

Novaculture

Technical journal on vegetable seeds

N°42

Page 2: Training:
Prevent fruit from bursting

Page 3: Information & Technical Tips:
How can you tell when watermelon is ripe for eating?

Page 4: Question
«What is Pink Root?»



SOON IN YOUR STORES!

SWEET PEPPER YOURI!



**Sweet pepper
YOURI**

Discover YOURI: the warm-season sweet peppers.

YOURI meets growers' demand for large, dark green, SIMBAD-type square peppers. Its fruits vary between 100 and 120g. It adapts better than NIKITA to the hot and dry season and the hot and humid season, being earlier and more productive. It also performs well in the field thanks to its tolerance to Xanthomonas and TMV.

We are ready to ship samples as well as commercial quantities.
Ready to develop YOURI?

Suzon TRAINSON
Solanaceae product Manager,
TECHNISEM France

PREVENT FRUIT FROM BURSTING

Fruit bursting is a physiological disorder that affects many crops, leading to lower yields and therefore profitability. Understanding the causes of this phenomenon can allow us to better prevent it.

Why is the fruit bursting?

This phenomenon is closely linked to the plant's water regime. It is linked to irregular water supply, too much watering in dry periods or excess water due to a succession of rainy days. This sudden supply of water will lead to an equally sudden increase in the volume of the fruit. Their skin, which is not stretchy enough to adapt to this sudden growth, can only crack; this is favoured by the proximity to the ripening of the fruit. The fruit will therefore burst through two or more cracks, which may open up to the central cavity. The sensitivity of the fruit to this phenomenon varies according to the species and variety.

How to recognize it?

Fruit bursting can be observed by large cracks that are more or less deep along the length of the fruit, starting from the attachment of the peduncle or at the opposite part of the peduncle, or it can be circular and extend as far as the heart. There are two types of damage:

- The degraded aspect low down the palatability of the fruit;
- The reduction of their shelf life with a tendency

to rot under the effect of various moulds.

How can it be prevented?

The prevention of fruit bursting can be done by adopting :

- Regular and controlled irrigation, especially in periods of drought, especially by adopting drip irrigation;
- Mulch at the foot of the plants to slow down the strong penetration of rainwater;
- Cultivation in greenhouses or under shelter;
- A good nutrition plan for your crops, especially through good calcium and potassium intake; for certain crops, practices that promote good root development;
- And finally, varieties resistant to this phenomenon.



Bursting watermelon fruits

Cédric TZIEMI,
Station Manager IROKO,
Cameroon

All Technisem's know-how in your pocket.

TECHNISEM

- Surface area calculator by species
- Help with variety selection
- Technical tips and tricks
- List of sales outlets
- Catalog access

Scan me!

Google Play

QUIZZ

facebook®



@Novaculture

«Follow us on the Novaculture facebook page to keep up to date with the latest news and the competition to win rewards»
<https://www.facebook.com/revueagriculture>



HOW CAN YOU TELL WHEN WATERMELON IS RIPE FOR EATING?

Watermelon is the jewel of summer, a sweet, juicy fruit that conjures up memories of sunny days and outdoor picnics. However, recognizing a watermelon's stage of ripeness is essential to ensure optimal consumption of the fruit, both in terms of taste, texture and juiciness. A watermelon that is too immature will be watery and not very sweet, while one that is too ripe may be mushy and have a less pleasant texture. Here are the key steps in determining whether a watermelon is ready to eat:

1. Skin color

The color of a watermelon's skin is a good indicator of its ripeness. In general, a ripe watermelon will have a skin that varies from light to dark green, depending on the variety. The skin becomes less shiny as the fruit ripens, and a totally green, shiny watermelon can be a sign of under-ripeness.

- **Soil stain (or yellow stain):** a ripe watermelon often has a yellow or cream stain on its skin, where it was resting on the soil. If the spot is white or absent, the watermelon may still be too young.

2. The sound of watermelon

One of the most effective tests for determining whether a watermelon is ripe is to gently tap it. This can be done with your fingers or the palm of your hand.

- **Hollow, resonant sound:** when you tap a ripe watermelon, it should produce a hollow, resonant sound. This sound indicates that the fruit is full of water and therefore ripe.

3. The weight of a watermelon

A ripe watermelon will generally be heavy for its size. If the fruit is light, it may be immature or lacking juice.

- **Weight versus size:** lift the watermelon and compare it to other fruits of similar size. If it feels denser and heavier, it's a good sign that it's juicy and ready to eat.

4. Skin texture

The skin of a ripe watermelon should be smooth, firm and resistant to the touch. If you press lightly on the skin and it sinks in, this may indicate that the watermelon is overripe.

- **Hard, resistant skin:** a ripe watermelon will have

a relatively hard, smooth skin. It should be tight, with no wrinkles or soft spots.

5. Fruit shape

Ripe watermelons are generally symmetrical in shape. They are often round or slightly oval, but should be free of bumps and irregularities.

- **Regular shape:** a ripe watermelon will have a regular shape, with no deformations.

6. Seeds

The seeds of a watermelon can also provide clues to its stage of ripeness.

- **Brown or black seeds:** a ripe watermelon will have brown or black seeds. If the seeds are still white, this generally means that the watermelon is immature.

7. Stem (or peduncle)

The watermelon's stem, which connects the fruit to the plant, is another indicator of its ripeness.

- **Dry, brown stem:** a brown or dry stem is a good sign that the watermelon has reached maturity.

8. The smell of fruit

Finally, the smell of the watermelon can also help you tell if it's ripe.

- **Sweet, light smell:** a ripe watermelon gives off a sweet smell, especially near the stem.

To recognize a ripe watermelon, it's essential to combine several of the criteria mentioned above. If you observe these indicators, you're more likely to choose a watermelon that is sweet, juicy and at its peak of ripeness.



Ripe watermelon

Seynabou Toure SECK, Junior Watermelon Selector, TROPICASEM Station Senegal

What is Pink Root?

The term Pink Root refers to the characteristic symptoms typical of the roots of affected plants which give its name to the disease and facilitate diagnosis in the field. This disease is caused by *Pyrenochaeta terrestris*, a soil-borne fungus which is not confined to the genus *Allium* and is capable of infecting roots of plants of other genera.

The fungus can survive for a long time in many types of soil, on saprophytic plant debris or in the form of microsclerotia which can be found up to 45 cm deep in the soil. The optimum for its development which is also the optimum for root infection is between 26°C-28°C. There are many races of *P. terrestris* with differences in growth, virulence and pathogenicity traits.

Pink root wreaks havoc on onions and the appearance of symptoms seems closely linked to the growing season. Thus, the best season for expression of symptoms is obtained especially in

the hot and cool seasons while during winter no symptoms are yet observed.

To the naked eye, infected roots are colored pink or when they are old, purplish red. The color of the roots represents the only recognition of the disease while at the foliar level, the plants seem to suffer from a deficiency of nutrient elements or water stress. It will spread to newly produced roots reducing the root system, preventing the bulbs from reaching a marketable size.

Once the soil is infested, the persistence of the pathogen seems very long and the search for effective and sustainable means of control remains a necessity.

The most used control methods are long-term crop rotation (4 to 5 years), the addition of organic matter, solarization and fumigation can considerably reduce the incidence of the disease.



Symptoms of Pink Root
disease on onion

Fruits and vegetables

Fruit and vegetables are high value-added products with high nutritional value, rich in vitamins, minerals, fiber and unique natural molecules. They are also a social driving force, creating numerous jobs. They are therefore at the heart of the global challenges of food security, public health and the fight against poverty.

Some industry figures:

- 500 million tonnes of fruit are produced worldwide every year.
- 700 million tonnes of vegetables are produced worldwide every year.
- 750 million tonnes of tubers are produced worldwide every year.

In most tropical countries, fruit and vegetables are produced by small family farms, which supply local, national and even international markets.

The stakes:

- Prevent disease: regular consumption of fruit and vegetables has been shown to reduce the risk of certain chronic, or “non-communicable”, diseases such as obesity, diabetes, cardiovascular disease and certain cancers.
- Fighting malnutrition: over 800 million people worldwide are undernourished, suffering from insufficient energy intake combined with deficiencies in proteins, vitamins and minerals. Fruit and vegetables, with their high mineral and vitamin content, are essential in the fight against malnutrition.



Source: <https://www.cirad.fr/nos-activites-notre-impact/filieres-agricoles-tropicales/fruits-et-legumes/contexte-et-enjeux#Tabs>, published in 2024

Gummy stem blight (*Didymella bryoniae*),

This is a fungus that can be stored on crop debris. The propagation is assured by water or air as well as insect bites on healthy plants.

Symptoms and damage

Circular brown or gray spots appear on the leaves, petioles and stems. The stems have yellow exudates of gummy material. Leaves turn yellow and may die. Sometimes the whole plant dies.



At an advanced stage leaves crack as well as fruits in which gummy exudates will come out (mostly in watermelons and pumpkins).



Damage prevention

- Use resistant varieties.
- Apply fungicides using mancozeb..

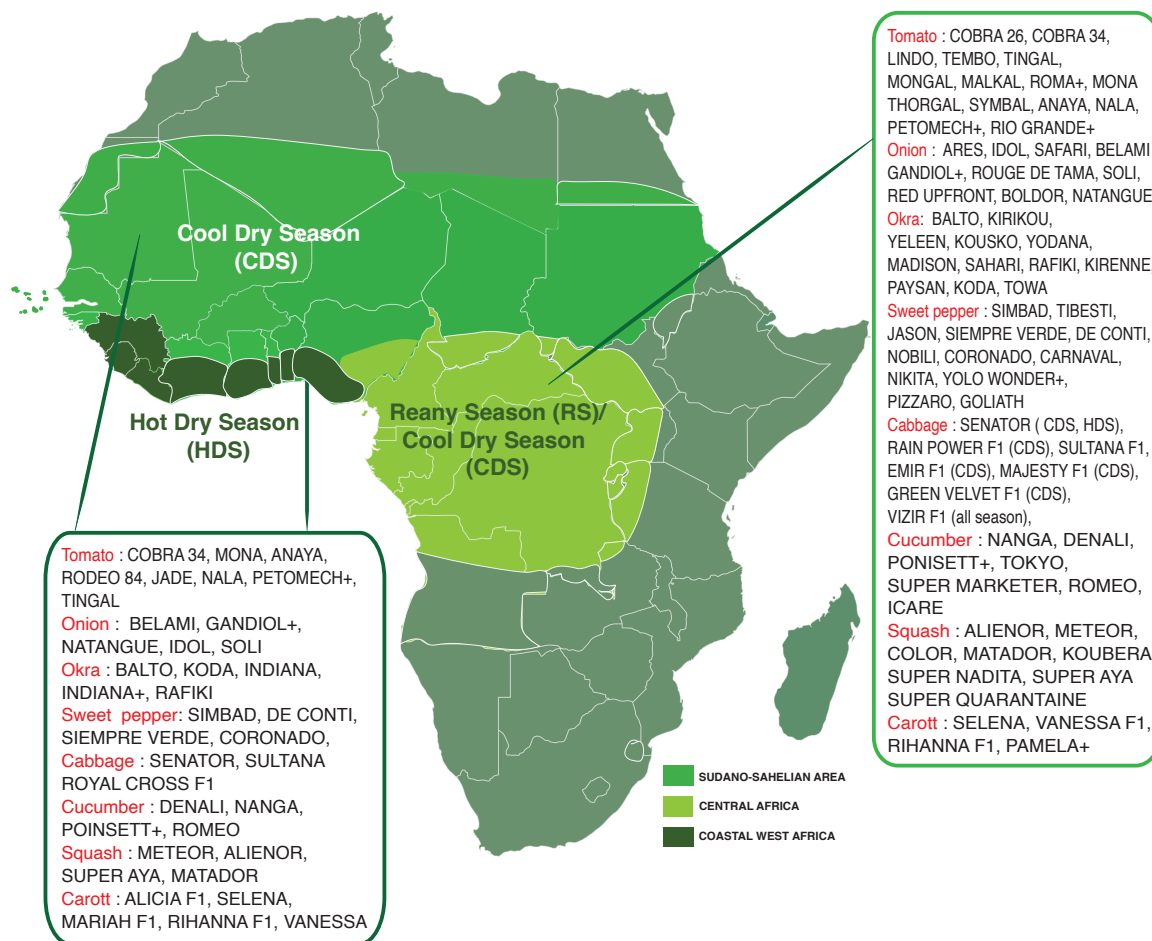
Information from the practical guide created by Technisem



Recommended varieties for the next two months according to geographical areas*

Below are several varieties offered by TECHNISEM for sowing in three defined areas. These tips are valid for the following months: december, january, february..

The team of Regional Developers based in Africa and product managers TECHNISEM, France



«Geographical areas: Sudano-Sahelian area (Cabo Verde, Senegal, Mauritania, Mali, Northern Côte d'Ivoire, Northern Ghana, Northern Togo, Northern Benin, Burkina Faso, Niger, Northern Nigeria, Sudan), Coastal West Africa Area (Southern Côte d'Ivoire, Southern Ghana, Southern Benin, Togo, Guinea Conakry, Liberia, Sierra Leone, Guinea Bissau), Central Africa area (Congo, Cameroon, Southern Nigeria, Gabon, DRC, Rwanda)»

THE HIGHLIGHT OF THE SEASON



Hot pepper
PHENIX

For the **COASTAL AFRICA** area

« Let's try our favorite variety! »

PHENIX is a very early variety (80-85 days), with good vegetative development. Very productive variety with big and pungent fruits.