - Lycopersicon lycopersicum Onion - Allium cepa Egg plant - Solanum melongena Okra - Abelmoschus esculentus L. Cabbage - Brassica oleracea var. capitata Cauliflower - Brassica oleracea var. botrytis Sprouting brocoli -Brassica oleracea var. italica Brussels Sprout - Brassica oleracea var. germifera Chinese Cabbage - Brassica campestris sub-var. pekinensis Chinese Cabbage Brassica campestris sub-var. chinensis	5 100 5 15 80 150 1,000 100 100 100 40	0.5 10 0.5 7 8 15 140 10 10 4	5 100 5 10 80 150 1,000 100 100 100 40
F	African eggplant - Solanum macrocarpum Amaranth - Amaranthus spp African cabbage - Brassica carinata Nightshade - Solanum vilosum Tomato - Lycopersicon lycopersicum Onion - Allium cepa Egg plant - Solanum melongena Okra - Abelmoschus esculentus L. Cabbage - Brassica oleracea var. capitata Cauliflower - Brassica oleracea var. botrytis Sprouting brocoli -Brassica oleracea var. italica Brussels Sprout - Brassica oleracea var. germifera Chinese Cabbage - Brassica campestris sub-var. pekinensis Chinese Cabbage Brassica campestris sub-var. chinensis Pepper - Capsicum spp	5 100 5 15 80 150 1,000 100 100 100 40 40	0.5 10 0.5 7 8 15 140 10 10 4 4	5 100 5 10 80 150 1,000 100 100 100 40 40
F	African eggplant - Solanum macrocarpum Amaranth - Amaranthus spp African cabbage - Brassica carinata Nightshade - Solanum vilosum Tomato - Lycopersicon lycopersicum Onion - Allium cepa Egg plant - Solanum melongena Okra - Abelmoschus esculentus L. Cabbage - Brassica oleracea var. capitata Cauliflower - Brassica oleracea var. botrytis Sprouting brocoli -Brassica oleracea var. italica Brussels Sprout - Brassica oleracea var. germifera Chinese Cabbage - Brassica campestris sub-var. pekinensis Chinese Cabbage Brassica campestris sub-var. chinensis Pepper - Capsicum spp Celery - Apium graveolens	5 100 5 15 80 150 1,000 100 100 100 40 40 40 150 25	0.5 10 0.5 7 8 15 140 10 10 4 4 4 15 2	5 100 5 10 80 150 1,000 100 100 100 40 40 150 25
F	African eggplant - Solanum macrocarpum Amaranth - Amaranthus spp African cabbage - Brassica carinata Nightshade - Solanum vilosum Tomato - Lycopersicon lycopersicum Onion - Allium cepa Egg plant - Solanum melongena Okra - Abelmoschus esculentus L. Cabbage - Brassica oleracea var. capitata Cauliflower - Brassica oleracea var. botrytis Sprouting brocoli -Brassica oleracea var. italica Brussels Sprout - Brassica oleracea var. germifera Chinese Cabbage - Brassica campestris sub-var. pekinensis Chinese Cabbage Brassica campestris sub-var. chinensis Pepper - Capsicum spp. Celery - Apium graveolens Cucumber - Cucumis sativus	5 100 5 15 80 150 1,000 100 100 100 40 40 40 150 25 150	0.5 10 0.5 7 8 15 140 10 10 4 4 4 15 2 70	5 100 5 10 80 150 1,000 100 100 100 40 40 150 25 150
F	African eggplant - Solanum macrocarpum Amaranth - Amaranthus spp African cabbage - Brassica carinata Nightshade - Solanum vilosum Tomato - Lycopersicon lycopersicum Onion - Allium cepa Egg plant - Solanum melongena Okra - Abelmoschus esculentus L. Cabbage - Brassica oleracea var. capitata Cauliflower - Brassica oleracea var. botrytis Sprouting brocoli -Brassica oleracea var. italica Brussels Sprout - Brassica oleracea var. germifera Chinese Cabbage - Brassica campestris sub-var. pekinensis Chinese Cabbage Brassica campestris sub-var. chinensis Pepper - Capsicum spp Celery - Apium graveolens Squash /Pumpkin - Cucurbita spp Squash /Pumpkin - Cucurbita spp	5 100 5 15 80 150 1,000 100 100 100 40 40 40 150 25 150 1,000	0.5 10 0.5 7 8 15 140 10 10 10 4 4 4 15 2 70 700	5 100 5 10 80 150 1,000 100 100 100 40 40 40 150 25 150 1,000
F	African eggplant - Solanum macrocarpum Amaranth - Amaranthus spp African cabbage - Brassica carinata Nightshade - Solanum vilosum Tomato - Lycopersicon lycopersicum Onion - Allium cepa Egg plant - Solanum melongena Okra - Abelmoschus esculentus L. Cabbage - Brassica oleracea var. capitata Cauliflower - Brassica oleracea var. botrytis Sprouting brocoli -Brassica oleracea var. italica Brussels Sprout - Brassica oleracea var. germifera Chinese Cabbage - Brassica campestris sub-var. pekinensis Chinese Cabbage Brassica campestris sub-var. chinensis Pepper - Capsicum spp. Celery - Apium graveolens Cucumber - Cucumis sativus Squash / Pumpkin - Cucurbita spp Lettuce - Lectuca sativa	5 100 5 15 80 150 1,000 100 100 100 40 40 40 150 25 150 1,000 30	0.5 10 0.5 7 8 15 140 10 10 10 4 4 4 15 2 70 700 3	5 100 5 10 80 150 1,000 100 100 100 40 40 40 150 25 150 1,000 30
F	African eggplant - Solanum macrocarpum Amaranth - Amaranthus spp African cabbage - Brassica carinata Nightshade - Solanum vilosum Tomato - Lycopersicon lycopersicum Onion - Allium cepa Egg plant - Solanum melongena Okra - Abelmoschus esculentus L. Cabbage - Brassica oleracea var. capitata Cauliflower - Brassica oleracea var. botrytis Sprouting brocoli -Brassica oleracea var. italica Brussels Sprout - Brassica oleracea var. germifera Chinese Cabbage - Brassica campestris sub-var. pekinensis Chinese Cabbage Brassica campestris sub-var. chinensis Pepper - Capsicum spp. Celery - Apium graveolens Cucumber -Cucumis sativus Squash /Pumpkin -Cucurbita spp Lettuce - Lectuca sativa Spinach - Spinach oleracea	5 100 5 15 80 150 1,000 100 100 100 40 40 40 150 25 150 1,000 30 250	0.5 10 0.5 7 8 15 140 10 10 10 4 4 4 15 2 70 700 3 25	5 100 5 10 80 150 1,000 100 100 100 40 40 40 150 25 150 1,000 30 250
F	African eggplant - Solanum macrocarpum Amaranth - Amaranthus spp African cabbage - Brassica carinata Nightshade - Solanum vilosum Tomato - Lycopersicon lycopersicum Onion - Allium cepa Egg plant - Solanum melongena Okra - Abelmoschus esculentus L. Cabbage - Brassica oleracea var. capitata Cauliflower - Brassica oleracea var. botrytis Sprouting brocoli -Brassica oleracea var. italica Brussels Sprout - Brassica oleracea var. germifera Chinese Cabbage - Brassica campestris sub-var. pekinensis Chinese Cabbage Brassica campestris sub-var. chinensis Pepper - Capsicum spp. Celery - Apium graveolens Cucumber -Cucumis sativus Squash /Pumpkin -Cucurbita spp Lettuce - Lectuca sativa Spinach - Spinach oleracea Carrot - Daucus carota	5 100 5 100 5 15 80 150 1,000 100 100 100 40 40 40 40 150 25 150 1,000 30 250 30	0.5 10 0.5 7 8 15 140 10 10 10 4 4 4 15 2 70 700 3 25 3	5 100 5 10 80 150 1,000 100 100 100 40 40 40 150 25 150 1,000 30 250 30
F	African eggplant - Solanum macrocarpum Amaranth - Amaranthus spp African cabbage - Brassica carinata Nightshade - Solanum vilosum Tomato - Lycopersicon lycopersicum Onion - Allium cepa Egg plant - Solanum melongena Okra - Abelmoschus esculentus L. Cabbage - Brassica oleracea var. capitata Cauliflower - Brassica oleracea var. botrytis Sprouting brocoli -Brassica oleracea var. italica Brussels Sprout - Brassica oleracea var. germifera Chinese Cabbage - Brassica campestris sub-var. pekinensis Chinese Cabbage Brassica campestris sub-var. chinensis Pepper - Capsicum spp. Celery - Apium graveolens Cucumber -Cucumis sativus Squash /Pumpkin -Cucurbita spp Lettuce - Lectuca sativa Spinach - Spinach oleracea Carrot - Daucus carota Turnip - Brassica campestris sub-var. rapa	5 100 5 100 5 15 80 150 1,000 100 100 100 40 40 40 150 25 150 1,000 30 250 30 70	0.5 10 0.5 7 8 15 140 10 10 10 4 4 4 15 2 70 700 3 25 3 7	5 100 5 10 80 150 1,000 100 100 100 40 40 40 150 25 150 1,000 30 250 30 70
F	African eggplant - Solanum macrocarpum Amaranth - Amaranthus spp African cabbage - Brassica carinata Nightshade - Solanum vilosum Tomato - Lycopersicon lycopersicum Onion - Allium cepa Egg plant - Solanum melongena Okra - Abelmoschus esculentus L. Cabbage - Brassica oleracea var. capitata Cauliflower - Brassica oleracea var. botrytis Sprouting brocoli -Brassica oleracea var. italica Brussels Sprout - Brassica oleracea var. germifera Chinese Cabbage - Brassica campestris sub-var. pekinensis Chinese Cabbage Brassica campestris sub-var. chinensis Pepper - Capsicum spp. Celery - Apium graveolens Cucumber - Cucumis sativus Squash / Pumpkin - Cucurbita spp Lettuce - Lectuca sativa Spinach - Spinach oleracea Carrot - Daucus carota Turnip - Brassica campestris sub-var. rapa Watermelon - Citrullus lanatus	5 100 5 100 5 15 80 150 1,000 100 100 100 100 40 40 40 40 150 25 150 1,000 30 250 30 70 1,000	0.5 10 0.5 7 8 15 140 10 10 10 4 4 4 15 2 70 700 3 25 3 7 250	5 100 5 10 80 150 1,000 100 100 100 40 40 40 150 25 150 1,000 30 250 30 70 1,000
F	African eggplant - Solanum macrocarpum Amaranth - Amaranthus spp African cabbage - Brassica carinata Nightshade - Solanum vilosum Tomato - Lycopersicon lycopersicum Onion - Allium cepa Egg plant - Solanum melongena Okra - Abelmoschus esculentus L. Cabbage - Brassica oleracea var. capitata Cauliflower - Brassica oleracea var. botrytis Sprouting brocoli -Brassica oleracea var. italica Brussels Sprout - Brassica oleracea var. germifera Chinese Cabbage - Brassica campestris sub-var. pekinensis Chinese Cabbage Brassica campestris sub-var. chinensis Pepper - Capsicum spp. Celery - Apium graveolens Cucumber -Cucumis sativus Squash /Pumpkin -Cucurbita spp Lettuce - Lectuca sativa Spinach - Spinach oleracea Carrot - Daucus carota Turnip - Brassica campestris sub-var. rapa Watermelon - Citrullus lanatus Muskmelon - Cucumis melo	5 100 5 100 5 15 80 150 1,000 100 100 100 100 40 40 40 40 150 25 150 1,000 30 250 30 70 1,000 150	0.5 10 0.5 7 8 15 140 10 10 10 4 4 4 15 2 70 700 3 25 3 7 250 15	5 100 5 10 80 150 1,000 100 100 100 40 40 40 150 25 150 1,000 30 250 30 70 1,000 150
F	African eggplant - Solanum macrocarpum Amaranth - Amaranthus spp African cabbage - Brassica carinata Nightshade - Solanum vilosum Tomato - Lycopersicon lycopersicum Onion - Allium cepa Egg plant - Solanum melongena Okra - Abelmoschus esculentus L. Cabbage - Brassica oleracea var. capitata Cauliflower - Brassica oleracea var. botrytis Sprouting brocoli -Brassica oleracea var. italica Brussels Sprout - Brassica oleracea var. germifera Chinese Cabbage - Brassica campestris sub-var. pekinensis Chinese Cabbage Brassica campestris sub-var. chinensis Pepper - Capsicum spp. Celery - Apium graveolens Cucumber - Cucumis sativus Squash / Pumpkin - Cucurbita spp Lettuce - Lectuca sativa Spinach - Spinach oleracea Carrot - Daucus carota Turnip - Brassica campestris sub-var. rapa Watermelon - Citrullus lanatus	5 100 5 100 5 15 80 150 1,000 100 100 100 100 40 40 40 40 150 25 150 1,000 30 250 30 70 1,000	0.5 10 0.5 7 8 15 140 10 10 10 4 4 4 15 2 70 700 3 25 3 7 250	5 100 5 10 80 150 1,000 100 100 100 40 40 40 150 25 150 1,000 30 250 30 70 1,000

G FRUIT CROPS

Н

Sweet oranges -	- Citrus sinensis	300	200	300
Mandarine -	C. reticulata	300	200	300
Lemon -	C. limon	300	200	300
Lime -	C. aurantifolia	300	200	300
Grapefruit -	C. paradisi	300	200	300
Pummelo -	C. grandis	300	200	300
Peaches -	Prunus persica	500	300	500
Plums -	P. domestica	500	300	500
Apricot -	P. armenica	500	300	500
Custard apple -		300	200	300
Sweetsop	A. squamosa	300	200	300
Mango -	Mangifera indica	1,000	1,000	1,000
Avocado -	Persea americana	1,000	1,000	1,000
Guava -	Psidium guajava	200	200	200
Pineapple -	Ananas comosus	10 (suckers)	10 (suckers)	10
i incappie -	Thunus comosus	10 (suckers)	10 (suckers)	(suckers)
Banana -	Musa spp.	10 (suckers)	10 (suckers)	(suckers)
Dallalla -	миза spp.	10 (suckers)	10 (suckers)	(suckers)
Amala	Malua aulusatuia	20 (auttin as)	20 (auttings)	,
Apple -	Malus sylvestris	30 (cuttings)	20 (cuttings)	30 (cuttings)
Pears -	Pyrus communis	30 (cuttings)	20 (cuttings)	30 (cuttings)
Grapes -	Vitis vinifera	30 (cuttings)	20 (cuttings)	30 (cuttings)
Papaya -	Carica papaya	300	300	300
Passion fruit -	Passiflora edulis	200	200	200
Jackfruit -	Artocarpus heterophyllus	500	300	500
Breadfruit -	A. altilis	500	300	500
Kumquat -	Fortunella japonica	500	200	500
	Litchi chinensis	20 (cuttings)	20 (cuttings)	20 (cuttings)
	Euphoria longana	20 (cuttings)	20 (cuttings)	20 (cuttings)
	Eriobotrya japonica	20 (cuttings)	20 (cuttings)	20 (cuttings)
Pomegranate –	Punica granatum	300	200	300
Raspberry -	Rubus spp.	20 (cuttings)	20 (cuttings)	20 (cuttings)
Rose apple -	Syzygium jambos	20 (cuttings)	20 (cuttings)	20 (cuttings)
Tree tomato -	Cyphomandra betacea	200	150	200
Tamarind -	Tamarindus indica	200	1.50	200
	i amarinaus inaica	200	150	200
Straw berry -	ramarmaus maica Fragaria ananassa	30 (cuttings)	20 (cuttings)	
•				30 (cuttings)
Carambora -	Fragaria ananassa	30 (cuttings)	20 (cuttings)	30 (cuttings) 300
Carambora - Fig - GRASSES, FOI	Fragaria ananassa Averrhoa carambola Ficus spp. RAGE AND GREEN MANURE CROPS:	30 (cuttings) 300 30 (cuttings)	20 (cuttings) 200 20 (cuttings)	30 (cuttings) 300 30 (cuttings)
Carambora - Fig - GRASSES, FOI	Fragaria ananassa Averrhoa carambola Ficus spp. RAGE AND GREEN MANURE CROPS: ndestinum	30 (cuttings) 300 30 (cuttings)	20 (cuttings) 200 20 (cuttings)	30 (cuttings) 300 30 (cuttings)
Carambora - Fig - GRASSES, FOI Pennisetum clar Desmodium spp	Fragaria ananassa Averrhoa carambola Ficus spp. RAGE AND GREEN MANURE CROPS: adestinum	30 (cuttings) 300 30 (cuttings) 70 50	20 (cuttings) 200 20 (cuttings)	30 (cuttings) 300 30 (cuttings)
Carambora - Fig - GRASSES, FOI Pennisetum clar Desmodium spp Glycine javanic	Fragaria ananassa Averrhoa carambola Ficus spp. RAGE AND GREEN MANURE CROPS: ndestinum	30 (cuttings) 300 30 (cuttings) 70 50 250	20 (cuttings) 200 20 (cuttings) 7 5 20	30 (cuttings) 300 30 (cuttings) 70 50 200
Carambora - Fig - GRASSES, FOI Pennisetum clar Desmodium spp Glycine javanic Medicago sativo	Fragaria ananassa Averrhoa carambola Ficus spp. RAGE AND GREEN MANURE CROPS: adestinum .	30 (cuttings) 300 30 (cuttings) 70 50 250 50	20 (cuttings) 200 20 (cuttings) 7 5 20 5	30 (cuttings) 300 30 (cuttings) 70 50 200 55
Carambora - Fig - GRASSES, FOI Pennisetum clar Desmodium spp Glycine javanic Medicago sativa Phaseolus atrop	Fragaria ananassa Averrhoa carambola Ficus spp. RAGE AND GREEN MANURE CROPS: adestinum a b a a b b c c d d d d d d	30 (cuttings) 300 30 (cuttings) 70 50 250 50 75	20 (cuttings) 200 20 (cuttings) 7 5 20 5 7	30 (cuttings) 300 30 (cuttings) 70 50 200 55 75
Carambora - Fig - GRASSES, FOI Pennisetum clar Desmodium spp Glycine javanic Medicago sativa Phaseolus atrop Chloris gayana	Fragaria ananassa Averrhoa carambola Ficus spp. RAGE AND GREEN MANURE CROPS: adestinum a b b c c d d d d d d	30 (cuttings) 300 30 (cuttings) 70 50 250 50 75 25	20 (cuttings) 200 20 (cuttings) 7 5 20 5 7	30 (cuttings) 300 30 (cuttings) 70 50 200 55 75
Carambora - Fig - GRASSES, FOI Pennisetum clan Desmodium spp Glycine javanic Medicago sativo Phaseolus atrop Chloris gayana Dolichos spp.	Fragaria ananassa Averrhoa carambola Ficus spp. RAGE AND GREEN MANURE CROPS: adestinum a b b c c d d d d d d	30 (cuttings) 300 30 (cuttings) 70 50 250 50 75 25 75	20 (cuttings) 200 20 (cuttings) 7 5 20 5 7 1	30 (cuttings) 300 30 (cuttings) 70 50 200 55 75 20
Carambora - Fig - GRASSES, FOI Pennisetum clar Desmodium spp Glycine javanic Medicago sative Phaseolus atrop Chloris gayana Dolichos spp. Sylobanthas gra	Fragaria ananassa Averrhoa carambola Ficus spp. RAGE AND GREEN MANURE CROPS: Indestinum	30 (cuttings) 300 30 (cuttings) 70 50 250 50 75 25 75 25	20 (cuttings) 200 20 (cuttings) 7 5 20 5 7 1 7 5	30 (cuttings) 300 30 (cuttings) 70 50 200 55 75 20 75
Carambora - Fig - GRASSES, FOI Pennisetum clan Desmodium spp Glycine javanic Medicago sativo Phaseolus atrop Chloris gayana Dolichos spp. Sylobanthas gra Hyparenia rhufa	Fragaria ananassa Averrhoa carambola Ficus spp. RAGE AND GREEN MANURE CROPS: adestinum a a a burpure a a burpure a b c c c c c c c c c c c c c c c c	30 (cuttings) 300 30 (cuttings) 70 50 250 50 75 25 75 25 30	20 (cuttings) 200 20 (cuttings) 7 5 20 5 7 1 7 5 3	30 (cuttings) 300 30 (cuttings) 70 50 200 55 75 20 75 25
Carambora - Fig - GRASSES, FOI Pennisetum clan Desmodium spp Glycine javanic Medicago sativo Phaseolus atrop Chloris gayana Dolichos spp. Sylobanthas gra Hyparenia rhufa Cenchurus cilia	Fragaria ananassa Averrhoa carambola Ficus spp. RAGE AND GREEN MANURE CROPS: adestinum a a a burpure a a burpure a b c c c c c c c c c c c c c c c c	30 (cuttings) 300 30 (cuttings) 70 50 250 50 75 25 75 25 30 25	20 (cuttings) 200 20 (cuttings) 7 5 20 5 7 1 7 5 3	30 (cuttings) 300 30 (cuttings) 70 50 200 55 75 20 75 25 30 25
Carambora - Fig - GRASSES, FOI Pennisetum clan Desmodium spp Glycine javanic Medicago sativo Phaseolus atrop Chloris gayana Dolichos spp. Sylobanthas gra Hyparenia rhufa Cenchurus cilia Eragrostis teff	Fragaria ananassa Averrhoa carambola Ficus spp. RAGE AND GREEN MANURE CROPS: adestinum	30 (cuttings) 300 30 (cuttings) 70 50 250 50 75 25 75 25 30 25 25	20 (cuttings) 200 20 (cuttings) 7 5 20 5 7 1 7 5 3 5	30 (cuttings) 300 30 (cuttings) 70 50 200 55 75 20 75 25
Carambora - Fig - GRASSES, FOI Pennisetum clan Desmodium spp Glycine javanic Medicago sativo Phaseolus atrop Chloris gayana Dolichos spp. Sylobanthas gra Hyparenia rhufa Cenchurus cilia Eragrostis teff Eragrotis tricha	Fragaria ananassa Averrhoa carambola Ficus spp. RAGE AND GREEN MANURE CROPS: adestinum a a a burpure acilis acilis <td>30 (cuttings) 300 30 (cuttings) 70 50 250 50 75 25 75 25 30 25 25 25 25</td> <td>20 (cuttings) 200 20 (cuttings) 7 5 20 5 7 1 7 5 3 5</td> <td>30 (cuttings) 300 30 (cuttings) 70 50 200 55 75 20 75 25 30 25</td>	30 (cuttings) 300 30 (cuttings) 70 50 250 50 75 25 75 25 30 25 25 25 25	20 (cuttings) 200 20 (cuttings) 7 5 20 5 7 1 7 5 3 5	30 (cuttings) 300 30 (cuttings) 70 50 200 55 75 20 75 25 30 25
Carambora - Fig - GRASSES, FOI Pennisetum clan Desmodium spp Glycine javanic Medicago sativo Phaseolus atrop Chloris gayana Dolichos spp. Sylobanthas gro Hyparenia rhufo Cenchurus cilia Eragrostis teff Eragrotis tricho Euchleana meci	Fragaria ananassa Averrhoa carambola Ficus spp. RAGE AND GREEN MANURE CROPS: adestinum a a a burpure acilis acilis <td>30 (cuttings) 300 30 (cuttings) 70 50 250 50 75 25 75 25 30 25 25 30 30 30</td> <td>20 (cuttings) 200 20 (cuttings) 7 5 20 5 7 1 7 5 3 5 1 1 3</td> <td>30 (cuttings) 300 30 (cuttings) 70 50 200 55 75 20 75 25 30 25 10 10</td>	30 (cuttings) 300 30 (cuttings) 70 50 250 50 75 25 75 25 30 25 25 30 30 30	20 (cuttings) 200 20 (cuttings) 7 5 20 5 7 1 7 5 3 5 1 1 3	30 (cuttings) 300 30 (cuttings) 70 50 200 55 75 20 75 25 30 25 10 10
Carambora - Fig - GRASSES, FOI Pennisetum clar Desmodium spp Glycine javanic Medicago sativo Phaseolus atrop Chloris gayana Dolichos spp. Sylobanthas gra Hyparenia rhufa	Fragaria ananassa Averrhoa carambola Ficus spp. RAGE AND GREEN MANURE CROPS: adestinum a a a burpure acilis acilis <td>30 (cuttings) 300 30 (cuttings) 70 50 250 50 75 25 75 25 30 25 25 25</td> <td>20 (cuttings) 200 20 (cuttings) 7 5 20 5 7 1 7 5 3 5</td> <td>30 (cuttings) 300 30 (cuttings) 70 50 200 55 75 20 75 25 30 25 10 10</td>	30 (cuttings) 300 30 (cuttings) 70 50 250 50 75 25 75 25 30 25 25 25	20 (cuttings) 200 20 (cuttings) 7 5 20 5 7 1 7 5 3 5	30 (cuttings) 300 30 (cuttings) 70 50 200 55 75 20 75 25 30 25 10 10
Carambora - Fig - Fig - GRASSES, FOI Pennisetum clan Desmodium spp Glycine javanic Medicago sativo Phaseolus atrop Chloris gayana Dolichos spp. Sylobanthas gro Hyparenia rhufa Cenchurus cilia Eragrostis teff Eragrotis tricho Euchleana meci Digitoria smuts Eragrostis chlo	Fragaria ananassa Averrhoa carambola Ficus spp. RAGE AND GREEN MANURE CROPS: adestinum	30 (cuttings) 300 30 (cuttings) 70 50 250 50 75 25 75 25 30 25 25 30 30 30	20 (cuttings) 200 20 (cuttings) 7 5 20 5 7 1 7 5 3 5 1 1 3 2 2	30 (cuttings) 300 30 (cuttings) 70 50 200 55 75 25 30 25 10 10 30 20 20 20 20 25 25 20 20 20 20 20 20 20 20 20 20
Carambora - Fig - Fig - GRASSES, FOI Pennisetum clan Desmodium spp Glycine javanic Medicago sativo Phaseolus atrop Chloris gayana Dolichos spp. Sylobanthas gro Hyparenia rhufa Cenchurus cilia Eragrostis teff Eragrotis tricho Euchleana meci Digitoria smuts Eragrostis chlo	Fragaria ananassa Averrhoa carambola Ficus spp. RAGE AND GREEN MANURE CROPS: adestinum	30 (cuttings) 300 30 (cuttings) 70 50 250 50 75 25 30 25 25 30 25 25 30 25 30 25 30	20 (cuttings) 200 20 (cuttings) 7 5 20 5 7 1 7 5 3 5 1 1 3 2 2 3	30 (cuttings) 300 30 (cuttings) 70 50 200 55 75 25 30 25 10 10 30 20 20 20 25
Carambora - Fig - GRASSES, FOI Pennisetum clan Desmodium spp Glycine javanic Medicago sativo Phaseolus atrop Chloris gayana Dolichos spp. Sylobanthas gro Hyparenia rhufo Cenchurus cilia Eragrostis teff Eragrotis tricho Euchleana meci	Fragaria ananassa Averrhoa carambola Ficus spp. RAGE AND GREEN MANURE CROPS: adestinum	30 (cuttings) 300 30 (cuttings) 70 50 250 50 75 25 75 25 30 25 25 25 25 25 30 25 25	20 (cuttings) 200 20 (cuttings) 7 5 20 5 7 1 7 5 3 5 1 1 3 2 2	30 (cuttings) 300 30 (cuttings) 70 50 200 55 75 25 30 25 10 10 30 20 20 30
Carambora - Fig - GRASSES, FOI Pennisetum clan Desmodium spp Glycine javanic Medicago sativo Phaseolus atrop Chloris gayana Dolichos spp. Sylobanthas gro Hyparenia rhufo Cenchurus cilia Eragrostis teff Eragrotis tricho Euchleana meci Digitoria smuts. Eragrostis chlo Eragrostics cur	Fragaria ananassa Averrhoa carambola Ficus spp. RAGE AND GREEN MANURE CROPS: adestinum	30 (cuttings) 300 30 (cuttings) 70 50 250 50 75 25 30 25 25 30 25 25 30 25 30 25 30	20 (cuttings) 200 20 (cuttings) 7 5 20 5 7 1 7 5 3 5 1 1 3 2 2 3	30 (cuttings) 300 30 (cuttings) 300 30 (cuttings) 70 50 200 55 75 20 75 25 30 25 10 10 30 20 20 30 30
Carambora - Fig - Fig - GRASSES, FOI Pennisetum clan Desmodium spp Glycine javanic Medicago sativo Phaseolus atrop Chloris gayana Dolichos spp. Sylobanthas gra Hyparenia rhufa Cenchurus cilia Eragrostis teff Eragrotis tricho Euchleana meci Digitoria smuts Eragrostis chlo Eragrostics cur Bothriochloa in	Fragaria ananassa Averrhoa carambola Ficus spp. RAGE AND GREEN MANURE CROPS: adestinum	30 (cuttings) 300 30 (cuttings) 70 50 250 50 75 25 75 25 30 25 25 30 25 30 30 30	20 (cuttings) 200 20 (cuttings) 7 5 20 5 7 1 7 5 3 5 1 1 3 2 2 3 3	200 30 (cuttings) 300 30 (cuttings) 70 50 200 55 75 20 75 25 30 25 10 10 30 20 20 30 30 20 20

	25		2.5
Panicum coloratum	25	2	25
Panicum obtusum	25	2	20
Panicum virgatum	30	3	30
Melinis minufilora	5	0.5	5
Lupinus spp	1,000	450	1,000
Pannisetum typhoides	60	6	60
Seteria splendida	90	9	90
Seteria sphacelate	90	9	90
Sorghum alum	700	20	200
Pennisetum purpureum	60	6	60
Sorghum sudanense	250	25	250
Trifolium repens	25	2	20
Ornithopusstivus spp	90	9	90
Crotalaria intermedia	150	15	150
Crotalaria juncea	700	70	700
Crotalaria lanceolata	70	7	70
Crotalaria mueronate	150	15	150
Crotalaria spectabilis	350	35	350
Cynodon dactylon	25	1	10
Themeda triandra	25	2	25
Eragrostis superba	25	2	25
	25	1	10
	30	3	30
T 1	30	3	30
D 1	30	3	30
	150	3 15	30 150
Centrosema pubescens			
Pueraria phaseoloides	350	35	350
Stylosanthes humilis	100	10	100
Stylosanthes mucronata	50	5	50
Clitoria ternatea	100	10	100
H ROOT CROPS AND SPICES:			
Potato (Irish) - Solanum tuberosum.(no. of tubers)	50	30	50
Garlic – Allium sativum(no. of sets)	50	20	50
Ginger – Zingiber officinalis(no. of rhizomes)	50	20	50
Cardamon – Elittalia cardamomum (gm)	50	20	50
Cinnamon – Cinnamomum zeylanicum(cuttings)	50	20	50
Cassava – <i>Manihot esculentum</i> (no. of cuttings)	50	20	50
Sweet potatoes – <i>Ipomea batatas</i> (no. of vines)	50	20	50
Yams – <i>Dioscorea spp.</i> (no. of tubers)	20	10	20
Tame Dioscorea spp. (no. of tuocis)	20	10	20

FOURTH SCHEDULE

(Made under Regulation 27 (8))

THE MINIMUM NUMBER OF PLANTS OR HEADS REQUIRED PER COUNT FOR EACH CROP

S/no.	Crop	Number of
	_	counts required
1.	Maize (hybrids/composite)	100
2.	Sunflower castor	100
3.	Beans and peas, cowpeas, groundnuts chickpeas and green	
	gram,	500
4.	Sesame, groundnut, kenaf, cotton, okra, amaranths	500

5.	Sorghum/millets	1000
6.	Wheat, rice, oats barley, critical,.	2000
7.	Peppers, eggplant, tomato	200
8.	Cabbage, cauliflower	200
9.	Cucurbits	Almost every
10.	Onions	plant 2000 bulbs

	(Made under regulation)	
	APPLICATION FORMS/CERTIFICATES	
	THE UNITED REPUBLIC OF TANZANIA MINISTRY OF AGRICULTURE, FOOD SECURITY AND COOPERATIVES THE SEED ACT (No. 18 of 2003)	
S/N	······································	Form SR I
	APPLICATION FOR RFGISTRATION AS A SEED DEALER	
	(Made under Regulation 3(1)) (To be filled in Triplicate)	
То:	Director for Crop Development Ministry of Agriculture, Food Security and Cooperatives P.O.Box 9192 DAR ES SALAAM.	
I/We l	hereby apply to be registered as seed dealer :-	
Postal Telepl Email	Address hone Number Address ion of the premises	
I/we w	vish to deal in (<i>Please tick where applicable</i>)	

FIFTH SCHEDULE

PART A: TO BE FILLED BY APPLICANTS WHO WISH TO PRODUCE/GROW SEED

1. Mention class/class (s) of Seed to be produced: 2. What mode of production do you intend to use :- (fill where appropriate) (b) contract grower □ (c) give details of land and equipment: 3. Provide number and qualification of the personnel who are conversant with Seeds production that are in your possession or possession of your

contract grower _____ 4. For how long have you been engaged in Seeds business?..... (attach business profile)

constitution

(i) Production \Box (ii) Processing \Box (iii) Importation \Box (iv) Exportation \Box (v) Distribution \Box (vi) Sale \Box

* For a legal person like a company, please attach Memorandum/Articles of association/ registration certificate/ and or

	PART B: TO BE FILLED BY APPLICANTS WHO WISH TO PROCESS SEED
1.	Do you have adequate equipments and machinery to process Seed? Yes /No If "YES" provide the list and capacity of each equipment/machinery:
2.	Are equipment/machinery own or hired?
3.	Describe your storage facilities:
4.	Do you have a capacity to mark or label packets /containers as required by Seed Regulations? Yes /No
5.	Do you have adequate and knowledgeable personnel who are conversant with Seeds processing and storage? Yes/No. if "YES", provide number and qualification of the said personnel
	PART C: TO BE FILLED BY APPLICANTS WHO WISH TO IMPORT/ EXPORT SEED
1. 2. 3. 4. 5.	Mention class/class (s) of Seed to be imported/exported: Do you have adequate and knowledgeable personnel who are conversant with Seeds matters? Yes/No. if "YES", provide number and qualification of the said personnel: What is estimated tonnage of Seed to be imported/exported annually: Where are proposed sources for import/ export: Describe your storage facilities:
	PART D: TO BE FILLED BY APPLICANTS WHO WISH TO SELL/DISTRIBUTE SEED
1 2 3 4	What are your distribution centres in the country Do you have enough storage facilities? YES/ NO. If "YES" state their capacity and conditions Do you have any agreements with agents or stockist to distribute Seed on your behalf? YES/ NO. If you have agents or stockist, do they have any identity to recognize them? YES/ NO if "YES" state their identity.
5 6	Do your agents or stockist have any knowledge on Seeds business YES/ NO . How will you ensure that your agents or stockist comply with the Seeds law?

PART E: TO BE FILLED BY SEED STOCKIST

1.	1. location of shop	village/street	ward/town
2.	2. Do you have any agreements with any seed dealer to o	distribute seed on his behalf?	YES/ NO
3.	3. if the answer in 2 is "YES", mention them		
	4. If you have any identity? YES/NO if "YES" state th		
	5. Do you have enough storage facilities? YES/ NO. If		
•••			

I/We declare that all information provided herein above is true to the best of my/ our knowledge.
Signed atday of
Signature:
FOR OFFICIAL USE ONLY
Application No: Date Received: Fees Receipt No:
Date Approved/Rejected:
If approved: Reg No If rejection, reasons for rejection. Signature of the regressible.
Dated: Signature of the responsible officer:

Declaration:

THE SEED ACT, 2003

(No. 18 of 2003)

 $S/N\dots\dots\dots$

Form SR II

Registration No
CEERTIFICATE OF REGISTRATION AS SEEDS DEALER
(Made under Regulation 3(3))
This is to certify that
(Name and address of Registrant)
has been registered as Seeds producer/processor/importer/exporter/ distributor (<i>delete where applicable</i>) for category of
(state of crop and class)
his farm /premises for business is located at
(village/ town/district/ region)
This registration shall be valid for the period of
Issued at
Signature:

THE SEED ACT, 2003

S/N	(No. 18 of 2003)	Form SR I
	APPLICATION FOR DUS TEST	
	(Made under Regulation 7(1))	
	(To be filled in Triplicate)	
To: Tanzania Official Seed Certification	Institute	
Full name of the Applicant/Pre- basic:		
2. Postal Address		
4. Email	Fax No	
7. Family Name:		
13.Major distinguishing merits from other rele 14. Variety descriptor attached/Not attached (co	ased varieties:	
15. Test fee paid by	P.O.BOX.	
Dated:	Signed:	
	FOR OFFICIAL USE ONLY:	
	ate Received:	
Amount of sample received for DUS test: first	season:second season	

Dated: Signature of the responsible officer:

THE SEED ACT, 2003

S/N	(No. 18 of 2003)

Form SR IIIB

APPLICATION FOR NATIONAL PERFORMANCE TRIAL

(Made under Regulation 4(1))

(To be filled in Triplicate)					
To: Tanzania Official Seed Cert	ification Institute.				
1. Full name of the Applicant:					
2. Postal Address		0			
4. Email.	Fax No				
5.Name of crop					
6. Botanical Name:					
7. Family Name:					
8. Chromosome Number					
9: Mode of Pollination:					
10.Other basic information:					
12. Name under which it is tested:					
16.Proposed elevation:					
19. Distinguishing characteristics (desc					
		(c) stem:			
		(j) growth habit:			
(k) others:		0, <i>6</i>			
20 Major distinguishing merits from of	her released varieties:				
(a) Sowing date:	(b) Seeds rates:				
24. Yield data/comparison/trial (Attach					
(a) Vield compared to check:	(b) Viald in far	ners field:			
25 Name and address of Pro-basis if d	afarant from the Applicant	nets netd.			
23. Ivallie aliu address of Fie- basic II d	eterent from the Applicant				
I/We certify that the information given	above is correct to the best of my/our know	vledge.			
I/We hereby enclose a cheque for:		being the payment of the application fee.			
		- * * * * * * * * * * * * * * * * * * *			

*		
	FOR C	OFFICIAL USE ONLY
Application No:	Date Received:	
Fees Receipt No:	Advanced yield trial	data (Accepted/Not accepted)
		Date Approved/Rejected:
If rejection, reasons for rejection		
I	title	,certify that the information given above is correct to the best of m
knowledge using the information ar	nd scientific data available to r	ne.
Date:	Signature:	

Date: Signature:

THE SEED ACT, 2003

	(No. 18 of 2003)	
S/N		Form SR IV
CERTIFICATE FO	OR DISTINCTINESS,UNIFORMITY AND ST	TABILITY TEST
	(Made under Regulation .7(3)	
Stability (DUS) Name / number under which it was tested: Plant species: Botanical Name: Name and Address of Applicant/ Certificate he	hose particulars referred herein has been passed to	······································
Issued thisday of):
	Signature & stamp	Chief Seed Certification Officer

THE SEED ACT, 2003

/N
RE: RECOMMENDATION FOR THE RELEASE OF NEW VARIETY
(Made under Regulation 7(7))
(To be filled in Triplicate)
o: National Variety Release Committee
This is to notify that the variety whose particulars set herein below had been submitted for NPT thisda f
. Full name of the Applicant/Pre- basic:
. Postal Address
. Email
Name of crop
. Botanical Name:
. Family Name: . Chromosome Number : Mode of ollination:
0.Other basic information: Pre- asic
Jame:
3. Agency responsible for development: 4. Cutivar pedigree: 5. Proposed area for release:
6.Proposed elevation:
7. Agency responsible for supply of pre- basic Seeds:
8. Agency responsible for maintenance:
9. Distinguishing characteristics (describe fully) (a) growth habit:
(d) flower:(e) ods:

(f) Seeds:....(g) Seeds

size: (i) Seeds shape and selection (i) time to	
(h) Seeds shape and colour:(i) time to	
flowering:	
varieties:	
21.Points of merits, drought tolerance, disease resistance, lodging resistance,	
etc	
22.Economical and quality	
attributes:	
23.Agronomic characters	
(optimal):	
(a) Sowing date:(b) Seeds	
rates:	
(c) Plant population :(d)	
maturity:	
(e) Fertilizer:(f) plant	
height:	
(g) Irrigation need	
4) Company (1) The control of the co	
(h) Consumer acceptability:(i)	
Others: 25. Yield data/comparison/trial (a)Yield compared to check:	
23. Field data/comparison/trial (a) Field compared to check	(0) Tield in farmers neid
26. Any other	
information:	
The following are the results of NPT:-	
1. M. J f	
1: Mode of Pollination:	
2. Proposed Name: 3. Name under which it is	
	S
tested:	
4. Agency responsible for development.	
5. Cultivar Pedigree:	
6. Name of Pre- basic:	
7. Proposed area for	
Release:	
8.Proposed	
elevation:	
9. Agency responsible for supply of pre- basic	
Seeds:	
maintenance:	
11. Distinguishing characteristics:	
(a) growth habit:(b) leaf:	(c)
Stem:	
(d)	
flower:(e)pods:	
(f) Seeds: (g) Seeds	
size:	
(h) Seeds shape and colour:(i) time to	
flowering:	
12. Major distinguishing characters from other released	
varieties:	
14. Economical and quality	
attributes:	
15. Agronomic characters (optimal): (a) So	owing
(b) Seeds Rates:(c) Plant	
nonulation: (d)Maturity:	

(e) Fertilizer:(f)crop	
height:	
(g) Irrigation need :	rvest
index:	
(i) Consumer acceptability:(
j)Others:	
16. Yield data (a) Yield on NPT :(b) Yield	eld on farm
(a) the variety be release ()*(b) the variety should not be release ()*	
Signature and Stamp:date:	
*Please tick where applicable	
	Secretary – NPT-TC

Attached: DUS results, NPT report, on farm trial report advanced yield trial

THE SEED ACT, 2003

(No. 18 of 2003) S/N	Form SR VI
VARIETY REGISTRATION CERTIFICATE	
(made under Regulation 8(2))	
This is to certify that the variety whose particulars referred herein has been approved and registered for use Tanzania. Name of Variety: Plant species: Botanical Name: Name and Address of Registrant Registration Number.	and commercialization in

Signature and Seal: Director

THE SEED ACT, 2003

				THE BEED TICT,	2003		
S/N	V			(No. 18 of 200	3)		Form SR VII
		A	PPLICATION	FOR INSPECTION	OF SEED FIEI	LD CROP	
			1	(Made under Regulati	on 27(1))		
				(To be completed in t	riplicate)		
To:	Tanzania	Official Seed Certi	fication Institute	2			
1. 2. 3. 4. 5. 6.	Separate a days after A map gi overleaf. Full name of Name of Con Person to be Contaction of the Location of the Location of the Contaction of the	Applicant:	y)*:sarest town:àrm:	ach the farm as well as	Address:Address:	he field unit within Telep Te Te	t be submitted within 30 the farm must be drawn phone: lephone:
	Crop	Variety	Class	Lot No. of Seeds used	Hectarage:	Source of Seeds use (Supplier/Seller	Planting date
7. 8. 9. 10.	Quantity of S Estimated dat Previous crop	eeds Used:e of Harvesting (A sand varieties grown	kgs No. of pproximate): wn in this field f	of Containers:or the last two growin		Weight of each	container:kgs
		tion form should b	e filled for each	contract grower.			
Dec	aration:						

I hereby declare that all information provided here is true to the best of my knowledge and belief and I shall always observe all conditions

Date: Signature of Applicant: Designation:

Enclosed herewith is a cheque of the sum of shillings..... being payment of the inspection.

governing Seeds production as provided in the Seeds Act and Regulations.

FOR OFFICIAL USE ONLY

Date received:	Appication No	 	
Application accepted/rejected:		 	
If rejected, state reasons for rejec	tion:	 	
Field Registration No:		 	
Date: Signature:			
Designation:			

THE SEED ACT, 2003

(No. 18 of 2003)

TANZANIA OFFICIAL SEED CERTIFICATION INSTITUTE

S/N							
FIELD INSPECTION RESULTS							
		(Ма	de under Regulatio	ons 27(12))			
		(to	be filled after every	inspection)			
Applicant name.				Address			
Grower name			Ao	ddress			
Crop		Variety:					
Does the crop ha	ve proper cutivar char	racteristics					
Count	Off - types	Diseases	Other features	Objectionable weeds	Other crop weeds		
1.							
2.							
4.							
5.							
6.							
Total							
Average percentage							
Identity							
					lquate/inadquate and should		
				bags/hectar	es		
	reasons:						
Signature of Seed	ds Grower or represen	ntative of the Grower.		Date			
	тыресия						

THE SEED ACT, 2003

(No. 18 of 2003)

TANZANIA OFFICIAL SEED CERTIFICATION INSTITUTE

S/N					Form SR. VIIIB
		FINAL	FIELD INSPECTION RES	ULT	
		(M	ade under Regulation 27(13)		
Applicant name			Address		
Grower name			Address		
Crop		Variety:			
Class:		hectare	es:		
	Lett	Lond	Lord	l m tax	
Factor	1 st inspection	2 nd Inspection	3 rd Inspection	Total No. or %	
Off - types					
Diseases					
Tassels					
Weeds					
Other crops					
Other (specify)					
Remarks					
This Crop is appro	ved/rejected.				
If rejected, state re	asons:				
Signature	Seed grower				
			Date		
Filed Copy to: Grower.	Inspector				

Chief Seed Certification Officer

THE SEED ACT, 2003

(No. 18 of 2003)

TANZANIA OFFICIAL SEED CERTIFICATION INSTITUTE

S/N		Form SR IX
	SEED TRANSPORT ORDER	
	(Made under Regulation 29(2))	
То:	of	
	transportation for processing ofon.	
Crop :		
Variety:		
Class:		
Mode of transportation :		
Vessel Registration No:		
Type of the identification:)
	Seeds Inspector	

THE SEED ACT, 2003

(No. 18 of 2003)

TANZANIA OFFICIAL SEED CERTIFICATION INSTITUTE

S/N						Form SR 2
			W	ORK ORDER		
			(Made und	er Regulation 30(2),)	
This work order is	issued at		thi	s	day of	200
Name and address	of Seeds producer	:				
Crop :		variety				
Name and address	of Seeds processor	r:				
Location of proces	ssing plant					
Class			Weight of lot b	pefore processing.		kg
Lot No			Provisio	nal germination		%
No. of Labels	Serial Nos. of labels Issued	No. of unused Labels	Date of Sealing	Nos. of Seals used	No. Container	Sample No.
Remarks if any						
Name of Inspec	tor:		••••			
Signature:						
Cc: Chief Seed Cert	ification Officer					



THE SEED ACT, 2003

(No. 18 of 2003)

TANZANIA OFFICIAL SEEDS CERTIFICATION INSTITUTE

S/No							FORM SR XI
			STOP S	SALE ORDER			
			(Made unde	er Regulation 32(5))			
Date:			(to be fill	ed in dublicate)			
Го:				(Name of See			
Businness Li	cence No						
You are here	by informed that the	following lots of S	eeds are found to be	in violation of Seeds	Act and Regula	ations:	
Crop	Variety	Lot No.	No. of containers	Quantity in Kg.	Nature of violation	Sampled	
						Yes	No
				released from this or			
_							
Once you con	mply with the releva	nt violated provision	on of the Seed Act or	Regulations, please	contact Chief Se	eds Certification	on Office.
Other instruc	tion:				• • • • • • • • • • • • • • • • • • • •		
Name of Insp	ector:			Name of sec	ed dealer		
Signature:				Signature: .	•••••		
Date:				Signature: .			

THE UNITED REPUBLIC OF TANZANIA MINISTRY OF AGRICULTURE, FOOD SECURITY AND COOPERATIVES THE SEED ACT, $2003\,$

(No. 18 of 2003)

S/No				FORM SR XII
	NOTICE	TO IMPORT SEED		
To: The Director, Ministry of Agriculture, Food Security P.O.BOX 9192 Dar Es Salaam		der Regulation 33(1))		
I/ We hereby apply to Import Seed do thereto.	escribed herein below in accordance with	th the terms and conditions laid d	own in the Seed Act and the Regula	tions made
 Address: Registration No. Previous permit No. (if any). Quantity of the Seeds of the same volume of Origin. Name and address of the Supplier: Expected date of arrival of the consolended of transport. Point of entry. 	Location of the store/god/variety in stock (if any)signment.	own where the Seeds will be kept	t after arrival	
Crop	Variety Name	Class	Quantity in Kg.]
				- - - - - -
Declaration:		.1	<u> </u>	J
I declare that all information provided Act and its Regulations.	d herein is true and I do undertake to ob	serve all terms and conditions for	r importation/ exportation as provide	ed in the Seeds
Signed this	day of2	200		
Signature:				
FOR OFFICIAL USE ONLY Date Received:				
Application Fees paid				
Action taken : Considered for permit/ Not considered Date:				
Signature: Director				
*please delete where necessary				

THE UNITED REPUBLIC OF TANZANIA MINISTRY OF AGRICULTURE, FOOD SECURITY AND COOPERATIVES



S/N	(No.	18 of 2003)	Form SR XIII
	SEED IM	PORT PERMIT	
	(Made una	ler Regulation 33(3))	
Permit No.	Date issued		
Permission is hereby granted to .		of Po of the Seeds dealer)	stal Address Office
to import from.		, Registration No.	
the following Seed: _			
Species	Variety	Class	Weight in kg
This permit is issued subject to to the consignment of Seeds sha			
(a) Phytosanitary certificate			
(b) Certificate of quality issu	ued by a Recognized Certificatio	n Agency	
2. The consignment shall be subj Seeds shall be inspected in accor			hereof and on arrival in the country, the
3. The Seed shall not be distribut	ed prior to the outcome of the re	sults of sample.	
4. The Permit holder shall be rec	quired to pay all fees as stipulated	d in the Seeds Regulations.	
5. The permit holder shall be req	uired to fulfill all conditions for	importation as provided in the	relevant law of Tanzania.
6. This permit is not transferable in the Seed Act and the Regulation		r fails to comply with the term	as and condition for conditions as provid
7. The permit shall be for	months only.		
Signature :		 Director	

cc. Chief Seeds Certification Officer.

THE UNITED REPUBLIC OF TANZANIA MINISTRY OF AGRICULTURE, FOOD SECURITY AND COOPERATIVES THE SEED ACT, 2003

(No. 18 of 2003)

S/No				FORM SR XI
	NOTICE	E TO EXPORT SEED		
To: The Director Ministry of Agriculture, Food So P.O.BOX 9192 Dar Es Salaam	,	nder Regulation 34(1))		
 Full Name of Application Address:	lescribed herein below in accordance with ant: Tel: (if any)	ne store/godown where the Seeds	will be kept after arrival :	
Crop	Variety Name	Class	Quantity in Kg.	
	ovided herein is true and I do undertake to ided in the Seeds Act and its Regulations		for	
	day of			
Signature:				
FOR OFFICIAL USE ONLY Date Received:				
Action taken : Considered for permit/ Not cons	idered for Permit*			
Signature: Director				
*please delete where necessary				

THE UNITED REPUBLIC OF TANZANIA MINISTRY OF AGRICULTURE, FOOD SECURITY AND COOPERATIVES



(No. 18 of 2003)

S/N			Form SR XV
	SEED EXP	ORT PERMIT	
	(Made under Reg	gulation 34(3))	
Permit No.	Date issued		
Permission is hereby granted to .		of I f the Seeds dealer)	Postal Address Office
			·
the following Seed: _			
Species	Variety	Class	Weight in kg
This permit is issued subject to t	he following conditions:		
1. The consignment of Seeds sha	Il be accompanied by-		
(a) Certificate of quality issu	ed by Tanzania Official Seed Cer	tification Institute.	
(b) Phytosanitary certificate	and other relevant document gove	erning exportation issued by	v relevant authorities.
	quired to pay all fees as stipulated		,
		_	
3. The permit holder shall be required which seeds are exported.	uired to fulfill all conditions for e	xportation as provided in th	ne relevant law of Tanzania and the country
4. This permit is not transferable in the Seed Act and the Regulation		fails to comply with the te	rms and condition for conditions as provide
5. The permit shall be for	months only.		
Signature :			
	De	irector	

76

cc. Chief Seeds Certification Officer.

THE UNITED REPUBLIC OF TANZANIA MINISTRY OF AGRICULTURE, FOOD SECURITY AND COOPERATIVES

THE SEED ACT, 2003

(No. 18 of 2003)

S/N
APPLICATION FOR SEED TESTING
(Made under Regulation 38(2)) (To be filled in Triplicate)
To: Tanzania Official Seed Certification Institute1. Full name of the Applicant:
2. Postal Address
4. Email
5. Crop
6. Variety
7. Lot No
8. Seeds Import Permit No
9. Weight of Lot.
10. Seeds dressing.
11. Date of Sampling: 12. Tests required. (purity/germination/moisture/injurious weeds/diseases/) * 13. Testing fee paid Payment Voucher/ Cheque No
I certify that the sample was drawn by me in the prescribes manner this
Name of Sampler:
Signature:
* delete as necessary
FOR OFFICIAL USE ONLY:
Application No:

Test requested:

Dated: Signature of the responsible officer:

Test results:

S/N.....

THE UNITED REPUBLIC OF TANZANIA MINISTRY OF AGRICULTURE, FOOD SECURITY AND COOPERATIVES

THE SEED ACT, 2003

(No. 18 of 2003)

TANZANIA OFFICIAL SEED CERTIFICATION INSTITUTE

SEEDS TESTING CERTIFICATE

(Made under Regulation 38(3)(b)) ((To be filled in Triplicate)

OFFICIAL		110.	Т					TEST NUMBER		
Date receiv	ed:			ŀ						
Lot Numb	oer:			W	eight of lo	t:				
Crop and										
Class of S										
Country of	f origin:									
					RESUL	T OF AN	IALYSIS			
	Pur	ity								
		0.1				1		ermination		1 25.
Pure Seeds (P)	Inert matter	Other Seed	Weed Seed		apacity (G)	Hard	Fresh ungerminated Seed	Abnormal Seedslings	Pure germinating Seed PxG 100	Moisture
) Inert matte) Other Seed) Weed Seed (dd: d: (a) objectio (b) restric	onable								
ypes of :) Inert matte (2) Other Seed (3) Weed Seed (4) (5) pecial test:	d: (a) objection (b) restric	onable								
ypes of:) Inert matter () Other Seed () Weed Seed () () pecial test:	d: d: (a) objection (b) restric	onable								
ypes of:) Inert matte) Other Seed) Weed Seed pecial test:	d: (a) objection (b) restric	onable								
ypes of: 1) Inert matte 2) Other Seed 3) Weed Seed (pecial test:	d: (a) objection (b) restric	onable						imum Seed stan	dards for Seeds Analyst	
ypes of:) Inert matte 2) Other Seed 3) Weed Seed (pecial test: emarks: is hereby c	d: (a) objection (b) restric	onable						imum Seed stan Signature	dards for Seeds Analyst	

 $S/N\dots\dots\dots$

THE UNITED REPUBLIC OF TANZANIA MINISTRY OF AGRICULTURE, FOOD SECURITY AND COOPERATIVES



(No. 18 of 2003)

TANZANIA OFFICIAL SEED CERTIFICATION INSTITUTE

SEED TESTING REPORT

(Made under Regulation 38(3)(c))

PRIVATE SAMPLE NO.	TEST NUMBER			
Date received:				
Lot Number: Weight of lo	ot:		·	
Crop and variety:				
Class of Seeds:				
Country of origin:				•

RESULT OF ANALYSIS

	Pur	ity							
				Germination					
Pure Seeds (P)	Inert matter	Other Seed	Weed Seed	Capacity (G)	Hard	Fresh ungerminated Seed	Abnormal Seedslings	Pure germinating Seed PxG 100	Moisture
% Types of	%	%	%	%	%	%	%	%	%

(1) Inert matte		 	
(2) Other Seed			
(2) Other Beed		 •••••	
Signature			
SignatureSeed	s Analyst		
Date:			

Signature..... Chief Seed Certification Office

THE UNITED REPUBLIC OF TANZANIA

MINISTRY OF AGRICULTURE AND FOOD SECURITY



S/N	(No	o. 18 of 2003)	Form SR - XIX
			Registration No
CEERTIFICA	TE OF AUTHORISAT	TION AS INSPECTOR/SAMPLE	R/ANALYST*
	([Made u	under Regulation 42(4))	
This is to certify that			
has been registered and authorized	as	address of Registrant)	
This authorization shall be valid for the cancelled if the registrant fails to a Regulations.			
Issued at	this	day of	
Signatui		l Certification Officer	
* delete where not applicable			
CC: Director			

SIXTH SCHEDULE

FEES FOR SERVICES

 $(Made\ under\ Regulation\ 40\ (1))$

Service	Fee in TShs.
I. Charges based on the services rendered for each operation:	
A: Seed field inspection made to determine the eligibility of a crop for pedigree status for each inspection: (1) for hybrid maize per hectare inspected	
(2) vegetables/pastures, up to one hectare inspected	3150 5000
(3) vegetables/pastures, for every exceeding unit above one hectare inspected (3) for all other s of Seeds crops, per hectare inspected	4000 2150
(4) minimum fee per field where inspected total field is less than 10 hectares, B: Seed inspection and sampling:	20,000
(1) agricultural crops per 100kg or part thereof	1,500 2000 2000
(4) minimum fee for each lot inspected (maximum of 10 tones per lot)	10,000
C: Seed testing for germination, purity and moisture: (1). charges for one kg for field crops of pedigree class	15 20
(2). Charges for Tooghi for vegetable crops of pedigree class	5 20
D: Seed health testing:	20.000
(1) charges per sample for local market Seed	20,000 50,000
F: Certificate and Tags (1) registration of Seed dealer	2500
(2) variety registration (3) certificate of Seed testing	10,000 1000 10,000
(4) certificate for Seed import/ export	500 500
(7) DUS test certificate	5000
E: Non refundable fees for various application forms (1) Registration as a Seeds dealer	2000 2000
(2) DOS test	2000 2000 3000
(5) Seed testing (per Seeds lot)	1000 2000
(7) Notice to import/export Seed	2000
(1) Conducting DUS test (for two seasons)	500,000 600,000
(8) Authorisation / licensing of Seeds sampler or Analyst Note: Fees for inspect, sampling , testing shall apply mutatis mutandis on re- inspection re- sampling or testing.	20,000

SEVENTH SCHEDULE

 $(Made\ under\ Regulations\ 7(4)(a))$

APPROVED TESTING SITES FOR NATIONAL PERFORMANCE TRIAL

Crop Type	High Altitude	Mid Altitude	Low Altitude
A: Compulsory certification	on crops		
Hybrid Maize	Dabaga, Njombe, Uyole, Nkundi (Sumbawanga) ,Machame or Marangu	AFSF or Selian, Lambo, Gairo, Mbimba, Babati, Laela	Msimba or Ilonga, KATRIN, SUA, Maramba or Mwele, Uchira, Nachingwea
Sweet Corn	Dabaga, Njombe, Uyole, Nkundi (Sumbawanga)	AFSF or Selian, Miwaleni, Gairo	Msimba or Ilonga, KATRIN, Kibaha, SUA, Maramba or Mwele
Open Pollinated Maize	Dabaga, Njombe, Uyole, Nkundi (Sumbawanga)	AFSF or Selian, Lambo, Gairo Ukiriguru	Msimba or Ilonga, KATRIN, Kibaha, Naliendele, SUA, Nachingwea Maramba or Mwele
Common dry beans	Dabaga, Njombe, Uyole, Nkundi (Sumbawanga)	AFSF or Selian, Lambo, Gairo, Mbimba	Msimba or Ilonga, KATRIN, SUA
Snap beans	Dabaga, Njombe, Uyole, Nkundi (Sumbawanga)	AFSF, Horti-Tengeru	
Soya beans	Dabaga, Njombe, Uyole, Nkundi (Sumbawanga)	AFSF or Selian, Horti- Tengeru, Laela (Sumbawanga), Maruku	Msimba or Ilonga, KATRIN, Naliendele or Nachingwea, SUA
Hybrid sorghum	Uyole, Mbozi, Dabaga, Nkundi (Sumbawanga)	AFSF or Selian, Miwaleni, Ukiriguru, Hombolo	Msimba or Ilonga, KATRIN, Kibaha, Naliendele, SUA
Open Pol. s or ghum		AFSF or Selian, Miwaleni, Ukiriguru, Hombolo	Msimba or Ilonga, KATRIN, Kibaha, Naliendele, SUA
Wheat or Barley	Dabaga, Njombe, Uyole, Basuto (Hanang) Nkundi(Sumbawanga)	AFSF or Selian, Karatu, West Kilimanjaro	
Rice (Lowland)		Ukiriguru, KATC (Moshi), Mbarali	Dakawa, KATRIN, Ruvu, SUA, Kyela, Kitere, Kinyope (Lindi) Mkwaya (Lindi)
Rice (Upland)		Matombo, Mahenge	Kyela,Kitaya
Hybrid sunflower	Dabaga, Njombe, Uyole, Nkundi(Sumbawanga)	AFSF or Selian, Miwaleni, Ukiriguru, Hombolo	Maramba or Mwele Naliendele or Nachingwea, SUA
Open pol. Sunflower	Dabaga, Njombe, Uyole, Nkundi(Sumbawanga)	AFSF or Selian, Miwaleni, Ukiriguru, Hombolo	Msimba or Ilonga, KATRIN, Naliendele or Nachingwea SUA, Maramba or Mwele
Irish potato	Dabaga, Njombe, Uyole, Kifyulilo	HORTI-Tengeru, Miwaleni, West Kilimanjaro	TABLEMON OF TAMOR
Groundnuts		Ukiriguru, Hombolo, Tumbi (Tabora), Gairo	Naliendele or Nachingwea, Ilonga or Msimba, Chambezi, Masasi, Chambezi
B:Voluntary certification of	crops		
Cassava*		Ukiriguru, Hombolo Tumbi (Tabora) HORTI- Tengeru	Kibaha, Mlingano, Chambezi, Naliendele or Nachingwea, Masasi, Mtopwa (Newala)
Sweet potato		Gairo, Hombolo, Miwaleni, Hort Tengeru, Ukiriguru, Tumbi (Tabora)	SUA Naliendele or Nachingwea
Carrots	Dabaga, Njombe, Uyole	HORTI-Tengeru, Miwaleni, West Kilimanjaro	
Green gram		AFSF or Selian, Miwaleni, Ukiriguru, Hombolo, Tumbi (Tabora)	Kibaha, Mlingano, Msimba or Ilonga , Maramba or Mwele Naliendele or Nachingwea, SUA, Msimba or Ilonga

Pigeon pea		AFSF or Selian, Miwaleni,	Msimba or Ilonga, KATRIN, SUA,	
(Long duration)		Ukiriguru, Isimani, Tumbi	Masasi	
		(Tabora)		
		Hombolo		
		Karatu		
Pigeon pea A		AFSF or Selian, Miwaleni,	Kibaha, Mlingano, Msimba or Ilonga,	
(Mid. & short duration)		Ukiriguru, Isimani, Tumbi	Naliendele or Nachingwea, SUA	
		(Tabora), Hombolo, Karatu		
Cowpea		AFSF or Selian, Miwaleni,	Msimba or Ilonga,	
		Ukiriguru, Hombolo,	Naliendele or Nachingwea, SUA,	
		Ismani,	Mlingano or Maramba, Masasi	
		Tumbi (Tabora)		
Sesame		AFSF or Selian, Miwaleni,	Kibaha, Mlingano, Msimba or Ilonga,	
		Ukiriguru, Hombolo,	Naliendele or Nachingwea, SUA, Kilwa	
Tomato	Uyole, Dabaga, Njombe	Seatondale (Iringa)	Dakawa or SUA, Kibaha, Mlingano,	
		HORTI-Tengeru, Ukiriguru,	Maramba or Mwele	
		Lushoto, Makutop or a		
Onion	Uyole, Dabaga, Njombe,	Seatondale (Iringa)	Dakawa or SUA, Kibaha, Mlingano,	
		HORTI-Tengeru, Ukiriguru,	Maramba or Mwele	
		Mbarali Makutop or a,		
		Karatu		

Key to the abbreviations on the table:

AFSF = Arusha Faundation Seeds farm

SUA = Sokoine University of Agriculture

KATC = Kilimanjaro agricultural Training Centre Horti - Tengeru = Horticultural Research Institute Tengeru

KATRIN = Kilombero Agricultural Training and Research Institute **EXPERIMENTAL DESIGNS AND DATA COLLECTION**

(a) Experimental design, plot size and number of replications for NPT

CROP	DESIGN	MINIMUM GROSS PLOT SIZE		
		ROW LENGTH (Meters)	NUMBER OF ROWS	MINIMUM REPLICATIONS
Maize	RCBD	5	4	3
Dry Beans	RCBD	5	4	3
Snap Beans	RCBD	5	4	3
S or ghum	RCBD	5	4	3
Wheat or Barley	RCBD	3	12	3
Rice	RCBD	5	20	3
Sunflower	RCBD	5	4	3
Irish Potato	RCBD	5	4	3
Carrots	RCBD	3	6	3
Cassava	RCBD	5	4	3
Pigeon Peas	RCBD	5	4	3
Cow peas	RCBD	5	4	3
Green gram	RCBD	5	4	3
Groundnut	RCBD	5	4	3
Sweet potato	RCBD	5	4	3
Sesame	RCBD	5	4	3
Tomato	RCBD	6	2	3
Onion	RCBD	3	6	3

(b) BASIC INFORMATION ON MANAGEMENT OF NPTs

- Planting Date Fertilizer rate 1.
- 3. Weeding regime or herbicide application
- 4.
- Plant spacing
 Pesticides application (if any)
 Weather (rainfall and temperature)

83

EIGHTH SCHEDULE

PROHIBITED, RESTRICTED AND NOXIOUS WEED SEEDS

(Made under Regulation 48)

The seed of the species of plants specified in this Schedule are hereby prescribed as weed seed for the purpose of establishing class standards under the Act.

Class 1: Objectionable Weed Seed

Objectionable weed seeds are weed seed not allowed in any seed at all, that is to say, a sample of seed may not contain any objectionable weed seed. However, if any objectionable weed seed is found in a sample, the tolerance shall be one seed per kilogram. If two or more seed are found in a kilogram the seed shall be placed under stop sale until it has been re-cleaned and retested. When one objectionable weed seed is found it will be considered within the tolerance none. The following are objectionable weed seed:-

1.	Witch weed	Striga spp
2.	Dodder	Cascuta spp
3.	Field bind wood	Convolvus arvensis L.
4.	Hemp	Marijuana spp.
	True Hemp (in Swahili Bhangi)	Cannabis Sativa
6.	Cocaine plant	Erythrosylum spp.
7.	Sudan grass	Sorghum sudanese
8.	Thorn apple	Datura spramondum L.
9.	Wild oats	Avena spp.
	Pastriated Navious Wood Cood	

Class 2: Restricted Noxious Weed Seed

The following are restricted noxious weed seed:-

1. Couch grass Digitaria scalarum (Schweinf.) Chiov. 2. Nutgrass, Watergrass.... Cyperus spp. 3. Perennial sowthistle..... Sonchus arvensis L. 4. Wild mustard..... Brassica campestris L 5. Mexican poppy Argemone mexicana L. 6. Darnel..... Lolium temulentum L. 7. Guinea-fowl grass..... Rottboelia exaltata L.f. 8. Love grass Setaria verticiltata (L.) Beauv. 9. Wild rice Oryza barthii A. Chev.

The presence of restricted noxious weed seed in any sample of seed shall be restricted. Where any restricted noxious weed seed are found in any sample of seed the maximum allowed shall not exceed four weed seed per kilogram, whether the four weed seed are of the same or a combination of two or more s of weed seed, the name and number of each must be stated on the label.

Class 3: Common Noxious Weed Seed.

Common Noxious Weed Seed are seed bulblets or tubers or pieces thereof specified as weed seed under the Seed, Regulations 2006 or recognized as weed seed by general usage. The presence of standard noxious weed seed in any sample of seed shall be restricted. Where any standard noxious weed Seed are found in any sample of seed the maximum allowed shall not exceed 1.5% by weight.

Common noxious weed seed include, but not restricted to, the following seed:-

1. Cleavers	Galium spurium L.
2. Dock	Ramex crispus L.
3 Chickweed	Stellaria media (L.) Vill.
4. Mexican marigold	Tagetes minuta L.
5. Chinese lantern	Nicandra physalodes (L.) Gaertn.
6. Oxalis	Oxalis latifolia H.B.K.
7. Blackjack	Bidens pilosa L.
8. Pigweed	Amaranthus spp
9. Goosefoot	Chenopodium spp.
10. Crabgrass	Digitaria velutina (Forsk.) Beauv.
11. Macdonaldi, Gallant soldier	Galinsoga paarviflora. Cav.

Dar Es Salaam, 2007

STEPHEN M. WASIRA (MP)

Minister for Agriculture Food Security and Cooperatives