MOISTURE MEASUREMENT & CONVEYING DEVICES

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• Explore moisture measurement devices

- Explore seed conveying devices in treatment process



Overview

- A seed can be regarded as a structure composed of complex substances
- This water is variable in quantity it can be added to or removed



Moisture Measurement Devices

Methods of Measuring Moisture Content:

- Direct measurement: water content is determined by removing moisture and then by measuring weight loss;
- Indirect measurement: an intermediate variable is measured and then converted into moisture content. Building up calibration charts before applying indirect measurements is a prerequisite;
- Empirical measurement: refers to methods such as biting, shaking, crunching, commonly used by both producers and small traders. These empirical measurements are both indirect and subjective.



Moisture Measurement Devices

• Direct measurement:
water content is determined
by removing moisture and
then by measuring weight
loss; heating in an oven, use
of microwaves or infrared
radiation



Indirect measurement: an intermediate variable is measured and then converted into moisture content. Building up calibration charts before applying indirect measurements is a prerequisite

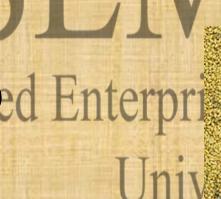
Capacitance

Radio Frequency

Near Infra Red (NIR)ed Enterpr

Conductivity

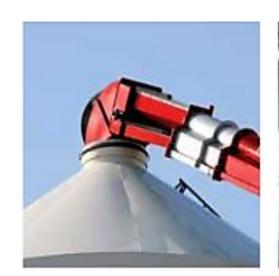
hygrometer





CONVEYING DEVICES

Depends upon the utility



TRANSPORT CONVEYOR



FLOOR MOUNT CONVEYOR



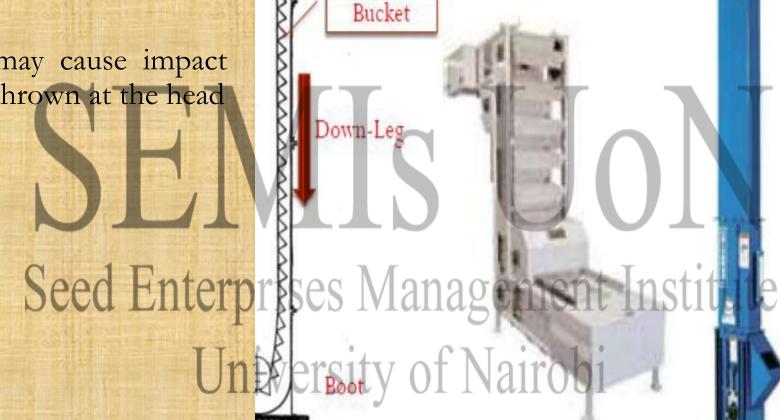
UNDER BIN CONVEYOR



UNDER CAR CONVEYOR



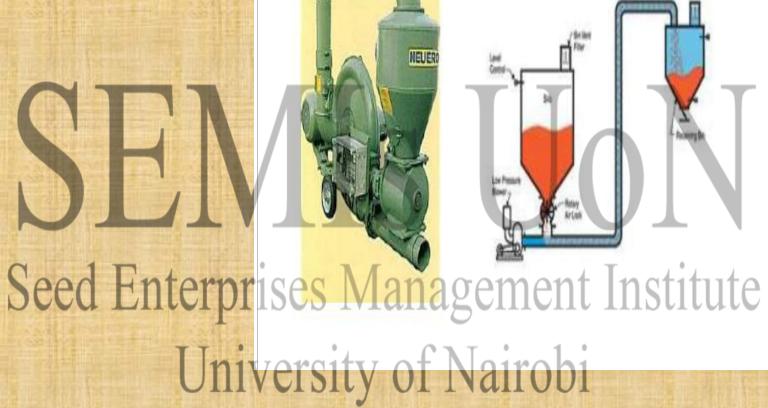
 Bucket elevators may cause impact damage as seed is thrown at the head



 Screw feeders may compress the seed to breakage



 Pneumatic conveyors may damage seed



Belt conveyors are much better

•Vibrating conveyors are much better

EQUIPMENT MAINTENANCE

- Mechanical parts
- Electrical parts





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