



NATIONAL SEEDS CORPORATION LIMITED

DIVISIONAL PROCEDURES
(ISO 9001:2000)

QUALITY CONTROL

Approved by: Head of Division(s)
Effective Date: 15.10.2007

National Seeds Corporation Limited
Beej Bhavan, Pusa Complex, New-Delhi 110012

Telephone: 011-25842383, 25846292, 25846295, Fax: 011-25841337

Web-site: www.indiaseeds.com

INDEX

1. Inspection of Seed crops

- a. Format of Field Inspection Report for Crops other than Bajra, Maize, Sorghum**
- b. Format of Detasseling Inspection Report – Hybrid Maize**
- c. Format of Field Inspection Report Hybrid Sorghum/ Bajra**
- d. Format for Field map**
- e. Format for Summary of Field Inspection Report**
- f. Procedure for inspection of seed crops**
- g. Quality Plan for inspection of seed crops**

2. Testing of seed sample

- a. Format for forwarding Samples for Seed Analysis**
- b. Format of Seed Analysis Report**
- c. Format of Seed Analysis Card**
- d. Format of Master Register**
- e. Format of Despatch (Outside/ Internal)**
- f. Format of Guard seed samples**
- g. Format of Minimum Inventory level of critical items**
- h. Format of Temperature Record Sheet**
- i. Procedure for testing of seed samples**
- j. Quality Plan for testing of Seed Samples**

3. Condemnation and Disposal

- a. Format for condemnation Proposal**
- b. Format of Write off of seed**
- c. Procedures for Condemnation and disposal of sub standard seed and write off of seed loss**
- d. Quality Plan for Condemnation and disposal of sub standard seed and write off of seed loss**

4. Procedure for QC check of store and Plant

- a. Check Sheet for Inspection of Seed Storage**
- b. Check Sheet for Inspection of Seed Processing**
- c. Procedure for QC inspection of Seed Processing Plants & Stores**
- d. Quality Plan for QC inspection of Seed Processing Plants & Stores**

5. Procedure for handling QC complaints

- a. Format of complaint register (Issue No.: 03)**
- b. Format of complaint register (Issue No.: 02)**
- c. Complaint of low germination**
- d. Procedure for Handling QC complaint**
- e. Quality Plan for handling customer complaints**



Approved by:

Format of Field Inspection Report for Crops other than Bajra, Maize, Sorghum

Doc.: F/QC/01/01 Issue No. 02 Page 01 of 01 Page Rev. No. 00 Effective Date:

Grower's Code No..... Unit Office.....Subunit.....

FIELD INSPECTION REPORT FOR CROPS OTHER THAN MAIZE, SORGHUM, BAJRA,

Nature of Programme..... Season: Kharif/Rabi/Summer..... Field No..... Report No..... Crop..... Variety..... Date of sowing..... Date of inspection..... Class of seed..... Time: From.....To..... Expected date of harvest.....

- 1. Name of grower..... 2. Vill.....Taluq.....Distt.....State..... 3. Location of Farm..... 4. Source of seed..... 5. Tag No./Label/Purchase Receipt..... 6. Total area under production of this crop (hectares) 7. Area of field No. inspected (hectares)..... 8. Previous crop..... 9. Isolation distance (metres).....N.....S.....E.....W..... 10. Stage of growth of contaminant..... 11. Stage of seed crop at this inspection..... 12. Field counts:

Table with 5 columns: Count No., Of off types, Of inseparable other crops, Of objectionable seeds, Affected by seed borne diseases. Rows include 13. Percentage of: a) Off types, b) Inseparable other crop plants /heads, c) Objectionable weed plants, d) Plans/heads affected by seed borne diseases, 14. Name (s) of: a) Inseparable other crops plants, b) Objectionable weed plants, c) Seed borne diseases, and a Total row.

- 15. Name of non-seed borne disease(s) present..... 16. Crop condition..... 17. Does this crop conform to the standards for certification..... 18. Quality of seed production work..... 19. Is this the final report..... 20. Estimated yield (Kg/hectare)..... 21. Was the grower or his representative present at the time of inspection..... 22. Area rejected (hectare)..... 23. Remarks.....


Signature of producer/grower Or his representative..... Name & Address.....

Signature of Inspecting Official Name..... Designation.....

Guideline:

Take 1,000 plants per count for barley ,oats, wheat, paddy. Take 1,000 plants per count for berseem, jute, Lucerne, mesta, soybean Take 500 plants per count for medium spaced row crops, such as beans, cowpea, garden pea, gram, lead crops, mustard, rape seed, sesamum, sunhemp. 100 plants per count for widespread row crops such as bhindi, brinjal, bulb crops, capsicum, castor, chilli, cole crops, cucurbits, groundnut, potato, redgram, root crops, tomato,

Regional Office/ Area Office/Grower

 <p>Approved by:</p>	<p>Format of Detasseling Inspection Report – Hybrid Maize</p>	<p>Doc.: F/QC/01/02 Issue No. 02 Page: 01 of 01 Page Rev. No. 01 Effective Date:</p>
--	--	---

(.....Region/ Sub-Unit.....)

FIELD INSPECTION REPORT – MAIZE

Field No:.....	Grower's Code No.....
Date of Sowing.....	Season:.....
Expected Date of Harvest	Report No.....
Inspection Sequence:	Date of Inspection.....
	Time

1. Name of Grower.....
2. Vill.....Taluq..... Distt.....State.....
3. Location of Farm.....
4. Code/Hybrid Designation.....5. Class of Seed.....
6. Female Parent..... Male parent.....
7. Area under Production..... 8.Acreage of this field.....
9. Planting Ratio..... 10. Seed Source.....
11. Method of marking male rows..... 12. Are both ends marked.....
13. Isolation distance in meters.....
14. Stage of growth of contaminant..... 15. Stage of seed crop at this inspection

16. Field Counts:

COUNT	Inbred Line/Composite open-pollinated variety of Maize crops.	Female parent of Maize cross	Inbred line/composite/open pollinated variety & female parent of Maize	Male parent of Maize cross
	Receptive Silks	Shedding Tassels	Off types with shedding tassels	Off types with shedding tassels
Total				
%				

17. Side of field from which inspection started.....18.No.of Border Row.....
19. Crop condition.....
20. No. of times Detasseled.....
21. Frequency of Detasseling..... 22. Was it done at the time of Inspection.....
23. Quality of Seed Production.....
24. Does the crop conforms to the standards of certification.....
25. Estimated Seed yield (Kg/Hectare).....
26. Was the grower present at the time of inspection.....
27. Is this final report
28. Area rejected in hectares.....
29. Area Certified in hectares.....
30. Remarks.....

Signature.....
 Producer or his representative
 Address.....

Signature of Inspector.....
 Name of Officer.....
 Designation.....

Regional Office/ Area Office/Grower



**Format of Field Inspection
Report
Hybrid Sorghum/ Bajra**

Doc. No.: F/QC/01/03
Issue No. 02
Page: 01 of 02
Page Rev. No. 00
Effective Date:

Approved by:

FIELD INSPECTION REPORT - SORGHUM/BAJRA

Field No.:..... Grower,s Code No.
 Date of Sowing..... Report No.....
 Expected Date of Harvest..... Date.....
 Inspection Sequence..... Time of Inspection.....

1. Name of seed producer.....
2. Address - Vill.....Taluq.....Distt..... State.....
3. Location of Farm.....
4. Code/Hybrid Designation..... 5.Class of Seed.....
6. Female Parent..... 7. Male Parent.....
8. Total Acres under seed production of this hybrid/variety.....
9. Area of Field/ inspected..... 10. Planting Ratio.....
11. Previous Crop.....
12. Are both ends marked..... 13. Method of Marking male rows.....
14. Seed Source.....
15. Isolation distance.....**N**.....**S**.....**E**.....**W**.....
 (from other Sorghum and Johnson Grass in mtrs).
16. Stage of crop growth at this Inspection.....17.Stage of growth of contaminant.....
18. **Field Counts:** (Take 1,000 heads per count)

Count	No.of pollen shedding heads	No.of heads of off types shedding pollen	No.of heads affected by			No. of heads of off types shedding pollen	No.of heads affected by		
			Head Smut	Kernel Smut	Green Ear		Head Smut	Kernel Smut	Green Ear
			Ergot	Grain Smut			Ergot	Grain Smut	
Total %									

17. No.of Border rows:
18. Crop Condition:
19. No.of times pollen shedders/ off types were removed:
20. Frequency of removal of pollen shedders, off types etc.
21. Was it done at inspection time.
22. Quality of seed production work
23. Does this crop conform to the standards for certification
24. Estimated seed yield (Kgs/hect):
25. Was the Grower or his representative present at inspection time:
26. Is this the final report:
27. Area rejected in hectares..... 28.Area certified in hectares:
29. Remarks

Signature.....
 Producer or his representative.

Signature.....
 Name of Inspector.....

Regional Office/ Area Office/Grower



Approved by:

**Format of Field Inspection
Report
Hybrid Sorghum/ Bajra**

**Doc. No.: F/QC/01/03
Issue No. 02
Page: 01 of 02
Page Rev. No. 00
Effective Date:**



Approved by:

Format for Summary of Field Inspection Report

Doc. No.: F/QC/01/05
Issue No. 02
Page: 01 of 01
Page Rev. No.01
Effective Date:

Region..... Area Office.....

Field Inspection staff:.....

Area..... Distt..... Acreage.....

S.No.	Address of grower	Crop/ Variety	Date of sowing	Acreage	Inspection period Vs. Actual dates			Sign. Of official	Remarks & report ref.
					Pre- flowering	Flowering	Pre- harvesting		

Signature of Area Officer.

Copy to:

1. RM
2. HO.

 <p>Approved by:</p>	Procedure for inspection of seed crops	Doc. No.: P/QC/01 Issue No.: 01 Page: 01 of 03 Page Rev. No. 01 Effective Date:
---	---	--

- 1.0 **Purpose:** To ensure the production of high quality of seeds by timely conduct of field inspection and ensure the elimination of undesirable pollen, off-type plants etc.
2. **Scope :** It applies to all seed fields located under control of various area offices of NSC.
3. **Overall Responsibility:** Area Officer, RM, and Head of QC.
- 4 **Procedure:**

S.No	Activity Description	Responsibility	Ref. Doc./Record
1.	<p>Based on the Production Plan finalized at HQ, the schedule of Production is divided for each Region. At Regional level, these targets are allocated area wise based on the capacity of Production of Sub Unit.</p> <p>Area Office finalizes the contract with Growers for production of seeds and submits the copy of programme to HO, QC.</p> <p>Based on the above Production, AO, RO and HO prepares a plan for inspection.</p>	<p>Production Head</p> <p>RM & AM</p>	<p>Production Plan</p> <p>Areawise Inspection Plan.</p> <p>Contract with growers</p>
2.	<p>For each crop, inspection schedules are defined indicating the stages , No. of inspections, in Field Inspection Manual. Normally, three inspections are undertaken by the Certification Agency and NSC. Area Manager with SSCA (State Seed Certification Agency) and growers in consultation with Regional Office coordinate the inspection.</p> <p>SSCA is involved in case of Notified Varieties except Vegetable seeds.</p>	A.M.	Field Inspection Manual. MSCS
3.	<p>The inspection is conducted & report is filled up separately for self Pollinated crops and cross pollinated crops.</p> <p>The sampling is done as per field counts defined for each crop and No. of heads/plants to be taken in each count in zigzag manner.</p> <p>A minimum of five counts should be</p>	Inspecting Officer	<p>Field Inspection Report for self-pollinated crops.</p> <p>Field Inspection Report for</p>



Approved by:

Procedure for inspection of seed crops


Doc. No.: P/QC/01
Issue No.: 01
Page: 02 of 03
Page Rev. No. 01
Effective Date:

	<p>made for the first five acres and one additional count for each additional five acres or fraction thereof. For Maize 100 plants for 1 count and for Bajra 1,000 plants for 1 count. If the percentage of shedding tassels in maize or shedders in Sorghum and Bajra is above the limits fixed in the standard or very close to limit, the number of counts made should be doubled. The additional counts should be recorded on the back of Inspection report. Field map shall be prepared and submitted alongwith report. Field map shall; indicate the location of counts, no. of pollen shedding plants or number of shedder, and location of affected number of seed blocks. Inspecting official and grower, in quadruplicate, sign the field inspection report. One copy each of report is given to RO, IO, and Growers. Report indicates percentage of off-type, inseparable other crop, objectionable weed plant and plant having seed borne diseases. NSC conducts internal inspection over and above certification agency. Internal inspection should be:</p> <ul style="list-style-type: none">❖ Inspection by Area Office (100% for /foundation/certified).<ol style="list-style-type: none">1. for crops offered for certification in C/S class as per the QC circular no. 235/1.10.91.2. for crops offered for certification in F/S class as per MSCS3. for crops not offered for certification as per MSCS.		<p>cross-pollinated crops.</p> <p>Circular No. 235 dated 1.10.91 on minimum field inspections at critical stage</p>
--	---	--	---


 <p>Approved by:</p>	Procedure for inspection of seed crops	Doc. No.: P/QC/01 Issue No.: 01 Page: 03 of 03 Page Rev. No. 01 Effective Date:
---	---	--

	<ul style="list-style-type: none"> ❖ Inspection by RO (5% for foundation and 2% for certified seed. ❖ Inspection by HO (Surveillance Inspection) 		
4.	Consolidation and Review of field inspection report at Regional Office. RM reviews the inspection Report for proper conduct of Inspection as per QC norms and gives necessary instructions as and when required.	RM	Field Inspection Report. Cir.No.267 dated 19.12.96
5.	Processing & Grading: After certification of seed (wherever required) the seed is despatched to the concerned processing plant of the Subunit. Grading of raw seed undertaken by Technical officers of Subunit in Processing Plant. After processing of seed stock IDP note is prepared and signed by Plant Incharge and submitted to RO for onward payment to producer/grower.	Technical Officers.	IDP

- i. Format of field inspection report other than Bajra, Maize & Sorghum (F/QC/01/01).
- ii. Format of field inspection report of Maize (F/QC/01/02).
- iii. Format of field inspection report of Sorghum / Bajara (F/QC/01/03)
- iv. Format of Field Map (F/QC/01/04)
- v. Format for Summary of Field Inspection Report (F/QC/01/05)

 <p>Approved by:</p>	<p>Quality Plan for inspection of seed crops</p>	<p>Doc. QP/QC/01 Issue No.: 02 Page: Page 1 of 2 Page Rev. No. 00 Effective Date:</p>
---	---	--

S.No.	Activity	Control Parameters	Control exercised and responsibility	Responsibility of Review/ Monitoring	Freq. of Monitoring records, if any.	Remarks
1.	Plan for Field Inspection.	i.Preparation of Field Inspection Plan. ii. Contents of inspection plan.	Field Inspection plan shall be prepared based on production plan. Inspection plan shall be made by the Area Officer in the specified format.	RM.	Compliance of Inspection plan shall be monitored on weekly basis during the procurement season	
2.	Inspection of crop.	i. Time for field inspection. ii. Sampling and reporting. iii. Acceptance criteria. iv. Time for submission of Inspection	For each crop inspection shall be conducted as per the stages & no. of inspections, parameters of inspection. As per testing format for Maize, Bajra, Sorghum & other crops. As per Minimum Seed Certification Standard given in Seed Certification Manual. Within 72 hours of conduct of Inspection if the field have passed within 24 hours if the fields are liable to	AM AM RO AM	Day to day basis	

 <p>Approved by:</p>	<p>Quality Plan for inspection of seed crops</p>	<p>Doc. QP/QC/01 Issue No.: 02 Page: Page 2 of 2 Page Rev. No. 00 Effective Date:</p>
---	---	--

		Report to RO.	be rejected.			
3.	Consolidation & review.	Consolidation .	Consolidation and review shall be done on first week of every month for previous month	RM	Monthly.	
4.	Grading & Prep. Of IDP.	Timeliness.	IDP report shall be prepared within 3-4 working days of processing and grading & packing in specified format.	AM	Monthly	

 <p>Approved By:</p>	<p>Format for forwarding Samples for Seed Analysis</p>	<p>Doc No: F/ Prodn/03/09 Issue No:02 Page No:01 of 01 Page Rev.No:00 Effective Date:</p>
--	---	--

Dear Sir,

The samples as detailed below are being sent by Registered Post Parcel/Regn.No._____ Dated _____. Kindly conduct only those tests marked_____ against each sample:

S.N.	Name & address of the Grower	Crop	Variety	Foundation/ Certified	Lot No.	Processed or unprocessed	* Tests Required			P.R. Pathological	Sample for		
							P	M	G		1 st Test	Re-test	Revalidation

*It is certified that above samples have been drawn as per instructions received from the Head Office.

P-Purity
M-Moisture
G-Germination
P.R.Pathological Result

Signature
Name & Designation
Address

TO ACCOMPANY SAMPLES

 <p>Approved by:</p>	Format of Seed Analysis Report	Doc. F/QC/02/04 Issue No. 02 Page No. 01 of 03 Page Rev No.: 00 Effective Date:
--	---------------------------------------	--

No. QCL Report Encl/.....

Dated:.....

Regional/Farm/Area Manager
National Seeds Corporation Limited
.....
.....

Sir,

The following Seeds Analysis Reports are attached herewith for your perusal and necessary action.

S.No.	Analysis Report Number (s)	Total Report
GRAND TOTAL		

NOTE: Please always quote in your Correspondence with QCL the Sample Coupon No., Name of Crop, Lot No., Class/Fresh or Revalidation to ensure prompt reply from this end.

FOR JOINT MANAGER (QCL)

	Format of Seed Analysis Report	Doc. F/QC/02/04
		Issue No. 02
Approved by:		Page No. 02 of 03
		Page Rev No.: 00
		Effective Date:

QUALITY CONTROL LABORATORY

North	South	East	West	Central
New Delhi	Secunderabad	Kolkata	Pune	Bhopal

SEED ANALYSIS REPORT

National Seeds Corporation Ltd.

Date:.....

Kind	Variety
Class	Lot No.
Sample Coupon No.	Qty. in Lot
Lab Test No.	Date of Test

ANALYSIS RESULT

PHYSICAL PURITY %AGE	GERMINATION %AGE	MOISTURE.....%
1. Pure seeds.....	1. Normal Seedlings.....	SEED HEALTH
2. Other crop seeds.....	2. Abnormal seedlings.....	K.B.....
3. Weed seeds.....	3. Hard seeds.....	P.B.....
4. Inert matter	4. Fresh Ungerminated Seeds...	Ergot
	5. Dead seeds.....	

DETERMINATION, IF ANY, BY NUMBER

Other crop seeds..... **Obj. weed seeds**..... **Weed seeds**.....

REMARKS

RECOMMENDATIONS

Subject to meeting other standards


Insect damaged.....%by weight.	Black seeds observed...No.per100gms
Lusture affected/dicoloured	Printed coupon not used/incomplete illegible
Needs further cleaning	Alive insects present
Sample insufficient fortest	Needs drying
Round seeds observed....% by wt.	Sample not properly packed for moisture.
Other Dist. Var.(ODV) by No	Sprouting observed

The information contained in this report is based on the sample submitted for analysis. Use of this information implies a guarantee that the sample is representative of the lot, hence the user is responsible. If a different result is found and confirmed in a subsequent test, the issuing station cannot be liable for compensation.

Seed storage condition, seed moisture content, insect attack and various environmental factors may affect seed quality after a satisfactory laboratory analysis. Upon the seedsman rests the responsibility of controlling the factors. Under no circumstances should the results reported here be used beyond the test validity period prescribed by seed Law Enforcement Agency. A fresh analysis should be made at the time if it has not been made prior to the date. The condition of the seeds, fastening on the packet and outer covering on receipt are intact.

Prepared by

Officer-incharge
Quality Control Laboratory.

 <p>Approved by:</p>	<p>Format of Seed Analysis Card.</p>	<p>Doc. F/QC/02/02 Issue No. 02 Page 02 of 02 Page Rev. No. 00 Effective Date:</p>
--	---	---

6. RETEST (GERMINATION)

Date.....Temp. oC.....Substatum.....Treatment.....
 Seeds X Rep.....Sign.....

Category	I	II	III	IV	Total	Average %	Space for Internal Use
Normal Seedlings							
First Count							
Final Count							
Total							
Abnormal Seedlings							
Hard Seeds							Date of test..... Analysed by..... SAR No..... Date.....
Fresh ungerminated seeds							
Dead Seeds							

Remarks

- | | | |
|-------------------------------|--|-------------------|
| * Lusture affected/dicoloured | * Printed coupon not used/Incomplete/illegible | * Recommendations |
| * Alive Insects present | * Sample insufficient fortest | * Drying |
| * Sprouting observed. | * Sample not properly packed for moisture. | * Recleaning |



Approved by:

**Format of Minimum Inventory
level of critical items**

**Doc. F/QC/02/06
Issue No. 02
Page No. 01 of 01
Page Rev. No. 00
Effective Date:**

Item	Specification (key parametres)	(key Minimum inventory level/Recorder qty. level.	Remarks

**Signature of Lab Incharge
Date.....**



Procedure for testing of seed samples

Doc No: P/QC/02
Issue No. 02
Page: 01 of 04
Page Rev.No.: 00
Effective Date:

Approved by:

- Purpose:** To establish and operate a system for testing of seed samples.
- Scope :** Applicable to all seed samples received for testing from ROs/AOs/QC.
- Overall Responsibility:** Lab.Incharge
- Procedure:**

S.No	Activity Description	Responsibility	Ref.Doc/Record
1	Receipt of samples from RO/Sub Unit for testing. The samples received is checked for <ul style="list-style-type: none">The type crop, variety, procurement/revalidation and its weight required for test as per MSCS.Filled sample coupon shall be received along with the test samples, which should indicate the type of test, required to be conducted.	Lab Incharge	Sample Coupon (F/Prod/03/08) Sample Forwarding Letter (F/Prod/03/09)
2	Registration of sample received: The sample so received is allotted a unique Lab Test No.e.g. For Wheat- W-sample No. For Oil Seed- O-Sample No. For Vegetable seed-V-Sample No. For Pulses seed- L-Sample No. For Paddy seed- P-Sample No. For Fodder seed- F-Sample No. For Bajra seed- B-Sample No. For Sorghum seed- S-Sample No. For seed samples received from QC- QC-Sample No. For Gram- G-Sample No. Sample No.is allotted as per the above Scheme and entered into the concerned Master Register filling all the details alongwith Seed Analysis Card indicating the Test requirement indicated in sample Coupon.	Lab Attendant	Master Register of testing (F/QC/02/01) Seed Analysis Card (F/QC/02/02)



Procedure for testing of seed samples

Doc No: P/QC/02
Issue No. 02
Page: 02 of 04
Page Rev.No.: 00
Effective Date:

Approved by:

3	<p>Forwarding of sample alongwith Seed Analysis Card & Coupon to Putting Section.</p> <p>The putting is done as per the MSCS's guidelines issued by Ministry of Agriculture:</p> <ul style="list-style-type: none">• Various methods of tests such as:<ol style="list-style-type: none">1. T.P. (Top of Paper) For small seed (Tomato, Brinjal, etc.02. B.P.(Between of the Paper)-For big seed (Wheat, Paddy, etc.)3. Sand method-For seeds like Groundnut, Castor, Bottle Gourd, etc.• No. of samples to be taken (3 or 4 replicates as per MSCS Guidelines)• Test conditions/ duration of Putting are maintained as per MSCS guidelines. <p>In case, the germination of Putting is not observed after maintaining the above test conditions, then pre-drying/hot water treatment/Gibberellic acid/Pre-chilling treatment is given to samples to break the dormancy, as per guidelines given in MSCS.</p> <p>Note: For Paddy, Dal, etc. the pre-treatment is required to be done. In case fungus is observed during counting of germination, then Thirum treatment is given to improve the germination.</p> <p>The test results are entered into the Seed Analysis Card.</p>	Lab. Attendant & Lab Assistant	MSCS Guidelines/ISTA
4	<p>Forwarding sample along with Seed Analysis Card & Coupon to Purity Section to check the Physical Purity of sample by visual inspection.</p> <p>The standard size seed sample (Qty. required) for testing is indicated in MSCS. After purity test, the sample is clarified for:</p> <ol style="list-style-type: none">1. Purity.	Technical Assistant/ Officer	Seed Analysis Card. (F/QC/02/02) MSCS/ISTA




Procedure for testing of seed samples

Doc No: P/QC/02
Issue No. 02
Page: 03 of 04
Page Rev.No.: 00
Effective Date:

Approved by:

	<ol style="list-style-type: none"> 2. Inert matter. 3. Other crop seed. 4. Weed Seed. 5. Objectionable weed seed. 6. Insect-damage. 7. Lusture. 8. ODV (Other Distinguishable varieties) 9. Under size seed. 10. Shelling Seed <p>The test results are entered into the Seed Analysis Card.</p>		
5	<p>Forwarding samples alongwith Seed Analysis Card & Coupon to moisture Section for Moisture content of samples. The test method, Test condition and requirement are as per MSCS. Moisture content is checked by Moisture Content Meter/Hot air oven Method and moisture content is recorded in Seed Analysis Card</p>	Technical Assistant/ Officer	MSCS/ISTA
6	<p>Forwarding of samples alongwith Seed Analysis Card Coupon to check Seed Health by Seed Health Test.</p> <ul style="list-style-type: none"> • In case of Wheat & Paddy, Karnal Bunt testing and Paddy Bunt test is done. Five thousand seed of wheat/paddy are soaked in 2% NaOH solution for 24 hours at 25 C. The above seed are checked for KB/PB by counting No.of bunt seed which float in NaOH solution & % age bunt is calculated. <p>In case of Bajra & Sorghum, Ergot is checked by Microscope Inspection for 5,000 seeds and calculate percentage. The test results are posted in Seed Analysis Card.</p>	Technical Assistant/ Officer	MSCS/ISTA
7	<p>Evaluation of Germination counting After germination seeds are classified as:</p> <ol style="list-style-type: none"> 1. Normal seeding. 	Technical Officer	Seed Analysis Card (F/QC/02/02)

	Procedure for testing of seed samples	Doc No: P/QC/02
		Issue No. 02 Page: 04 of 04 Page Rev.No.: 00 Effective Date:
Approved by:		

	2. Abnormal seeding. 3. Hard seed. 4. Dead Seed. Posting of average germination results of all replicates in Seed Analysis Card.		
8	Posting of all the test results is done in the concerned Master Register.	Technical Assistant	Master Register of Testing (F/QC/02/01)
9	Seed Analysis Report is prepared which is approved by Lab Incharge. The report is sent to the concerned Sub Unit/Regional Office after entering into Report Despatch Register.	Technical Assistant	Report Despatch Register (F/QC/02/03) Seed Analysis Report (F/QC/02/04)
10	Storage of Guard samples: The sample left out after testing is stored for fresh procurement for nine months and revalidation samples for six months. The guard samples are identified by Sample Coupon and Lab. Test No. Details of Guard samples are entered into Guard Seed Sample Register.	Lab Attendant	Guard Seed Sample Register (F/QC/02/05)
11	Storage of Seed Analysis Card: Seed Analysis cards are stored in Record Room for 3 years and current year Seed Analysis Cards are stored in Lab.alongwith the concerned register.	Lab Attendant.	Seed Analysis Card. (F/QC/02/02)

Ref. Docs

1. MSCS(Minimum Seed Certification Standard)
2. Format of Sample Coupon (F/Prod/03/08)
3. Format of Master Register (F/QC/02/01)
4. Format of Seed Analysis Card (F/QC/02/02)
5. Format of Report Despatch Register (F/QC/02/03)
6. Format of Seed Analysis Report (F/QC/02/04)
7. Guard sample Seed Register (F/QC/02/05)
8. Minimum Inventory level of critical items (F/QC/02/06)
9. Temperature Record Format (F/QC/02/07)



Quality Plan for testing of Seed Samples

Doc.: QP/QC/02
Issue No. 01
Page: 01 of 03
Page Rev. No. 00
Effective Date:

Approved by:

S.No.	Activity	Control Parameters	Control exercised & responsibility	Responsibility of Review/ Monitoring	Freq. of monitoring records, if any.	Remarks
1.	Receipt of sample	i. Completeness of details in coupon. ii. Coupon signed by. iii. Sample Weight.	The sample shall be received alongwith the complete details of sample and testing required, duly filled in the coupon.	Lab Incharge Technical officer.	Weekly by Lab. Incharge	Manual of Seed Testing.
2.	Allocation of Unique Lab Test No.	i. Correctness of Unique No. ii. Filling of Seed Analysis Card. iii. Stocking of critical items	Unique No. shall be correctly allotted as per the scheme. The testing requirement indicated in Coupon shall be the same as that of filled in Seed Analysis Report. Minimum inventory/ recorder level.	Lab Incharge. Minimum inventory	-do-	Continuous running no. for a year. For carry over sample, coding will include e.g. WR for Wheat. As per format (F/QC/02/07)



Quality Plan for testing of Seed Samples

Doc.: QP/QC/02
 Issue No. 01
 Page: 02 of 03
 Page Rev. No. 00
 Effective Date:

Approved by:

3-7.	i. Testing of seed.	i. Method of test. ii. Parameters /requirements of seed. iii. Test conditions. iv. Calibration	For method of test, Test conditions & the requirements of various types of seeds, MSCS recommendations shall be referred to. Instruments used in the testing shall be calibrated. Following instruments to have valid calibration: ❖ Thermometers. ❖ Weighing balance	Lab Attendant/ Sr. Technical Assistant who are responsible for conducting their respective test.	-Do-	
8.	Posting of test results.	Time for posting of test results in Test Result Register.	After testing the entire test results shall be posted in the Test Result Register from Seed Analysis Card working within 2-3 days after completing of testing.	Sr. Technical Assistant/ Assistant.	Weekly by Lab. Incharge.	
10	Storage of guard sample	i. Period of storage of guard sample	Guard sample shall have: ❖ Identification by Lab. No. ❖ Rodent/ moisture proof in seed	Lab In-charge	Once three months in	Guard Sample Register. F/QC/02/04




Quality Plan for testing of Seed Samples

Doc.: QP/QC/02
Issue No. 01
Page: 03 of 03
Page Rev. No. 00
Effective Date:

Approved by:

			<p>storage.</p> <ul style="list-style-type: none">❖ Galvanized MS containers for storage. <p>Period of storage is 9 months for fresh procurement and 6 months for revalidation samples.</p> <p>Details shall be recorded in Guard Seed Sample Register</p>			
--	--	--	--	--	--	--

	Format for condemnation Proposal	Doc. No.: F/QC/03/01
		Issue No. 02 Page: 1 of 2 Page Rev. No. 00 Effective Date:
Approved by:		

PROPOSAL FOR CONDEMNATION OF SEEDS

Regional Office----- Crop-----
 Subunit ----- Proposal No.-----
 Subunit Sl. No. and code Year -----

S.No	Variety	Class	Lot No.	Seed Produced at		Particulars of Receipt			
				Sub unit	Year	Source of supply	MT/GR/IDP No. Date	Date of Receipt	Lotwise Qty.
1	2	3	4	5	6	7	8	9	10

PARTICULARS OF ISSUES				
Qty.of lot sold	Qty.of variety sold	Qty.of variety transferred	Qty.of lot earlier proposed for condemnation	Germination at the time of receipt
11	12	13	14	15

GERMINATION DETAILS AT PRESENT					
Ist Test		IInd Test		IIIrd Test	
SAR No.& Date	Germination %age	SAR No. & Date	Germination %age	SAR No. & Date	Germination %age
16	17	18	19	20	21

Qty.to be condemned	Rate/ Kg.	Value of seed to be condemned (Rs.)	Disposal Sanctioned Details					
			Disposal given by RO		Disposal sanctioned by HO		Disposal required from HO	
			Qty.(Kg)	Value(Rs.)	Qty.(Kg)	Value(Rs.)	Qty.(Kg.)	Value(Rs.)
22	23	24	25	26	27	28	29	30

Reasons for Condemnation	Remarks
31	32

Sig. of I/C Store (Sub unit)
(Date.....)

Signature of Area Manager
(Date.....)

Entered at S.No.....Page No..... in the ROs condemnation proposal (PTO for additional information & Certificate).

I/C QC in RO

Signs .of RM

Recommendations R.O. Committee

- The value of proposal is within 1% of the total turn-over of previous year
- Disposal proposal is recommended for approval


I/C QC in RO
(Date.....)

I/C Prodn in RO
(Date.....)

I/C Mktg in RO
(Date.....)

I/C Accts in RO
(Date.....)

Signs .of RM
(Date.....)

 <p>Approved by:</p>	Format for condemnation Proposal	Doc. No.: F/QC/03/01
		Issue No. 02 Page: 2 of 2 Page Rev. No. 00 Effective Date:

Region:

S.No.	Crop/Variety	Class	Sub-unit	Received from	Qty. received
1.	2.	3.	4.	5.	6.

Qty. Condemnation	%age	Value in Rs.	Year of production	Source of supply/procurement	Reasons for condemnation
7.	8.	9.	10.	11.	12.

Total.....

Recommendation of Condemnation Committee at (Head Office)

Head(Mktg)

Head(Finance)

Head(RD&QC)

Head(Prodn)

Certificate:

- 1) The qty. included in this proposal have not been proposed earlier.
- 2) The stock which remained carried over was revalidated properly and in time.
- 3) All efforts were made to dispose of the stocks when they were recording standard germination.
- 4) Disposal after approval will be as per HO's direction on the subject

(Store Keeper)

(Are a Manager)

Additional Information:

- 1) Whether the seed was received in time?
- 2) Whether seed was received as per the indent?
- 3) Particulars of movement instructions sought from RO/HO for surplus stock.
- 4) Action taken to prevent deterioration of stock in past 6 months, date of fumigation and doing spraying & chemical used.
- 5) Can any official be held responsible for the lapses?
- 6) Any other information justify the condemnation.

(Area Manager)

(Regional Manager)

 Approved by:	Format of Write off of seed	Doc. No.:F/QC/03/02 Issue No. 02 Page: 01 of 01 Page Rev. No. 01 Effective Date:
--	------------------------------------	---

Year:.....

Name of the Sub Unit.....

Proposal No.....

Date.....

S. No.	Crop/Variety	Lot No.	FOR THE SEED LOSS RESULTING OUT OF REVALIDATION RECLEANNING												
			Qty. of the lot recd. Kg.	Recd from sub unit	Date of Receipt	IDP/GR/MT/No. and date of receipt	Date of Revalidation Reclea-ning	Duration of handling	Qty. before revalidation	Qty. after Revalidation Reclea-ning kg.	Qty. of undersized seed after recleaning kg.	Total loss kg. (Col. 9- (10+11)	% of loss	Rate/kg.	Value
1.	2.	3.	4.	5.	6.	7.	8.	8-A.	9.	10.	11.	12.	13.	14.	15.

No. & date of proposal for condemnation for undersized seed in col. No. 11.	FOR THE SEED LOSS RESULTING OUT OF DISPOSAL OF CONDEMNED SEEDS													
	PARTICULARS OF DISPOSAL								Details of Loss					
	Qty. before Disposal (kg.)	H.O Sanction Order & date	Date of disposal	Qty. disposed (kg.)	Bill No. & date	Rate (Rs./Kg.)	Value (Rs.)	Total loss kg. (col. 17-20)	% of loss	Rate kg.	Value	Ledger folio no. / date (RO)	Remarks Reason/ loss during disposal	
16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.	27.	28	29.	

Certified that the items/ quality included in the proposal have Not been proposed earlier

Recommended for write off at RO

(I/C-Stores)

Area Manager

I/C-QC (R.O.)

Regional Manager

Recommendations of write off committee at HO,

Head (QC)

Head(Prod)

Head(Marketing)

Head(Finance)




Approved by:

Procedures for Condemnation and disposal of sub standard seed and write off of seed loss.

**Doc. No.: P/QC/03
Issue No. 02
Page No. 01 of 02
Page Rev. No. 00
Effective Date:**

1. **Purpose:** i. To ensure timely disposal of condemned seed which are of sub-standard quality
ii. Write off to take permission for clearing variations in physically available stock .
2. **Scope:** i. Seeds of all varieties found unfit for sale shall be condemned.
ii. Mismatch of stocks due to losses during condemnation and disposal.
3. **Overall responsibility:** AM - At Area Office.
RM - At Regional Office.
Head of QC - At HQ.

S.No.	Activity Description	Responsibilities	Ref. Doc./ Record
1.	Receipt of condemnation/write off proposal from RO: ❖ Proposal shall be in the specified format indicating the reasons of condemnation/write off. ❖ Qty. to be condemned/write off. ❖ Third test results declaring the condemnation. The proposal shall be duly signed by Subunit official and approved by ROCC and sent to H.O.	Head-QC	Proforma for condemnation (F/QC/03/01)
2.	Consolidation of condemnation/write off proposal: Proposals from various ROs are consolidated and statement of condemnation/write off is prepared regionwise and by QC Division. Clarification wherever needed is taken	Head-QC	Statement of seed condemnation regionwise.
3.	Conducting of meeting for condemnation/write off of seed: A meeting is conducted with condemnation Committee and decision for Condemnation/write off is taken.	Condemnation Committee	Condemnation File. Office Order No.5 F.No.1(13)/90-Pers/NSC dated 03.01.97.

 <p>Approved by:</p>	Procedures for Condemnation and disposal of sub standard seed and write off of seed loss.	Doc. No.: P/QC/03 Issue No. 02 Page No. 02 of 02 Page Rev. No. 00 Effective Date:
---	--	--

4.	Based on the Recommendations of Condemnation/Write Off Committee & approval of competent authority order is sent to the concerned RO for disposal/write off of seed.	Head-QC	Condemnation File
5.	The concerned RO/AO, prepares and submits the schedule of disposal, which is to be done in the presence of the Committee constituted by RO within one month of approval of disposal proposal from HQ. Report of disposal shall be submitted to HQ. Records at RO/AO level are corrected accordingly.	RM/AO	Condemnation File

Ref Doc.:

1. Format of condemnation proposal (F/QC/03/01)
2. Format of write off proposal (F/QC/03/02).



Approved by:

Quality Plan for Condemnation and disposal of sub standard seed and write off of seed loss

Doc. No.: QP/QC/03
Issue No. 02
Page: 01 of 02
Page Rev. No. 00
Effective Date:

S.No	Activity	Control parameters	Control exercised & Responsibility	Responsibility of Review/ monitoring	Freq. of Monitoring records, if any.	Remarks
1.	Receipt of proposal	i. Format; ii. Approval of RO iii. Time for submission of proposal to RO	The proposal shall be submitted by AO to RO in the prescribed proforma. The proposal shall be approved by RO and submitted to HQ with recommendation of ROCC. AO shall submit the proposal to RO every quarter.	Head, QC. RM AM	As and when proposal is received.	Quarterly.
2.	Consolidation of proposal	i. Time for submission of proposal to HO.	RM shall consolidate and approve the condemnation proposals alongwith comments (if any), by quarter end and submit to HO for approval.	RM	-do-	



Approved by:

Quality Plan for Condemnation and disposal of sub standard seed and write off of seed loss

Doc. No.: QP/QC/03
Issue No. 02
Page: 02 of 02
Page Rev. No. 00
Effective Date:

		ii. Format;	The proposal from RO for condemnation shall be consolidated in the prescribed format.	Head-QC		
		ii. Time for preparation of condemnation proposal.	Proposal for condemnation shall be ready in the last week of the month following the quarter.	Head-QC		
4.	Condemnation of seed after approval.	i) Time of approval of condemnation proposal.	Approval of HO shall be communicated to all RMs within the month following the quarter.	RO/Head-QC	The approved condemnation proposal shall be reviewed quarterly to monitor the condemnation.	
		ii) Timely disposal.	After approval of condemnation of seed from HQ/RO, RO shall undertake disposal within one month of approval and shall submit the report to HQ.			



Approved by:

**Check Sheet for Inspection
of Seed Storage**

**Doc. No.: F-QC-04-01
Issue No. 02
Page:01 of 03
Page Rev. No.00
Effective Date:**

**Regional Unit.....
Sub Unit:.....**

**QUALITY CONTROL REPORT OF SUPERVISORY OFFICER FOR SEED
STORAGE_____**

Quarter ending on.....

1. Name/Designation of Inspecting
Official(s):.....
2. Location of Seed Storage:
3. Date of Inspections:
4. Observations/recommendations:

A. Seed Store Building, Construction, etc.

- i. Comments on type and condition of floor:
- ii. Nature of wall:
- iii. Nature of ceiling/roof:
- iv. Water seepage/rain water leakage:
- v. Rat proofness of the godown:
- vi. Safety arrangements:
- vii. Facilities for aeration, ventilation, etc.
- viii. Facilities for air tightness, etc. for fumigation:

B. Stacking:

- i. Whether standardized wooden pallets are used
For stacking:
- ii. Size of stacks (feet):
Length_____Breadth_____Height:_____.
- iii. Size of packing used in stacking:
- iv. Distance between the top of stack and ceiling:
- v. Whether stack card is used for each lot:
 - i. Whether stack card entries are up-to-date:
 - ii. Whether adequate alley space is provided
between stacks:
 - iii. Distance between wall and stack (feet):
- iv. Whether proper ventilation is provided:
- v. Approximate height of location of ventilator
From ground level (feet):
- vi. Whether lot and variety identity are
Maintained in stacks:



Approved by:

**Check Sheet for Inspection
of Seed Storage**

Doc. No.: F-QC-04-01
Issue No. 02
Page:02of 03
Page Rev. No.00
Effective Date:

C. Sanitation and insect control:

- i. Chemical used for fumigation/spraying
- ii. Dosage of the Chemical used:

- iii. Whether uniform dosage has been used for the entire quantity:
- iv. Interval between fumigation/spraying/ (days):
- v. General range of moisture of seed at the time of fumigation:

CROP	MOISTURE	PERCENTAGE
------	----------	------------

- vi. Prevalent environmental condition at the Time of fumigation:
- vii. Length of exposure of seed to fumigant (hours):
- viii. Kind of packing material used for bagging seed:

D. Revalidation (Minimum 5 seed lots on random basis):

Crop	Variety	Lot No.	Date of test	Due date for revalidation	Actual date of revalidation	Remarks
------	---------	---------	--------------	---------------------------	-----------------------------	---------

E. Quality of seed (Minimum 5 seed lots on random basis):

Crop	Variety	Lot No.	Moisture %age	Remarks on the physical appearance of seed	Remarks on insect infestation, disease infection, etc.
------	---------	---------	---------------	--	--

F. Movement of Seed:

- i. Whether seed is moved after due revalidation of testing:
- ii. Whether seed is physically inspected at the time of despatch and physical inspection certificate prepared lotwise:
- iii. Whether seed is physically examined at the time of receipt and report prepared lotwise:
- iv. Any special observation on seed that has been received from elsewhere:



Check Sheet for Inspection of Seed Storage

Doc. No.: F-QC-04-01
Issue No. 02
Page:03of 03
Page Rev. No.00
Effective Date:

Approved by:

G. Condemnation:

- i. Whether seed meant for condemnation has been segregated:
- ii. Any condemnation proposal pending with HO: If so, details LR NO.....Date.....:
- iii. Details of stock for which approval for condemnation has been issued by HO but stock is still not disposed off:

Crop	Variety	Lot No.	Qty. (Q.)	Reasons stated for not disposing so far.
------	---------	---------	-----------	--

H. General cleanliness of the Store:

- i. Whether seed bags are clean, intact with seal tags, labels, etc.:
- ii. Remarks on maintenance of:
 - a. Germination Register:
 - b. Fumigation Register:
- iii. Condition of file samples:
- iv. Approximate age of the oldest seed in the store for each variety and its quality:

Crop	Variety	Lot Number	App. Age (months)	Germination %age	Date of test
------	---------	------------	-------------------	------------------	--------------

I. Storage of unprocessed seed (Minimum 5 seed lots on random basis):

- i. Whether unprocessed seed is being stored Properly:
- ii. Condition of unprocessed seed

Crop	Variety	Lot Number	Remarks
------	---------	------------	---------

Signature of the Incharge Store
Name:
Designation:
Sub-unit:

Signature of Inspection Official.
Name:
Designation:



Check Sheet for Inspection of Seed Processing

Doc. No.: F/QC/04/02
Issue No. 02
Page: 01 of 04
Page Rev. No. 00
Effective Date:

Approved by:

Regional Unit.....
Sub Unit:.....

QUALITY CONTROL REPORT OF SUPERVISORY OFFICER FOR INSPECTION OF SEED PROCESSING OPERATION

Quarter ending on.....

- 1. Name/Designation of Inspection Officials
2. Location of Seed Processing Plant:
3. Date of Inspection:
4. Observations/recommendations:

Unprocessed seed:

Table with 8 columns: Crop, Variety, Lot No. (if any), Moisture %age, Rain damage, Insect damage, Visible diseases, Observations on infection. Includes numbered rows 1-8.

Table with 3 columns: Physical appearance/discolouration/lusture defect, Physical admixture, Nature of Admixture. Includes numbered rows 9-11.

- B. Maize Sorting (if applicable)
i) Remarks on removal of:
a) diseased cobs:
b) Kernels exhibiting xenia:
c) Lusture affected cobs:
ii) Basis adopted in accepting true to type codes (mark whichever is being followed):
a) Seed colour:
b) Chaff colour:
c) Texture:
d) Specify if any other basis:

C. Drying

ii. Before drying:

Table with 5 columns: Crop, Variety, Lot No., Moisture %age before drying, Remarks.

	Check Sheet for Inspection of Seed Processing	Doc. No.: F/QC/04/02
		Issue No. 02 Page: 02 of 04 Page Rev. No. 00 Effective Date:
Approved by:		

ii. **Drying bin:**

Crop	Variety	Lot No.	Drying temp.	Moisture %age at the time of insp.	No. of effective hours for drying upto inspection time

iii. **Examination of dried seeds:**

Crop	Variety	Lot No.	Moisture %age of dried seed	Packing material used	Remarks

iv. **Shelling in Maize (if applicable)**

Crop	Variety	Lot No.	Moisture %age at shelling	Remarks

D. **Cleaning and Grading:**

Crop	Variety	Lot No.	Screen size used		Quality of cleaning/grading	
			Top	Bottom	%age of under sized graded	under seed admixture

E. **Seed Treatment:**

Crop	Variety	Lot Number	Name of chemical	Dosage (gm/100 kg. Seed)	Method of treatment	Uniformity of coverage

F. **Sampling:**

- i. Whether correct sampling procedure is followed:
- ii. Condition of guard samples:

 <p>Approved by:</p>	Check Sheet for Inspection of Seed Processing	Doc. No.: F/QC/04/02 Issue No. 02 Page: 03 of 04 Page Rev. No. 00 Effective Date:
---	--	--

G. Weighing:

Crop	Variety	Lot No.	Total No. of bags	No. of bags randomly tested/checked	Size of packing (kgs.)	Remarks

H. Bagging, tagging, labeling and sealing:

- i. Whether all required information on bag, tag and label are correctly mentioned.
- ii. Whether bags are properly stitched and Sealed:
- iii. Whether signature along with the full name of the processing official is being mentioned on the reverse of the tag.
- iv. Remarks, if any, on certification agency's Procedure and performance.
- v. Remarks, if any, on compliance to Seeds Acts Provisions.

I. Remarks on Maintenance of;

- i. Seed Receipt Book
- ii. Processing Register
- iii. QC register
- IV. Germination Register
- V. Seed Return Book

J. Remarks if any on;

A) Equipment used

- i. Dryer
- ii. sheller
- iii. Moisture Meter
- iv. Cleaner
- v. Grader
- vi. Treater
- vii. Weighing Balances
- viii. Bag closer

 <p>Approved by:</p>	<p>Check Sheet for Inspection of Seed Processing</p>	<p>Doc. No.: F/QC/04/02 Issue No. 02 Page: 04 of 04 Page Rev. No. 00 Effective Date:</p>
--	---	---

B) Quality of material used

- i. Bag
- ii. Tag
- iii. Label
- iv. Packing Material
- v. Seal
- vi. Thread
- vii. Leaflet

Observations recorded at sl. No..... requires your immediate comments/attention/remedial action

Signature of the Incharge
Name:
Designation:
Sub-unit:

Signature of Inspection Official.
Name:
Designation:



Approved by:

**Procedure for QC
inspection of Seed
Processing Plants & Stores**

**Doc. No.: P/QC/04
Issue No.: 02
Page: 01 of 02
Page Rev. No. 01
Effective Date:**

- 1.0 **Purpose:** To ensure proper upkeep of plants and stores.
2. **Scope :** It applies to all processing plants and seed stores where NSC's seeds are handled
3. **Overall Responsibility:** RM and Head of QC.
- 4 **Procedure:**

S.No	Activity Description	Responsibility	Ref. Doc./Record
1.	Identification of processing plants and stores. Concerned RM shall have a list of all the Processing Plants and Stores under their control.	RM	List of Stores & Plants
2.	Preparation of schedule of QC Inspection of Stores & Plants. Schedule of QC Inspection of Storage & Plants shall be prepared considering: <ul style="list-style-type: none">❖ Inspection by AO (100% of plants and stores under their control)❖ Inspection by RO (Min.50% of plants and stores in their Region)❖ Inspection by HO (Surveillance Inspection) A copy of List of plants and stores along with the schedule shall be forwarded to QC incharge at HO.	RM	Inspection Schedule
3.	Conducting QC Inspection of plants and storage shall be done as per the relevant guidelines indicated in circular no 11 dt 1.1.1970 The inspection is conducted as per the check sheets for Inspection of stores and Inspection of processing plants. & report is filled up separately.	Inspecting Officer	Check sheet for inspection of seed storage (F-QC-04-01) Check sheet for inspection of seed processing plant(F-QC-04-02)



Approved by:

**Procedure for QC
inspection of Seed
Processing Plants & Stores**

**Doc. No.: P/QC/04
Issue No.: 02
Page: 02 of 02
Page Rev. No. 01
Effective Date:**

4.	Submission of QC Inspection Reports. AM shall submit the QC Inspection Reports to concerned RM RM reviews the inspection Report for proper conduct of Inspection as per QC norms and gives necessary instructions as and where required. RM shall forwards his report of inspection along with the action taken on the Reports of area offices to HO The report of QC Inspection conducted at HO Level shall be forwarded to Head(QC) for review and taking suitable action.	AO/RM	
----	--	-------	--

- i. Check sheet for inspection of seed processing plant(F-QC-04-02)
- ii. Check sheet for inspection of seed storage (F-QC-04-01)

 <p>Approved by:</p>	<p>Quality Plan for QC inspection of Seed Processing Plants & Stores</p>	<p>Doc. QP/QC/04 Issue No.: 02 Page:01 of 01. Page Rev. No. 00 Effective Date:</p>
---	---	---

S.No.	Activity	Control Parameters	Control exercised and responsibility	Responsibility of Review/ Monitoring	Freq. of Monitoring records, if any.	Remarks
2	Plan for Inspection.	i.Preparation of Inspection Plan in the month of April every year.	Inspection plan shall be prepared based on season of the year when material is in the store or being processed..	RM.	Compliance of Inspection plan be monitored on seasonal basis	
3	Inspection of Plants and Stores	i. Time for inspection. ii. Sampling and reporting. iii.Time for submission of Inspection Report to RO.	i.Plant and store shall be inspected as per schedule as for as possible. ii. Samples wherever drawn shall be submitted for test as per procedure P/QC/02 iii. Within 72 hours of conduct of Inspection if the field have passed within 24 hours if the fields are liable to be rejected.	AM RO HO (QC)	Monthly basis	
4	Consolidation & review.	Consolidation .	Consolidation and review shall be done on first week of every month for previous month	RM and HO	Monthly.	



Format of complaint register

Doc. No.: F/QC/F/05/01
Issue No.: 03
Page: 01 of 01
Page Rev. No. 00
Effective Date:

Approved by:

Area Office :

Regional Office :

Complaint no. :

Complaint Details & Status :

S.No	Description	Details	Remarks
1	Name & Address of complainant		
2	Nature of complaint:	Generic Germination Physical Seed Health	
3	Details of seed Purchase	a) Seed purchased from NSC Dealer NSC Sale counter	
		b) Details of seed purchase: Crop Variety Class Qty purchased Cash Memo & date Bill no & date (Enclose the copy) Purchase cost Farm area involved	
4	Root cause analysis of the complaint		
5	Corrective and preventive action taken		
6	Status With Date		



Format of complaint register

Doc. No.: F/QC/F/05/01
Issue No.: 02
Page: 01 of 01
Page Rev. No.: 00
Effective Date:

Approved by:


Area Office :

Regional Office :

Complaint no. :

Complaint Derails & Status:

S.No	Description	Details	Remarks
1	Name & Address of complainant		
2	Nature of complaint:	Generic Germination Physical Seed Health	
3	Details of seed Purchase	a) Seed purchased from NSC Dealer NSC Sale counter	
		b) Details of seed purchase: Crop Variety Class Qty purchased Cash Memo & date Bill no & date (Enclose the copy) Purchase cost Farm area involved	
4	Action taken on complaint /Status		
	Date & progress		

 <p>Approved by:</p>	<p>Complaint of low germination</p>	<p>Doc. No.: F/QC/05/02 Issue No.: 02 Page: 01 of 01 Page Rev. No.: 00 Effective Date:</p>
--	--	---

Date of Receipt of Complaint _____


Date of Inspection _____

1. Name and address of the complainant
2. Details of the seed purchased
 - a) Crop
 - b) Variety
 - c) Lot No.
 - d) Whether Foundation or Certified
3. Date of receipt of seed at the supply point
4. Date of purchase
5. Quantity purchased
6. From where/whom purchased
7. How and where the seed was kept by the complainant until planted
8. Information from the tags of used seed bags:
 - a) Date of test/revalidation
 - b) Present germination
9. Area planted (Acres/Hectares)
10. Date of planting
11. Type of soil in which planted (clay, loam, sand etc.)
12. Condition of the seed bed (fine, smooth, cloddy, weedy, etc.)
13. Level of the field (flat, sloping, undulating, depressions, etc.)
14. Is the field well drained?
15. Is the stand uniformly poor in the whole field or there are patches of good or poor stand?
16. How and when was the fertilizer applied?
Was it applied with the seed to one side and below the seed or before sowing but mixed thoroughly in the soil?
17. What was the moisture situation in the seed bed?
18. What was the source of moisture – irrigation or rain? If rain, was it sufficient?
19. Was there any rain after planting but before the seed germinated? If so, how many days after planting?
20. Did the rain cause any hard crust on the surface of the seed bed?
21. Depth of seed in the soil (as actually checked by digging)
22. Did the seed sprout but could not come out of the soil?
23. Was the seed rotten, damaged by soil insects and/or microorganisms?
24. What is the moisture condition of the field at the time of inspection?
25. Concluding remarks of the inspecting officer.

Dated, the

Inspecting Officer

NB: If there is any left-over seed with the complainant, the same is to be collected and sent to Quality Control Lab. for testing.

 <p>Approved by:</p>	<p>Procedure for Handling QC complaint</p>	<p>Doc. No.: P/QC/05 Issue No.: 02 Page: 01 of 02 Page Rev. No. 00 Effective Date:</p>
--	---	---

- 1.0 **Purpose:** To ensure proper handling of Complaints related to quality of seeds.
- 2.0 **Scope :** It applies to all units, Regional offices and HO
- 3.0 **Overall Responsibility:** RM and Head of QC.
- 4.0 **Procedure:**

S.No.	Activity Description	Responsibility	Ref. Doc./Record
1.	<p>Receipt of complaint from dealer/grower/farmer. The complaint may be received at HO/RO/AO. As soon as the complaint is received it is registered & entered in a Register. The complaints if received at HO/RO are reviewed and forwarded to concerned RO/AO for Taking suitable action</p>	AM/RM /HO QC	Complaint Register
2.	<p>The complaint is reviewed and classified in category of Genetic, Germination, Physical or Seed Health. Investigation of complaint based on discussion with the complainant. The field visit, if required is made and sampling is done, detail of lot no, purchase details etc are collected.</p>	AM	<p>i) Circular for taking sample in field ii) Performa for investigation & reporting of low germination of seed</p>
3.	<p>If the complainant is satisfied with the explanation given by area manager. The report is prepared & a copy is sent to RO/HO. The status of complaint is recorded as Closed in complaint Register.</p>	AM	
4.	<p>In case it is found that the complaint is genuine and has resulted due to faulty seed / services, the investigating officer will submit the report to RM with his recommendations for further investigations or corrective measures</p>	AM	Report



**Procedure for Handling QC
complaint**

Doc. No.: P/QC/05
Issue No.: 02
Page: 02 of 02
Page Rev. No.: 00
Effective Date:

Approved by:

	and send the samples for testing if involved.		
5	Based on the recommendations of AM, RM will review for further investigation by a team nominated members, or send the case to HO for final decision.	RM	
6	Reporting : AM/RM shall submit the monthly report to Head QC on Status of customer complaints along with corrective measure to reduce the cases of complaints.	AM/RM	

 <p>Approved by:</p>	<p>Quality Plan for handling customer complaints</p>	<p>Doc. QP/QC/05 Issue No.: 02 Page: 01 of 01. Page Rev. No. 00 Effective Date:</p>
---	---	--

S.No.	Activity	Control Parameters	Control exercised and responsibility	Responsibility of Review/ Monitoring	Freq. of Monitoring records, if any.	Remarks
2	Classification of complaint & attending the complaint	Time for attending the complaint	Within 6 days of receipt of complaint	AM.	Monthly	
4	Submission of report to RM	Time for submission of Report to RO.	Within 4-5days of site visit/ drawing of sample.	AM	Monthly	
6	Reporting of complaints	Time of submission of monthly report	By first week of every month	RM and HO	Monthly.	