

071906T4AEN

AGRICULTURAL ENGINEERING LEVEL 6

ENG/OS/AGR/CR/03/6/A

Perform Produce Post Harvest Activities

March/April 2025



**TVET CURRICULUM DEVELOPMENT, ASSESSMENT AND CERTIFICATION
COUNCIL (TVET CDACC)**

PRACTICAL ASSESSMENT

Time: 3 HOURS

INSTRUCTIONS TO CANDIDATE:

1. You are required to perform the following tasks
 - i. **TASK 1**-Received grains in store determined percentage content of foreign materials, Rotten, disease and discoloured (RDD) grains and Pest Damaged grains
 - ii. **TASK 2**-Test for possible Aflatoxin using UV vapour lamp and estimate percentage infestation if any
 - iii. **TASK 3** –Determine the moisture content, dry and wet basis by oven dry method and make recommendation.
2. You have been provided with the following resources for the practical tasks:
 - UV light lamp
 - Microwave oven /oven

- Digital weighing balance
- Locally available grains
- Writing material
- Calculator
- Grains scooping spear (cylindrical)
- A sack of maize
- Sieve
- Small buckets (3 each)
- Packaging papers (khaki @ 2kg size-3)
- Marker pen
- Stapler
- Extracts from the Quality standards - National Cereals and Produce Board as provided in:
 - Table 1
 - Table 2
 - Table 3

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Table 1 — Quantity of a working sample

Type of grain	Mass of working sample (m1) - grammes
Maize	200
Wheat	250
sorghum	100
oats	250
barley	250
Rice	100
Millet	100
Bean	200
Soy bean	200
Chick peas	200
Green grams	200
Pigeon peas	200
Cowpeas	200

Table 2 — Size of test sieve

Type of grain	Sieve size
Maize	4.50-mm round hole
Wheat	Perforated sieve with slots measuring 1.6 mm wide and 9.5 mm long
Sorghum	1.8mm round hole

Table 3 - Acceptable grade parameters

	PARAMETERS	GRADE K2 or better
1	Moisture content	13.5% Max
2	Foreign material	2.0% Max
3	Pest Damaged	7.0% Max
4	Rotten, diseased and discoloured (RDD) grains	4.0% Max
5	Other coloured grains	3.0% Max
6	Total defects (Foreign + RDD+ pest damaged grains)	8.0% Max
7	Free from live insects' infestation	
8	Total aflatoxin (B1) 5% maximum	10ppb Max
9	Must be non-Genetically Modified (GM)	0.1% Max
Source: National Cereals and Produce Board (2009)		