



Don state technical University

Technology of
post-harvest processing of
Maize

MTAP-11
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Rostov-on-don
2017

Aim

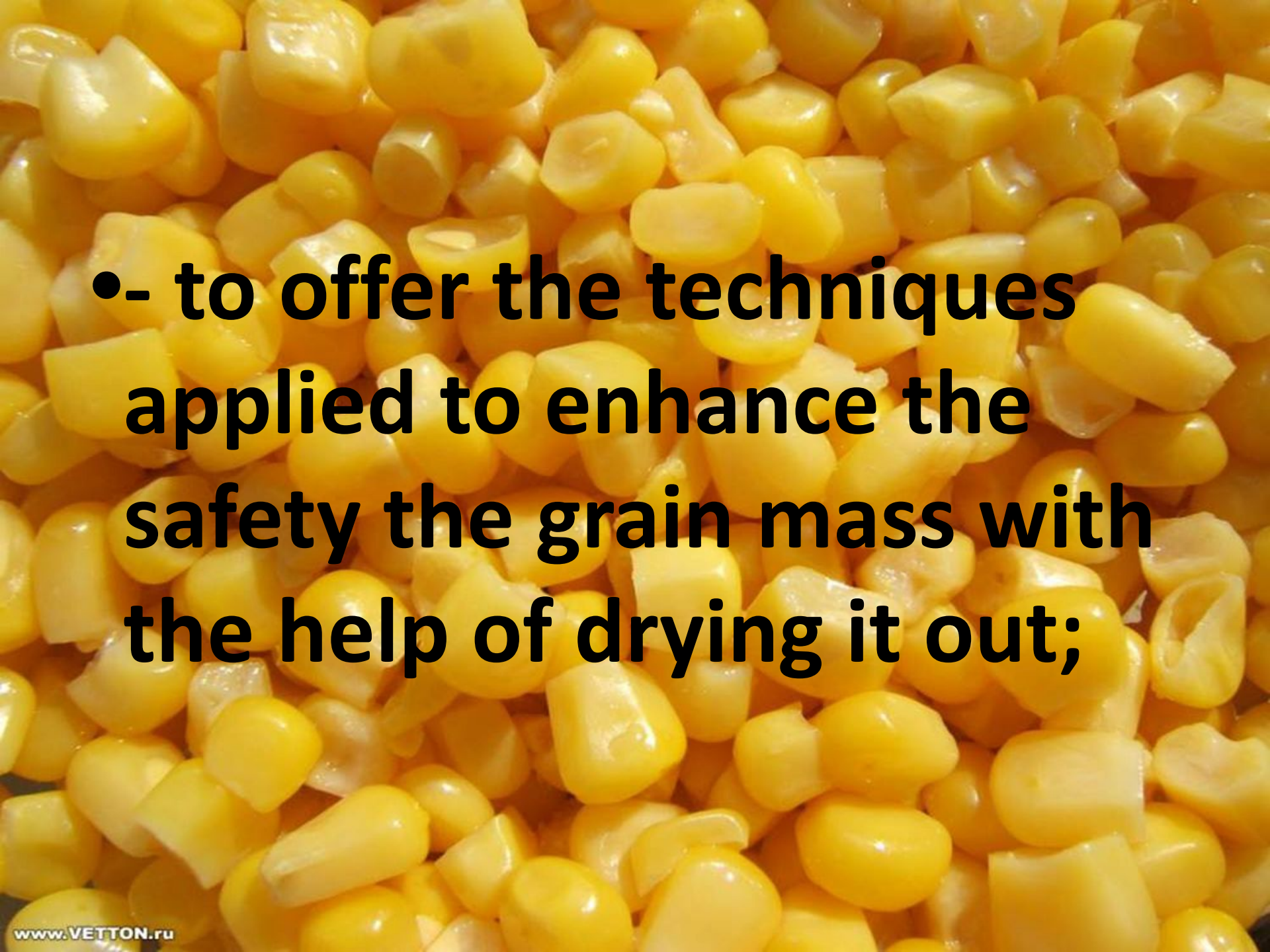
- The main aim of my research work is increasing of the grain resistance in the process of post-harvest period



The Objectives

- to study methods and techniques applied to increase the life and resistance of Maize;



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- to offer the techniques applied to enhance the safety the grain mass with the help of drying it out;

Losses in Maize of two types:

Losses in Maize can be of two types:

Quantity Loss	Quality Loss
<ul style="list-style-type: none">· Improper time of harvesting	<ul style="list-style-type: none">· Change in colour, smell or taste
<ul style="list-style-type: none">· Inconsistent Harvest technology	<ul style="list-style-type: none">· Contamination with toxins
<ul style="list-style-type: none">· Improper drying methods	<ul style="list-style-type: none">· Pathogen
<ul style="list-style-type: none">· Spillage during storage	<ul style="list-style-type: none">· Insect excreta
<ul style="list-style-type: none">· Damage caused by pest organism (Aflatoxin)	<ul style="list-style-type: none">· Reduction in nutritional value
<ul style="list-style-type: none">· Poor handling	
<ul style="list-style-type: none">· Damage caused due to rodents	

Drying of Maize

- ❖ **low moisture content and low storage temperatures reduce the opportunity for deterioration and microbial growth**



Storage

- ◆ The efficient conservation of maize depends basically on:
 - the ecological conditions of storage (relative humidity, temperature, etc.);
 - the physical, chemical and biological characteristics of the grain;
 - the storage period;
 - the type and functional characteristics of the storage facility;



❖ ***A good storage structure should:***

- **not allow re-wetting of grain by either moisture migration or rain;**
- **offer reasonable protection from thieves, nature's vagaries or any other factor of physical damage;**
- **allow aeration as it helps in keeping down the relative humidity of interstitial gases;**
- **proper sanitization and fumigation to prevent growth of pathogens;**

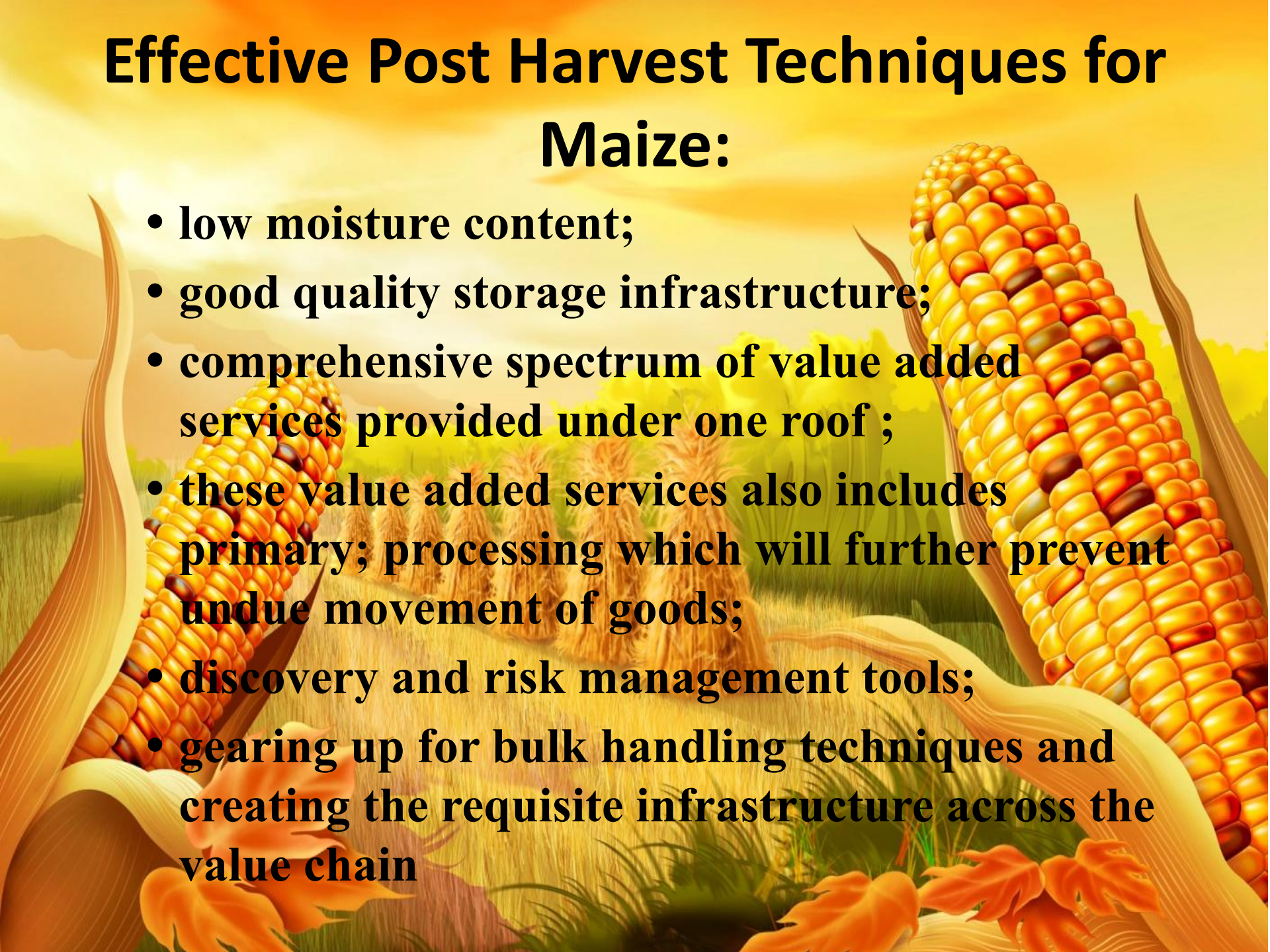
Bulk Handling - Silos

- the principal advantages of bulk handling are:
 - great saving in time and cost of handling the grain
 - saves the cost of providing hags every season;
- ◆ silos form an integral part of bulk handling of commodities;



Effective Post Harvest Techniques for Maize:

- **low moisture content;**
- **good quality storage infrastructure;**
- **comprehensive spectrum of value added services provided under one roof ;**
- **these value added services also includes primary; processing which will further prevent undue movement of goods;**
- **discovery and risk management tools;**
- **gearing up for bulk handling techniques and creating the requisite infrastructure across the value chain**





Conclusion

- **analysis of about 40 scientific literature confirmed that there are a lot of techniques allowing to increase the life and resistance of Maize;**
- **a major outcome of the research work is that we have managed to develop the method technology appeared to enhance the safety the maize the help of drying it out**

A close-up photograph of three ears of yellow corn. The corn cobs are arranged diagonally from the top-left to the bottom-right. The kernels are bright yellow and appear plump. The green husks are partially peeled back, revealing the rows of corn. The lighting is bright, highlighting the texture of the corn and the vibrant colors.

• Thank you for your attention