

Novaculture

Technical journal on vegetable seeds

N°21

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**Hot pepper
SUN SET**

A NEW VARIETY IN THE SPOTLIGHT

Let's try our new hot pepper SUN SET!

Very soon, our new hot pepper SUN SET will be available for samples. As you know, it's the biggest priority of the year for the hot pepper range! Indeed, SUN SET comes close to BIG SUN. Its fruits are so attractive as BIG SUN with the same size and shape, but with a better firmness. The perfume is good, but it's spicier than BIG SUN!

The most interesting thing for SUN SET is a better viruses tolerance, so this variety will solve some problems encountered by producers. Moreover, this variety is very early in dry and hot season and in rainy season.

Fanny APPELL, Product Manager for Solanaceae
TECHNISEM, France

NUTRIENT REQUIREMENTS OF EGGPLANTS

Eggplants belong to the solanaceae family. To have a good production, a better quality of fruits and a regularity of harvests it is necessary to have a good fertilization plan.

Beyond the pH which must be close to neutral (7) or be slightly acid (5,8 to 6,5), before any setting up of a production plot it is necessary to know the previous cultures.

Solanaceae (tomato, capsicum) and malvaceae (okra) have to be avoided. On the other hand, brassicaceae (cabbage), cereals and alliums are recommended.

N	P ₂ O ₅	K ₂ O	CaO	MgO	SO ₃
180	60	180	30	18	80

Complete manuring of eggplant can be divided into three types:

- The organic manure

It should be made with well decomposed material to avoid proliferation of mealy bugs, mites and other diseases related to the collars and roots.

Preferably poultry manure where the sulphur content is higher than other manures, an important element in the fertilization of eggplants. Depending on the availability it can be up to 20 tons per Ha.

- Mineral fertilizer

It must be composed of nutrients that are not leached very quickly: phosphorus, magnesium, calcium and very little nitrogen.

One can use 50 kg of DAP (18 46 00), 50 kg of potassium sulphate, 120 kg of calcium nitrate and 100 kg of Magnesium sulphate.

In soils with an alkaline pH, avoid adding calcium and magnesia.

- Cover crop manure

It must evolve with the development of the plants. It is often spread out to allow a good development and avoid deficiencies or phytotoxicities.

It must be well ordered to respect a good balance and a good quality of the fruits.

At the beginning, a good dose of phosphorus, during growth, a good balance of nitrogen and for quality, bring nitrate and potassium sulfate.

With 50 kg of DAP (18 46 00), 100 kg of 15 15 15, 150 kg of 9 23 30, 150 kg of nitrate of potash 165 kg of urea 50 kg of sulfate of potash.

Some aspects of the plant that should suggest deficiencies

Nitrogen	Light green leaves
Phosphorus	Purplish leaves / senescence
Potassium	Tanned appearance
Calcium	Interveinal chlorosis
Magnesium	Diffuse chlorosis / tissue necrosis

To overcome these deficiencies it is recommended in addition to a fertilization plan to make monthly foliar treatments with complete fertilizers provided with oligo elements.

NB: do not confuse with the bronzed aspect due to the intense stings of jassids.

In calcareous soils with a high pH, phosphorus units must be increased to avoid induced deficiencies.

Conclusion

Fertilization of plants in general and eggplant in particular is a complex activity. It requires a good knowledge of the soil and a good observation of the crops for a good yield and a better quality of the harvest.

HOW TO KEEP INSECTS AWAY FROM CROPS?

The management of pest populations can be done by the use of synthetic or biological phytosanitary products, but is possible by techniques such as cultural associations, the introduction of auxiliaries (parasitoids, predators) or the introduction of infertile males (diptera).

Naturally, plants have means of defense against pests, these means can be biochemical substances that the plant releases to repel pests or attract them.

Plants can also contains substances that are toxic to certain insects, for example, cabbage produces glucosinolates when it buds and these sulfur-containing substances are toxic to *Plutella xylostella* larvae. When a plant releases substances to repel pests, this is called the PUSH effect and when it releases substances to attract insects, this is called the PULL effect.

Crop associations can be used to disrupt the behavior of pests. For example, the combination of beans and cabbage confuses pests in search

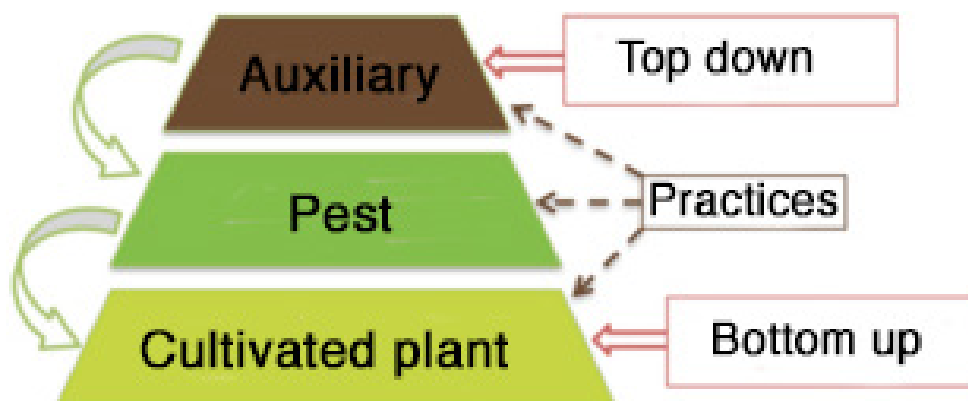
of food or egg-laying site.

The combination of tomato and basil helps protect the tomato from pests. The combination of thyme or lavender with a main crop will deter slugs.

The development of parasitoids and predators in an agro-ecosystem can be encouraged by planting certain plant species that provide a suitable environment for their development. This technique is used in organic agriculture to keep pest populations low.

It is possible to introduce parasitoids and predators into an agro-ecosystem when pests are growing exponentially and crop damage is becoming significant.

Today, the notion of pest management is more recommended to producers than the notion of pest eradication, because by trying to eliminate all crop pests, one participates in the degradation of biodiversity.



Aguibou DIALLO,
Regional Developer
AGRIVISION, Senegal

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4 THE QUESTION OF THE MONTH

What is a rootstock?

A rootstock, in agriculture, is a decapitated woody or herbaceous plant, provided with a root system on which a graft is implanted in order to carry out a grafting.

Depending on the case, it may be a clone (from vegetative propagation such as cuttings or layering) or a plant from a seedling. It is the latter case commonly practised on solanaceae and cucurbitaceae.

Each grafted plant has one or more specific rootstocks, often botanically close.

The choice of a rootstock depends on the environmental difficulties that we want to improve. In the case of the above-mentioned plant families, here are the criteria for choosing a rootstock:

- Rootstocks-solanaceae: vigorous, tolerant to BW, to fusariosis, to nematodes and to drought.
- Rootstocks-cucurbits: vigorous, tolerant to

Fusarium, powdery mildew, nematodes and drought.



Grafted tomatoes

Jean LIM, Head of Research Station
SEMAGRI, Cameroon

QUIZZES



@Novaculture

facebook QUIZZ

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-June 2021: give the answer».



Name a vegetable from the Malvaceae family? »



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: Mrs Maty MBAYE, Agricultural Entrepreneur Yeumbeul Dakar.
Congratulations to all for your participation!

The question asked was: « Name a Technisem brand yellow hot pepper?» and the answer was «BIG SUN, ESTRELLA, JAUNE DU BURKINA...».



We summarize for you:

Senegal: project to reduce administrative formalities on plant and seed import for local companies.

This new project created by the Government of Senegal and the private sector with the support of the Global Trade Facilitation Alliance aims to strengthen the competitiveness of Senegal's agricultural sector.

This project governing plant and seed imports will ease the burden on traders, farmers, distributors and small businesses who have often waited days for their applications to be reviewed.

Plant and seed imports are important inputs into agricultural production, but many in the sector have struggled to identify and understand the paperwork required to comply with import processes.

This project will design and implement digital solutions, train border officials in their use, and educate traders and others on how the new system works. It will build on the experience of the private sector and create a platform for the participation of local agricultural businesses and horticultural associations.

Senegal will see a more efficient system for ensuring the quality of plant and seed imports, while also seeing a more dynamic agricultural sector freed from bureaucracy that could hold back small and medium-sized enterprises from expanding their operations.



Article published in march 2021: «<http://moroccomail.fr/2021/03/25/senegal-projet-visant-a-reduire-les-formalites-administratives-sur-les-importations-de-plant-es-et-de-semences-pour-les-entreprises-locales/>»

Cercospora leaf spot

The fungus symptoms occur primarily on foliage. Petiole and stem lesions develop when conditions are highly favorable. It can be stored in crop residues and spread by wind, insects, water, etc.

Symptoms and damage

Round spots with grey center and a deep brown margin surrounded by a yellow ring.

Leaves turn yellow then wilt and fall.



On stems, elongated spots can appear.

Damage prevention

- Use healthy seeds.
- Remove all crop residues, weeds and infested plants.
- Avoid overhead watering otherwise water early in the morning.
- Apply fungicides on the foliage in case of early symptoms.
- Implement crop rotation, by alternating with plants such as sorghum, corn or fodder plants.

Varietal Solution

- Carott: good tolerance: AMAZONIA.

Possible Confusions

- Carott/cucurbitaceas: alternaria Leaf Blight.
- Cabbage: ring spot (*Mycosphaerella*)
- Solanaceae: on leaves: Bacterial spot.

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: June, July, August.

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



SPECIES	SUDANO-SAHELIAN AREA	COASTAL AFRICA AREA	CENTRAL AFRICA
	Cool Dry Season (CDS) / Rainy Season (RS)	Cool Dry Season (CDS)	Rainy Season (RS) Cool Dry Season (CDS)
TOMATO	COBRA 34 F1	COBRA 34 F1	COBRA 26 F1 (RS)
	MONA F1	MONA F1	COBRA 34 F1 (RS), MONA F1
	COBRA 26 F1	COBRA 26 F1	MONGAL F1, ANAYA F1 (CDS)
	SYMBAL F1	SYMBAL F1	F1 THORGAL (CDS)
ONION	ARES (June)	ARES (June)	KARIBOU (RS), GANDIOL+
	KARIBOU (August)	KARIBOU (August)	ARES ((RS), NATANGUE, JULIO
OKRA	BALTO F1	BALTO F1	RAFIKI F1 (RS)
	KODA F1	KODA F1	BALTO F1
	RAFIKI F1	RAFIKI F1	KODA F1 ((RS)
	LUCKY 19 F1	LUCKY 19 F1	FESTIVAL
SWEET PEPPER	CARNAVAL F1	CARNAVAL F1	SIMBAD F1 (RS)
	SIMBAD F1	SIMBAD F1	TIBESTI F1 (RS)
	JASON F1	JASON F1	DE CONTI F1 (RS)
	SIEMPRE VERDE F1	SIEMPRE VERDE F1	CARNAVAL (CDS)
CABBAGE			NOBILI F1
	VIZIR F1	VIZIR F1	VIZIR F1 (RS), FORTUNE F1 (RS)
	FORTUNE F1	FORTUNE F1	ROYAL CROSS F1 (CDS)
	TROPICA CROSS F1	TROPICA CROSS F1	GREEN VELVET F1 (RS)
			SULTANA F1 (CDS), MAJESTY F1 (CDS)
			MASTER CROSS F1 (CDS)

*Geographical areas: **Sudano-Sahelian** (Cape Verde, Senegal, Mauritania, Mali, Northern Côte d'Ivoire, Northern Ghana, Northern Togo, Northern Benin, Burkina Faso, Niger, Northern Nigeria, Sudan), **Coastal Africa** (Southern Côte d'Ivoire, Southern Ghana, Southern Benin), **Central Africa** (Congo, Cameroon, Southern Nigeria, Gabon, DRC).

THE MOST OF THE SEASON



Onion
ARES

For the COASTAL AFRICA area

«We propose you to try our favorite variety!»

The ARES variety is a red onion of wet season. It is early, rustic with a firm, homogeneous bulb with a beautiful red color.