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NOVALLIANCE
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Novaculture

Technical journal on vegetable seeds

N°28

TECHNISEM

SOON IN YOUR STORES!

LETTUCE BLONDE DE PARIS TYPE KEFA

Lettuce BLONDE DE PARIS TYPE KEFA

You already knew the Batavia type lettuce (forming no head) gracefully called «BLONDE DE PARIS»? We announce the triumphant arrival of BLONDE DE PARIS TYPE KEFA, a variety selected by us to meet your needs!

In the field, it has the same colour and leaf shape as its namesake but is of a larger size and has better heat resistance (later bolting).

On the plate, let yourself be tempted by its delicate green-blond foliage, tender to the palate, which is most beautiful in salads or sandwiches. From Algeria to the Ivory Coast, via the Philippines and Mozambique, this new variety is already making its way around the world to delight lettuce lovers.

BLONDE DE PARIS TYPE KEFA will soon be available in your shops, so don't hesitate to ask our agents!

Hugo DESPRETZ
Product Manager African Leafy Vegetables and Okra
TECHNISEM France

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INTEGRATED BIOLOGICAL CONTROL!

The concept of integrated biological control is quite fluctuating and has evolved considerably since its inception, and is based on biological control, in combination with plant protection products.

It is defined as follows by the European Parliament Directive 2009/128/EC: «the careful consideration of all available plant protection methods and, consequently, the integration of appropriate measures that discourage the development of pest populations and keep the use of plant protection products and other types of interventions to levels that are justified from the economic, environmental and health points of view».

It is based on several principles:

- Prevention (crop management, choice of varieties, hygiene, cultivation methods).
- Surveillance (implementation of scientific methods and/or observations to rapidly launch control measures).
- The establishment of «alert thresholds» which indicate when it is advantageous to intervene. These thresholds are defined according to the aggressors, the region, the climate …
- Favor biological and physical control methods as long as they are effective (predators, parasitoids, pathogens, sex pheromones and kairomones, anti-insect or bird nets, mulching or weeding against weeds, fogging against mites).
- If chemical means are used, they are used in a reasoned manner.
- The choice of chemical means is also based on the possible resistances that the bio-aggressors may have developed.
- The choice of chemical means is made according to their recognized effectiveness against the targeted bio-aggressor.

Prevention is the key word in integrated biological control. The following prophylactic measures have been adopted:

- Healthy soil through crop rotation and crop (or variety) distribution.
- Good plant health: density, sowing techniques, pruning, rational soil fertilization, soil improvement.
- A choice of resistant varieties.
- The protection of crop protection agents.

Integrated biological protection requires a good technical knowledge. The evolution of cultivation methods and the harmful effects of over-used phytosanitary products have favored the emergence of integrated biological control. It is now possible to combine nature's natural defense mechanisms with phytosanitary products developed and used in a reasoned way to preserve human health and protect the environment.

Aguibou DIALLO, Development Manager
AGRIVISION, Senegal

QUIZZES

@Novaculture

facebook QUIZZ

« Name a leafy vegetable of the TECHNISEM brand? »

It's easy to play, all you have to do is:

- Like the Facebook page
- Send a private message to the Novaculture Facebook page with: «#Novaculture Games-August 2022: give the answer».

Drawing lots among the winners. The winner will be announced on Facebook and in the next Novaculture magazine. There are many prizes to be won!

Winner of the previous issue: Mr. Lamine DIATTA, Senior farm technician, Thies none route de Dakar, Senegal. Congratulations to all for your participation!

The question asked was: «To which botanical family does the carrot belong? » and the answer was « Apiaceae or Umbelliferae ».

WHAT ARE THE BENEFITS OF ORGANIC AND CHEMICAL INPUTS AND CHEMICAL INPUTS TO THE SOIL?

Organic and chemical inputs to the soil aim to improve its physical, chemical and biological condition.
These contributions can be brought in the form of amendments or fertilizers.

1. The amendments.

1.1. Organic amendments.

They have a vegetable origin and have a great effect on the structure of the soil (manures, green manures, compost, certain crop residues etc...).

They allow a good lightening of heavy soils, make light soils consistent, bring organic matter and humus to the soil, allow a better watering efficiency and a good aeration of the roots, feed the fauna and flora of the soil, provide mineral elements (NPK, minor elements and trace elements) necessary to the life and health of plants.

However, it is necessary to wait for a good decomposition of the organic amendments before planting the crops because the non-complete decomposition can be a source of attacks of telluric diseases (phytophtora, pithium etc.); of an excessive weediness, of the rise of mites and mealy bugs but also of the development of termites.

1.2. Chemical amendments.

They have a mineral origin and improve the structure and certain physical-chemical properties of the soil (limestone, lime, marl, ashes, sand, sulfur etc.).

They increase the pH of acidic soils (lime), decrease the pH of basic soils (sulfur), lighten heavy soils (sand), limit toxic elements (Al etc..); promote microbial life and microflora, provide fertilizing elements to the plant (Ca, Mg, S etc.).

The mineral amendments badly made can create induced deficiencies or favour the development of certain diseases, in particular fungi.

2. Fertilizers.

Although the soil and the organic and mineral amendments bring nutritive elements to the plant, they are very far from satisfying its needs in quantity.

Of the 16 elements that are essential for the development of a plant, the 03 macro elements are manufactured by the plant itself through photosynthesis (C.H.O). All the others must be brought in for a good expression of the plant (N.P.K. C.a. Mg. S Fe. B. Mn. Mo. Cl. Cu. Zn).

These elements are brought most often by chemical fertilizers which can be in granulated form, powder or liquid.
They can be partly applied on the foliage (especially the trace elements).

For an efficiency of fertilizers; it is necessary to make a good plan of fertilization which takes into account: the nature of the ground, the cultivated species, the season, the purpose of the culture and the system of irrigation.

Example:

In high pH soils, it is necessary to increase phosphorus because if we limit ourselves to the simple needs of the tomato, there will be induced deficiencies which will result in a fall of the flowers and apical necroses.

Considerably reduce nitrogen inputs during the rainy season to avoid fungus and bacteria attacks.
Reason the fertilizations according to the purpose of the trial.

For the same species, less fertilizer units will be needed in varietal control than in seed production.

Organic and chemical fertilizers are a source of life, health and development of the plants but they require a know-how for their application.

Abdoul NIANG, Station Technical Manager,
TROPICASEM Senegal

What are glucosinolates in cabbage?

Glucosinolates are organic molecules present in 16 families of plants of the order of Capparales such as Brassicaceae (cabbage, radish, mustard, watercress) or Moringaceae (moringa).

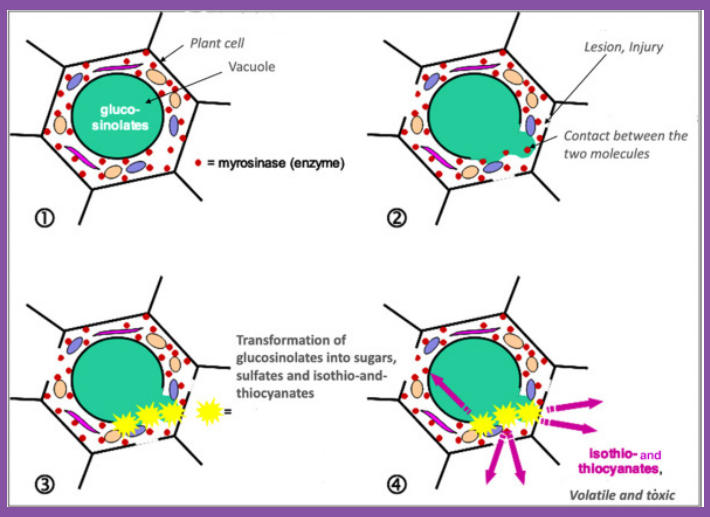
They are molecules of plant defense acting against pests (fungi, insects, bacteria, rodents) when the plant is injured, attacked, stung or bitten. Their presence induces a bitter and pungent taste found in brassicas.

Glucosinolates are stored in the vacuole of plants. They are harmless until activated by an enzyme, myrosinase. The two molecules come into contact when the plant is injured. This triggers chemical and enzymatic reactions that create isothiocyanate, which is volatile and reactive, giving a bitter taste and a strong odor.

Isothiocyanate is toxic to most insect pests, nematode bacteria and fungi. Studies show that army worms do less damage on mustard plants rich in glucosinolate. Isothiocyanate has been shown to be an insecticide for weevil larvae and eggs. Various studies have shown that broccoli residues spread on soils contaminated with a fungus responsible for Verticillium wilt (Verticillium dahliae), reduced fungal residues by a factor of 5.

However, some species have adapted to this plant defense system. For example, the whitefly (Pieris rapae), Plutella xylostella or the cabbage aphid (Brevicoryne brassicae) which stores the toxic compound, becoming in turn toxic for its predator the ladybug.

In food, glucosinolates have beneficial antifungal, antibacterial, antioxidant and antimutagenic properties. A diet rich in brassicas could protect against the risks of lung cancer and colorectal cancer.



Schematic representation of the reaction at the level of the plant cell, which results in the formation of gases. (Vincent M., 2008).

Aubin Cheyroux, in charge of experimental tests
ARMOR GENETIC, France

Testimony

Mr. DOUTI Mado industrial electrician at the New Cotton Company of Togo (NSCT), Market gardener at DAPAONG

Since 2014, I have been buying TECHNISEM brand seeds from the DAPAONG agency in TOGOSEM. I am in the savannah region in the far north of the country.

The following new varieties are produced in my farm: tomato (COBRA 26 F1, COBRA 34 F1, KIARA F1 and TROPIMECH); cabbage (FORTUNE F1, KK CROSS F1); cucumber (POINSETT+, NAGANO F1); okra (INDIANA, KIRIKOU F1); lettuce (EDEN).

TECHNISEM varieties are very good, the plants are robust, productive with a good conservation of fruits after the harvest.

The fruits are very appreciated on the market and are well adapted to our climate.

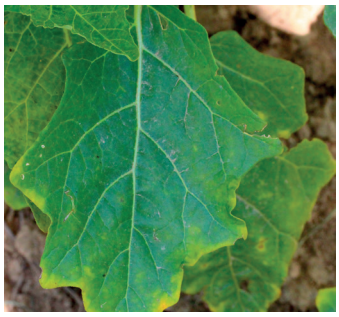
Adegunle BIKOUNLE
Development Manager
TOGOSEM, Togo

Leafhopper or Jassid

It is a very vivacious little green insect which jumps and sucks the sap by biting the under side of leaves. It can attack both at larval and mature stage. Young plants are more sensitive.

Symptoms and damage

Leaves edges turn yellow and bend up. Borders coloration becomes red-brown and streches to the intervein tissues.



Leaves dry and can fall down. It can lead to yield losses or plant death.

Damage prevention

- Observe plants at crop beginning to identify first leafhoppers or symptoms appearance.
- Apply insecticide when first damage appear, particularly at seedling stage. No intervention necessary after fruiting.
- Avoid growing plants from the Malvaceae (bissap, cotton plant) or Solanaceae (tomato, pepper, eggplant) families all at the same spot, as those are hosting Jassids.
- Refer to pages about aphids (p. 30) and whiteflies of our booklet on pests and diseases to get more insight on their management

Information from the practical guide created by Technisem

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: August, September, October.

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

SPECIES	SUDANO-SAHELIAN AREA	COASTAL WEST AFRICA	CENTRAL AFRICA
	Hot and Humid Season	Cool Dry Season (CDS) Rainy Season (RS)	Rainy Season (RS) Cool Dry Season (CDS)
TOMATO	MONA F1	MONA F1	LINDO F1 (RS), COBRA 26 F1(RS)
	COBRA 26 F1, JAGUAR F1+	COBRA 26 F1, JAGUAR F1+	NADIRA F1 (RS), RIO GRANDE+
	PETOMECH+ (october)	KIARA F1	NINJA F1 (RS) MONGAL F1 (RS)
	THORGAL F1, NALA F1 (october)	RIO GRANDE+ (october)	ANAYA F1 , BUFFALO (all season), AGATE F1
	SYMBAL F1, ANAYA F1 (october)	F1 ANAYA (october)	SYMBAL F1 (all season), JADE F1 (all season)
	RIO GRANDE+ (october)	PETOMECH+ (october)	MONA F1 (CDS & HDS), RODEO 84 F1 (CDS)
ONION	KARIBOU (august) DAMANI (october)	KARIBOU (august)	ARES (RS), BOLDOR, JULIO (CDS)
	ROUGE DE TAMA (october)	ROUGE DE TAMA (october)	ROUGE DE TAMA, NATANGUE (CDS)
	SAFARI (october)	SAFARI (cctober)	SOLI (CDS), IDOL (CDS), KARIBOU(CDS)
OKRA	RAFIKI F1, KIRIKOU F1, FESTIVAL	RAFIKI F1, KIRIKOU F1 (RS), FESTIVAL	RED PASSION F1 (RS), KIRIKOU F1 (CDS)
	YELEEN, HIRE, LUCKY 19 F1	YELEEN, HIRE (RS), LUCKY 19 F1	YELEEN, HIRE (RS), LUCKY 19 F1, RAFIKI F1
	BALTO F1, YODANA F1, LIMA F1	RED PASSION F1, YODANA F1,TOWA F1	YODANA F1, BALTO F1 (all season)
	KIRENE F1, KODA F1, TOWA F1	KIRENE F1 (RS), KODA F1 (all season)	LIMA F1 (RS), FESTIVAL, KIRENE F1 (RS)
	RED PASSION F1	BALTO F1 (all season), LIMA F1 (RS)	KODA F1 (all season), TOWA F1 (RS)
SWEET PEPPER	JASON F1, SIMBAD F1	JASON F1, SIMBAD F1	SIMBAD F1 , TIBESTI F1, NIKITA F1
	YOLO WONDER+, PIZARRO F1	YOLO WONDER+, PIZARRO F1	PIZZARO F1, ULYSSE F1, DE CONTI F1
	CORONADO F1, DE CONTI F1	CORONADO F1, DE CONTI F1	NOBILI F1 , GOLIATH F1 , CARNAVAL
	ALBERIC F1, SIEMPRE VERDE F1	SIEMPRE VERDE F1	JASON, F1 YOLO WONDER+
CABBAGE	VIZIR F1, SULTANA F1	VIZIR F1, SULTANA F1 (RS)	RAIN POWER F1 (RS), FORTUNE F1 (RS & CDS)
	MAJESTY F1 (october)	MAJESTY F1 (october)	VIZIR F1 (all season), TROPICA CROSS F1 (RS)
	RAIN POWER F1 (RS))	RAIN POWER F1 (RS)	ROYAL CROSS F1 (CDS & HDS), GREEN VELVET F1

***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).

THE HIGHLIGHT OF THE SEASON

SELECTION crush of heart

Carott SELENA

For the SOUDANO SAHELIAN AREA

« We strongly recommend that you try it ! »

SELENA is a variety with a good vegetative development, very early.
Very sweet taste and a more tender heart than Amazonia.