

HYGROTECH

SUSTAINABLE SOLUTIONS

FORUM

SPRING 2013

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ONION EVOLUTION

FERTAGCHEM
LETTUCE TRIALS

TOMATO
DISEASES

MASSMART INITIATIVE - GOOD NEWS FOR EMERGING FARMERS



HYGROTECH

SUSTAINABLE SOLUTIONS

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onion
evolution

4



fertagchem
lettuce trials

12



massmart initiative
good news for emerging farmers

29

EDITORIAL

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ONION EVOLUTION: ANGELINA

Foreground: PJ Fourie holding a bunch of striking Angelina onions.

Background: A beautiful photo of Angelina onions pulled and in the curing process in the Brits area.

Photo by: PJ Fourie

CONTENTS

- 4** onion evolution
6 crop rotation
9 angelina skud die uieemark
10 waltz with seagull summer lettuce
12 fertagchem lettuce trials
14 terra bueno & vitazyme trials in kzn
15 raagrassse maak hulle merk
16 summer crops for money in the bank
17 libeccio new italian rygrass
18 tomato diseases
21 hot sauce burn bambi burn
22 brachiaris from brazil
24 sporekill® stop the rot
26 saniwash clean it like you mean it
27 newbies & changes welcome to the hygrotech family
29 massmart initiative good news for emerging farmers
30 soyield eersteklas sojaboon genetica
32 pastures successful farmers day
34 vine crops what do we plant to make money

THE WEIRD AND ABSURD

Written by Theo Schoonraad



Theo Schoonraad

We all have times when intellectual, intelligent and sensible communication with our fellow man...or woman... becomes rather laborious, pretentious or down right boring. Be honest!

We all need a breather. Imagine a 'braai' or barbeque, sitting around a camp fire on a hunting trip, going on a fishing excursion or lying on the beach with family and friends, without jokes or silly/funny and useless facts to amuse one another with. Yes, alcohol often plays its part, but it is not compulsory.

Idle chatter is also not restricted and/or typical to commoners, oh no, some of the most intelligent and successful people are masters in the art. Probably because they realize the importance of winding down often. Nothing better for stress relief than just a serious session of laughter and talking utter nonsense for a sustained period. Believe it!

So, herewith some useless, absurd facts (they really are facts !) to add to your list for these sessions...

- Peanuts are one of the ingredients of dynamite.
- The national anthem of Greece has 158 verses.
- No word in the English language rhymes with month, orange, silver or purple.
- In California, USA, there is a law (still valid and in the Law Books) which prohibits animals, doves and birds from publicly mating with each other within 500 meters of any school, church or tavern ! Makes one wonder how this law is enforced ? Is this ridiculous, or what ?
- The shark is the only fish that can blink with both eyes.
- It's impossible to sneeze with your eyes open.
- The world's termites outweigh the world's humans 10 to 1.
- John Crapper invented the toilet. That is why we call it the John and the Crapper.
- Coca-Cola would be green if colouring weren't added to it.
- You can't kill yourself by holding your breath.
- Honey is the only food that does not spoil.
- Women blink nearly twice as much as men.
- Owls are the only birds who can see the colour blue.
- Months that begin on a Sunday will always have a 'Friday the 13 th'
- The average person laughs 10 times a day.
- Like fingerprints, everyone's tongue print is different.
- On average, 100 people choke to death on ball-point pens every year.

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George 044 870 7808

WESTERN CAPE

Stellenbosch 021 881 3830

Vredendal 027 213 5609

Ceres 023 316 209

Malmesbury 022 482 2570

This information is based on our observations and/or information from other sources. As crop performance depends on the interaction between the genetic potential of the seed and variety, its physiological characteristics, the environment including climate, disease pressure, water quality and quantity, management etc., we cannot give any warranty expressed or implied, for the accuracy, performance or applicability for the information, recommendations or products supplied, nor for the performance of crops or products relative to the information given, nor do we accept any liability for any loss, direct or consequential that may arise from whatsoever cause.

* These cultivars are not on the official cultivar list, but applications have been, or will be submitted.

ONION EVOLUTION

O NION PRODUCTION IN THE NORTHERN PARTS OF SOUTH AFRICA IS CHANGING AND EVOLVING, AND KEEPING PACE WITH THIS, IS IMPROVING SEED QUALITY, SEED GERMINATION, PLANT UNIFORMITY AND GENERAL BULB UNIFORMITY.



The onion market is changing year by year, weather patterns are changing, making it possible to plant onions earlier than ever before.

“ making it possible to plant onions earlier than ever before ”

Due to these changes in weather crucial problems are coming to the fore. Like always, Hygrotech have studied the relevant issues, done the homework, and come up with sustainable solutions to solve and decrease your risk.

PROBLEM AREAS IN EARLY PLANTINGS

ALL THE BELOW POINTS ARE INTERWOVEN WITH EACH OTHER:

- INTERNAL GREENING AND SPROUTING
- POOR OR DELAYED GERMINATION
- POOR BULB UNIFORMITY
- HIGH WEED PRESSURE
- POOR PLANT VIGOUR
- POOR SHELF-LIFE
- EARLY BULB
- POOR YIELD



What is really happening? Onion seed is extremely sensitive to high temperatures. Exposure to temperatures of 35°C and above for as little as one hour can delay germination by as long as 21 days. Exposure to too high temperatures for longer periods can place onion seed in a state of dormancy. Delayed germination and poor vigour by as much as 30% can be expected.

Every variety and seed size has a different tolerance to exposure to too high temperatures. Even more challenging is that it differs from seed batch to seed batch every season. Therefore Hygrotech monitors vigour and germination of every seed lot on a regular basis.

“ Planting seed in February (one of the hottest months of the year) will always be risky due to high soil temperatures. ”

Planting under centre pivots is a lengthy task and can't always be completed in one day. Therefore seed is automatically exposed to extremely high temperatures.



Poor stand due to uneven germination will result in bigger and smaller plants in the field. This will lead to difficulty in timing to start your herbicide spray program. Unfortunately, some smaller plants that germinated later will either be killed by the herbicide or placed under stress. (The stronger plants will become stronger and the smaller plants weaker or stagnant).

The smaller plants exposed to herbicide will automatically be more prone to early bulb than the stronger plants.

The weaker, stressed plants will also be more prone to attack by bacterial and fungal disease. (Lower resistance) This way you will be increasing your fields' bacterial population resulting in a higher spread of the disease by water splash and runoff from the centre pivot.

The weaker stressed plants will not be able to grow out to true 13 leaf potential resulting in plants falling over prematurely. These bulbs will have either internal greening or sprouting in storage.

All the above have a direct influence on yield, bulb uniformity, pack-out, shelf life and overall price per bag.

" Hygrotech has come up with solutions to lower your risks, improve your overall production of onions, and reduce the vicious circle of poor onion quality. "

- All our Onion seed will be graded in sizes (only the bigger seed grading will be sold for February plantings). The graded seed will result in a more uniform plant stand.
- Plan your direct seeding at night or plant very early mornings, before the heat of the day. Make sure the centre pivot has run over the field prior to the hottest time of the day.
- Plant out you pivots in quarters to decrease the risk of seed being exposed to high temperatures as little as possible.
- Specialized seed coatings with build in fungicides and colouring to improve the visual effect at seeding and germination.

The above solutions lower your risk and improve your yield by as much as 5-7% Why?

More uniform, quicker germination results in stronger plants, less late germinating seeds, less stressed plants, lower disease pressure. More uniform plants result in more uniform bulb size distribution. More uniform plants result in more even plant fall, easing the irrigation management at bulb sizing. The first 12-20 days pretty much determines the rest of your crop's future.

BUY HYGROTECH AND FEEL ASSURED TO GET THE BEST OF

THE BEST.



BOSVELD UIE

DIE DRIE MUSKETIERS

Die wye reeks van kultivars wat Hygrotech bied gee aan die kliënt die geleentheid om sy produksietyd te verleng en so ook sy inkomste tydperk.

Met die toevoeging van Python, Morena en Fernanda* word die bestaande kultivars Sirius, Charlize en Angelina ondersteun.

Verskeie proefaanplantings is in verskillende streke in die Bosveld gedoen en dit is duidelik dat die drie variëteite 'n groot bydrae tot elke uieboer se winsgewendheid kan maak.



DIE AANBEVOLE PLANTTYE VAN DIE DRIE MUSKETIERS IS:

PYTHON	10 Desember – 6 Januarie
MORENA	20 Desember – 25 Januarie
FERNANDA*	7 Januarie – 7 Februarie

VOEG HIERBY DAN:

SIRIUS	7 Februarie – 25 Februarie
CHARLIZE	25 Februarie – 25 Maart
ANGELINA	25 Februarie – 15 April
EN WEER SIRIUS	15 April – 10 Mei

en 'n uiters winsgewende plantprogram kan saamgestel word.

Op meegaande fotos kan die eindproduk van Python, Morena en Fernanda* gesien word.

KONTAK GERUS DIE BOSVELD VELDBEAMPTES VIR VERDERE INLIGTING EN VERSEKER SO DAT JY DEEL IS VAN 'N WENSPAN.

THEUNIE SNYMAN

Louis Trichardt, Musina en Vivo – 083 443-1913

STEPHEN LE ROUX

Polokwane, Mokopane, Roetan en Dendron – 071 331-5344

PIETER VORSTER

Ellisras, Tom Burke en Baltimore – 072 603-5428

HERMAN DE BEER

Besigheids Eenheid Leier: Bosveld – 082 802-3827

CROP ROTATION

HISTORICAL PERSPECTIVE

There was a time when the use of long-term crop rotations figured prominently in every farmer's plan to boost soil fertility and control crop pests and diseases. Since the 1950's however farmers have replaced crop rotations with modern practices such as using synthetic fertilisers to supply annual crop nutrients and applying agri-chemicals to control pests and diseases.



THE USE OF INTENSIVE CROPPING, PLANTING THE SAME MONOCULTURE EVERY YEAR HAS A NEGATIVE IMPACT ON THE SOIL

The use of intensive cropping for the past 50 years has caused some negative impacts on our environment, especially our farm soils.

Today, the biggest risks for farmers are declining soil quality and increasing environmental degradation.

As a result, researchers are once again focusing on crop rotations as a primary way to attain sustainable crop production and improved yields.

WHAT IS CROP ROTATION?

Crop rotation is a series of different crops planted in the same field following a defined order to prevent problems usually experienced by monoculture plantings. The main problem with monoculture plantings is the increase in crop specific pests and diseases over time.

Another problem observed is that continuously growing the same crop on the same soil will tend to exploit the same soil root zone which can lead to a decrease in available nutrients for plant growth and to a decrease in root development.

BENEFITS OF CROP ROTATION

- Many crops may have positive effects on succeeding crops in the rotation, leading to increased production.
- Rotations may help with weed control. Some crops like potatoes and squashes, with dense foliage or large leaves, suppress weeds, thus reducing maintenance and weed problems in following crops.
- One of the main benefits of crop rotation is the control of pests and diseases. Soil pests and diseases tend to attack specific plant families over and over again. By rotating crops between sites the pests tend to decline in the period when their host plants are absent which helps reduce build-up of damaging populations of spores, eggs and pests. Common diseases that can be helped avoided by rotation include clubroot in brassicas and onion white rot.



A POTATO CROP WITH DENSE FOLIAGE WILL SUPPRESS WEED GROWTH

- Rotations may also give benefits in terms of improved soil quality (more or deeper roots, root exudates), better distribution of nutrients in the soil profile (de-rooted

crops bring up nutrients from below) and to increase biological activity).

- Rotations will benefit soil fertility. Different crops have different nutrient requirements. Changing crops annually reduces the chance of particular soil deficiencies developing as the balance of nutrients removed from the soil tends to even out over time.
- Through rotations, peak labour times may be reduced and labour better distributed throughout the year, if planting and harvest times are different.
- Crop rotations may decrease risk as bad seasons may affect some crops more than others.

IMPORTANT FACTS ABOUT CROP ROTATION

- Many of the benefits of crop rotations are not completely understood and often cannot be predicted: rotations need to be tested in the field.
- The best economic returns from rotations can be expected if legumes are included because of the nitrogen they add to the system.
- Rotations alone are not sufficient to maintain crop productivity – extracted nutrients have to be replaced by fertilisers and/or manure.
- The most effective rotations combine crops with different growth strategies (deep rooting vs shallow rooting; nutrient accumulating vs nutrient depleting; water accumulating vs water consuming).



INCREASED GRANULAR STRUCTURE AND FRIABLE CONSISTENCE

EFFECTIVE CROP ROTATIONS

Rotations are most effective when combined with such practices as manuring, composting, cover cropping, green manuring and short pasturing cycles.

Together, these practices create soil quality improvements such as increased soil aggregate stability, decreased crusting of soil surfaces and increased granular structure and friable consistence.



ROTATIONS THAT INCLUDE SOD, PASTURE, OR HAY CROPS ALSO HELP TO DECREASE BULK SOIL DENSITY, WHICH CAN GREATLY IMPEDE ROOT GROWTH AND NUTRIENT FLOW.

METHOD OF ROTATION

Generally crops in the same family should not follow one another in the field.

A rotation of families might include Brassicaceae (cole crops), followed by Asteraceae (lettuce), followed by Solanaceae (tomatoes, peppers, potatoes, eggplants), followed by Cucurbitaceae (squashes, cucumbers, melons).

The longer the rotation the better, but the usual length is 4 years. If the soil is already infected with persistent problems such as nematodes or clubroot, try to extend the rotation of susceptible crops even further.

WHERE THERE IS A HISTORY OF PROBLEMS WITH LONG-LIVED PATHOGENS, THE FOLLOWING PRACTICES HAVE PROVEN TO BE BENEFICIAL:

Terra Nova
Reg. No. 8444 Act 36/2011

NATURAL FERTILISER

COMPOSTED CHICKEN MANURE BASED
HYGROTECH
SUSTAINABLE SOLUTIONS

- Soil solarisation
- Compost additions
- Use of resistant varieties
- Long rotations

HYGROTECH HAS A CHICKEN MANURE BASED ORGANIC FERTILISER RANGE

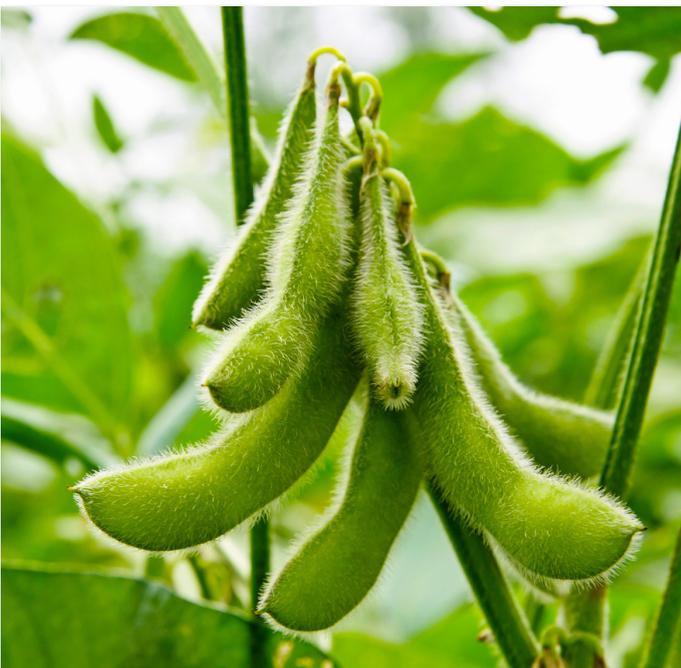
As a general rule, a two-year rotation will reduce the incidence of foliar diseases because a primary source of inoculums for infection is often the infected tissue from previous crops. Generally, that tissue will be well decomposed in two years, and any inoculums. For example, most of the inoculums for early blight in tomatoes, *Cercospora* of cucurbits, and most foliar bacterial diseases can be eliminated by destruction and incorporation of residues and a one-year waiting period before replanting.



CROP ROTATION IS MOST EFFECTIVE IF A GREEN MANURE IS INCLUDED IN THE CYCLE

HARD CASE PATHOGENS

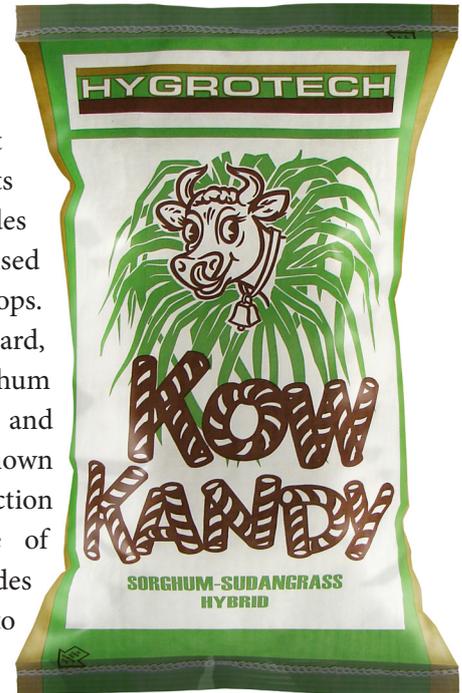
Some particularly troublesome pathogens in the soil can be controlled by relatively short rotations of specific plants that are unsuitable hosts for the disease. An example is Southern bacterial wilt in tomatoes. Crop rotation is successful against this disease because these bacteria do not multiply in the soil without susceptible plant tissue. Planting a non host crop, such as soybeans, fescue, corn, cotton and sorghum for just one year will significantly reduce the losses to this disease in the following tomato crop.



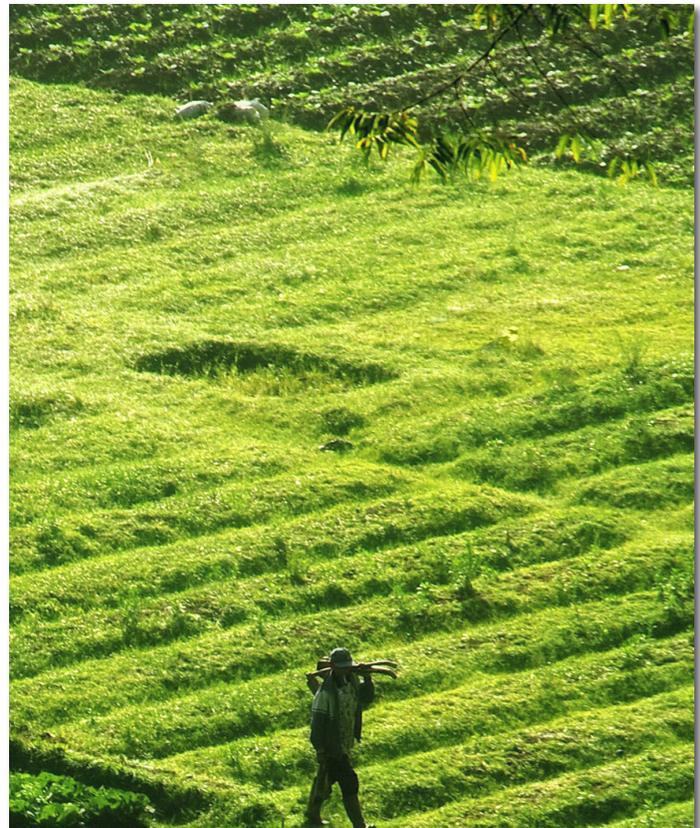
ALTERNATE TOMATO CROPS WITH SOYBEAN TO REDUCE CROP LOSSES DUE TO SOIL BORNE PATHOGENS

NEMATODE MANAGEMENT

Susceptibility to parasitic nematodes is another consideration in planning crop rotation. Generally, rotations should separate a crop sensitive to a particular nematode, say root knot nematode, with crops that are not sensitive or easily infected by that nematode. Green manure crops that do not serve as hosts to problem nematodes are sometimes used as intervention crops. Rapeseed, mustard, velvet bean, sorghum sudangrass and sunn hemp have shown insensitivity to infection by a wide range of parasitic nematodes and are often used to "clean up" soil.



COW KANDY AS SOLD BY HYGROTECH IS A HYBRID SORGHUM SUDAN GRASS AND IDEAL TO "CLEAN" SOIL FROM NEMATODES



REFERENCES

- CROP ROTATION. ROYAL HORTICULTURAL SOCIETY. 2011
 C. THIERFELDER & P.C. WALL. THE IMPORTANCE OF CROP ROTATIONS.
 K.R. BALDWIN. 2006. CROP ROTATIONS ON ORGANIC FARMS.

NEW EXPLOSIVE BUTTERNUT RANGE

ATOM

- VERY UNIFORM IN SHAPE AND SIZE
- HIGH YIELD POTENTIAL
- WEIGHT: 1.5 - 2.5 KG
- MATURITY: 90-110 DAYS



B52

- VERY UNIFORM IN SHAPE & SIZE
- CAN BE PLANTED IN EARLY & LATE SLOTS
- WEIGHT: 1.2 - 1.6 KG
- MATURITY: 90 DAYS



TNT

- VERY GOOD PLANT VIGOUR
- PERFECT FOR THE PROCESSING MARKET
- WEIGHT: 1.6 - 2.0 KG
- MATURITY: 90-110 DAYS



NEUTRON

- ONE OF THE FIRST VARIETIES TO CLAIM MILD RESISTANCE TO ZUCCHINI YELLOW MOSAIC VIRUS, POWDERY MILDEW AND ALTERNARIA
- WEIGHT: 1.2 - 1.5 KG
- MATURITY: 90 DAYS



TORPEDO

- MILD RESISTANCE TO ZUCCHINI YELLOW MOSAIC VIRUS AND POWDERY MILDEW
- EXPORT QUALITY FRUIT
- WEIGHT: 1.4 - 1.8 KG
- MATURITY: 95 DAYS



Opgestel deur: Herman Bosman, Areabestuurder Gauteng
en Lourens Ras, Veldbeampte Brits

ANGELINA

SKUD DIE UIEMARK

"... ek wil nie in een jaar ryk word nie, maar 'n konstante hoë kwaliteit oes lewer, Angelina sal jou nooit teleurstel nie." - Bekende boer van Brits.

Angelina word reeds 'n paar jaar deur Hendrie Hills van die plaas Geluk in Brits geproduseer met reuse sukses. Die afgelope seisoen is die eerste aanplanting gedoen op 10 Februarie en die laaste aanplanting in die laaste week van Februarie. Die eerste uie het geval teen middel Junie en hy kon reeds begin bemark in die eerste week van Julie.



Verskeie ander suksesvolle aanplantings in die gebied het ook net weer gewys Angelina gee die pas aan in die vroeë tydsgleuf.

VOORDELE:

- Minder geneig tot saadskiet
- Uiters eenvormige bolgrootte en eenvormigheid
- Goeie skilverbruining (curing)
- Kan vroeër ge-oes word en die risiko vir Witbolvrot (*Sclerotium cepivorum*) verminder
- Minder vergroening
- Dun nek
- Meer aanpasbaar tov planttye (10 Feb – 30 Maart)
- Verwagte opbrengs tussen 55 en 75 ton per hektaar





Waltz with Seagull...

Written by Leon Grundlingh
Product Manager:
Brassicas, Leaf crops, Legumes & Sweetcorn

L SUMMER LETTUCE - FOCUS WESTERN CAPE

Lettuce growing in the summer months can be very tricky. The combinations of rain, wind and high temperatures causes the plants to suffer from sunburn, bolting and not forming good quality heads.

In the Western Cape, we do not have the summer rain, BUT we have got warm, dry winds and high temperatures, sometimes soaring above 40°C. Sandy soils with a low water holding capacity, puts even more pressure on lettuce growers.

In the search for ultimate varieties that perform well under these harsh conditions, Hygrotech has done extensive work in the Joostenberg area this past season. These trails were initiated by the question: "what is best for summer on my farm?"



EISH, SAULA AND SEAGULL

The score of each variety was calculated and a weight assigned to it. The farmers' ratings was deemed the most critical. All the data were recorded over a five month period by Neil and the results were given to the respected seed companies after the final evaluation. These results exceeded Hygrotechs' most optimistic expectations and we can now with confidence recommend the following:



LEON WITH NEIL & MARIUS FROM RADICAL SEEDLINGS

Marius Langenhoven and Neil Pretorius from Radical Seedlings (formally known as Propagating Plants) invited all the interested seed companies to include their summer iceberg lettuce varieties in these trails. Seedlings of 14 varieties were propagated from week 41. These entries, including standard varieties, were coded and planted on Edwern Heim, where Rudi Engelke grows, amongst other crops, Iceberg lettuce on a large scale. These trails were included in commercial fields of lettuce to keep the playing field even.

Evaluations were done by a group of people, including the farmer, nurserymen and representatives of the seed companies. The evaluation criteria included overall appearance, tolerance to diseases and sunburn, frame of the plants, head form, shape and mass and % harvestable heads.



WALTZ

The best performing varieties for picking mid- December to end-January are Oriola (1), Saula (2), Seagull (2), and Eish (4). The numbers in brackets indicate final position in the 14 varieties trail.



ORIOLA

To extend the summer picking into February and March, Seagull (1) performed the best.

The next slot was autumn, the months of April and May. In these months the best performers were Waltz (1) and Pedrola (1).



WALTZ TRIMMED FOR PACKING



WINTER RAINFALL REGION

PLANTING GUIDE FOR ICEBERG LETTUCE

VARIETY	Jan	F	M					A	M	J	J					A	Sept					O	N	Dec		
	Week										Week															
	1	3	5	7	9	11	13	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51
Acula BI 1-27, Nr						S	S	S	S	S	S															
Botiola BI 1-27						S	S	S	S	S	S															
Waltz BI 1-26, Nr	S	S	S	S	S							S	S	S	S	S										S
Pedrola BI 1-27, Nr	S	S	S	S	S							S	S	S	S	S										S
Oriola BI 1-27, Nr	P	P	P														S	S	S	S	S	S	S	S	S	S
Cooler summer Saula & Papiro BI 1-16,21,23	H	H	H	H	H																H	H	H	H	H	H
Seagull BI 1-27	P	P	P														S	S	S	S	S	S	S	S	S	S
Eish!	P	P	P	P	P	P	P	P												P	P	P	P	P	P	P

The information provided is given in good faith as a general guide only. Significant variations may occur due to geographic location, climate, soil type, soil conditions, cultural practises and other grower and development factors.

BI=*Bremia lactucae* (Downy mildew) Nr=*Nasonovia ribisnigri* (Lettuce leaf aphid) P=Planting S=Sowing H=Harvesting

CONTACT THE HYGROTECH TEAM AND GROW WITH US.



FERTAGCHEM

TRIALS & NOT TRIBULATIONS



BEING AN AGRICULTURAL COMPANY, WE NEVER REFUSE THE TEMPTATION TO DO TRIALS AND TO “FARM” AS MUCH AS WE POSSIBLY CAN, BECAUSE THAT IS WHAT WE WERE BORN TO DO. THOUSANDS OF FARMERS LOOK AT US TO HELP THEM TO PROVIDE MORE FOOD, WITH LESS SOIL, THE SIGNS OF OUR TIMES. HYGROTECH ALREADY HAVE A FULL RANGE OF FERTILIZERS, FUNGICIDES AND PLANT MANIPULATION PROGRAMMES, IT ONLY MAKES SENSE FOR US TO GIVE MORE INFORMATION AND TRIAL DATA OF OUR PRODUCTS. FOR THAT REASON, MORE AND MORE TRIAL INFORMATION OF DIFFERENT PRODUCTS WILL BE GIVEN, NOT JUST TO SHOW WHAT WE HAVE DONE SO FAR, BUT ALSO TO IMPROVE ON WHAT HAS BEEN DONE BEFORE.

One of the recent FertAgChem trials saw the production of cauliflower, cabbage and lettuce with the use of three different fertilizer types, namely natural, traditional and a mixture of natural and traditional. At the moment, only lettuce has been harvested and evaluated. Cabbage and cauliflower are still growing and will be harvested in the next month.



NATURAL BLOCKS:

In these blocks, only natural fertilizers were applied to feed the crops. These include blends of the enriched composted chicken manure range we call the Transition range with a 7:7:7 (21) and 9:2:9 (20) formulation.

TRADITIONAL BLOCKS:

In these blocks, no natural fertilizer was applied. The fertilizer programme included MAP, 3:1:5 (26), Hygroponic, solucal and NC32.

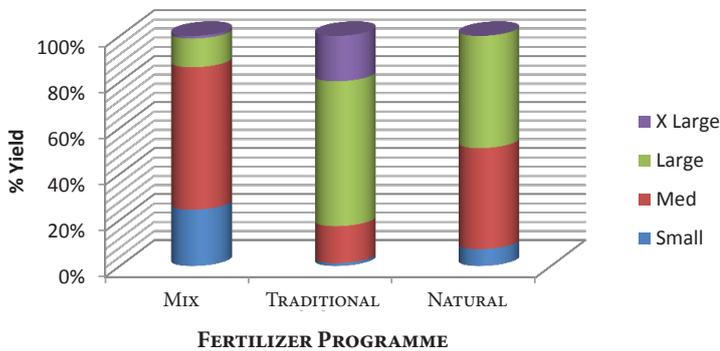
MIXTURE BLOCKS:

In these blocks, natural fertilizers were used in conjunction with 3:1:5 (26) and Hygrotech water soluble fertilizers, like Hygroponic and Solucal.

The total N, P and K applied in various blocks of each crop were equal but fertilizer types different.

One of the major evaluation parameters of lettuce was the size of the lettuce heads, as seen below.

SIZES PER PROGRAMME - LETTUCE:



Note that none of the three fertilizer programmes gave unmarketable heads because of size.



The trial is not yet complete because we are still going to evaluate the last two repetitions. However, to me the interesting highlight of the trial is that: despite the fact that no micronutrients were applied in the natural blocks, the natural fertilizers gave very good results with about 44% of the heads being medium size and 49% being large. Due to the fact that leaching of nutrients is lower when natural fertilizers are used, in the natural block, fertilizer was applied in large quantities divided into three parts. Contrary to this, in other blocks, fertilizers were applied in about 10 various applications. Therefore huge savings in labour in the natural blocks.



TWO MORE REPETITIONS OF THE TRIAL WILL BE PLANTED FROM OCTOBER 2013 TO JANUARY 2014. WE BELIEVE THAT THIS KIND OF TRIALS WILL GIVE VALUABLE INFORMATION ON FERTAGCHEM PRODUCTS.

TERRA BUENO & VITAZYME

TRIALS IN KZN

North and South of Pietermaritzburg trials with Terra Bueno and Vitazyme are being done with sugar cane farmers at planting. Farmers showing an interest in a sustainable farming concept have committed to these trials. Although harvesting of the crop is still pending, very pleasing visual and physical signs of success are emerging. Terra Bueno is a chemically enriched fertilizer consisting of an average of 3% N, 3%P and 3% K with the base being composted chicken litter. The soil is receiving benefits from slow release organic nutrients and the improvement of cation exchange capacity in the soil. The stimulation of micro-organisms and the availability of organic acids (3%-6%) all contribute to a healthy and productive soil structure.

TerraBueno

Vitazyme is applied in the furrow over the sugar cane sets and will stimulate the indigenous soil micro-biota thus improving the availability of soil nutrients. Application is 1lt/ha.



Visuals of the cane in the photos were taken in the Wartburg area which has a growing period of 18 months before harvest.



CANE PLANTED MID SEPTEMBER 2012
PICTURE TAKEN IN OCTOBER 2012



SAME CANE FIELD SHOWING HEALTHY VIGOROUS
PLANTS IN JANUARY 2013



PLANTS REACHING THE CANOPY STAGE STILL LOOKING
HEALTHY AND VIGOROUS (MARCH 2013)

The following pictures were taken in the Highflats area which has a 16 month growing period before harvest.



THE LEFT HAND SIDE OF THE FIELD IS TERRA-BUENO (500KG/HA) AND VITAZYME (1LT/HA) ON THE RIGHT HAND SIDE OF THE PICTURE IS THE NORMAL CONVENTIONAL CHEMICAL FERTILIZER TREATMENT APPLIED AT THE SAME RATE

The picture below shows the growth of the cane sticks taken randomly from both the trials above (control and conventional methods). The left stick has shortened internodes taken from the conventional fertilizer trial and the right stick, taken from the Terra/Vitazyme Trial has a more even growth pattern shows signs of less stress.



Watch this space for the conclusion of trails after harvesting the cane.

Anyone wanting more results of trials with Vitazyme in the following countries (East Java, Indonesia, Cuba and Ecuador) please contact your relevant Field Officers.

Written by Theo Schoonraad
Voer en Weiding

HYGROTECH RAAIGRASSE

maak hulle merk

IN DIE VERRE NOORDWESTE VAN ONS LAND, IS RAAIGRASSE UIT DIE HYGROTECH-STAL BESIG OM STIL-STIL 'VELD TE WEN'.

Mnr. Jacques Swart van die plaas Mooirus in die Louwna-distrik, het as gevolg van die droogte in daardie gebied besluit om 'n nuwe spilpunt op te rig en vir sy beste aangeplante weiding beskikbaar te stel.



Die afgelope seisoen is 50 hektaar en 20 hektaar met eenjarige Westerwold-tipe raaigrasse, Lolan en Jivet onderskeidelik, aangeplant en Jacques is baie tevrede met die grasse se produksie-opbrengs.



Daar word tans 400 koeie en kalwers op die 20 hektaar Jivet aangehou.

Mnr. Swart boer met 2000 stoet vroulike diere en sy Malemba Simbra Stoet word tans beskou as een van die beste in die land.

SUMMER CROPS

for money in the bank

WITH SPRING ON THE DOOR STEP, IT IS TIME FOR EVERY STOCK FARMER IN THE CENTRAL AND NORTHERN REGIONS TO DUST OFF THEIR PLANTERS. ONCE THE FIRST RAINS HAVE SOAKED THE SOIL, OUR PASTURES WILL BE READY FOR THE FIRST BATCH OF FODDER AND PASTURE SEED FROM THE HYGROTECH STABLE.

Crop selection is a simple yet methodical process that has to be approached with care to ensure the right crop is cultivated for every farmer's specific set of circumstances. Producers need to take rainfall, soil type, budget, and use into consideration when selecting a suitable crop.



For producers that need a cheap, fast, hardy annual grower with maximum yield, an annual forage crop would be first choice. Kow Kandy, Right On, and Hy Pearl Millet are three widely adapted annual forage crops with tried and tested drought hardiness. For farms where an ultra fast growing grazing crop is needed from November to March and in some cases May, farmers can opt for Kow Kandy or Right On with confidence. For farms where rainfall is unreliable and hardiness is a selling point, Hy Pearl Millet is a prime candidate. Hy Pearl Millet has become well known for its production of palatable fodder under even the most severe conditions in central and northern parts of the country.



Another addition to the Hygrotech stable from South America is the much anticipated Big Dog. This forage sorghum has been specially bred to compete in the Silage market. Big Dog delivers on all fronts with exceptional yield, standability and nutritional content, all of which are crucial in the production of good sorghum silage. Big Dog has a price and yield advantage over most silage maize varieties and compares exceptionally well with maize on nutritional value.

For the producer that is set on producing hay, or has to factor in a perennial crop in his fodder bank, the old trusted perennial grasses such as Rhodes, Smuts Finger, Eragrostis, White and Blue Buffalo can be cultivated. Your Hygrotech representative will be able to assist you in selecting the grass best suited to your area and demands.



A new buzz word, *Brachiaria*, has popped up under pasture farmers and is now also available from Hygrotech. Various *Brachiaria* varieties were trialed recently by renowned pasture specialist Professor Chris Dannhauser. It was under his keen eye and scrutinising that the top varieties were selected, ensuring only the best is available to our clients (read more on the *Brachiarias* on page 22)

Silage maize has long been a safe bet for farmers that need to produce large volumes of feed in a short as possible window. Hygrotech has access to Silmaster, a well known and well proven silage maize that has been cultivated with success in almost every stock producing area in South Africa.



Once a suitable crop has been selected, farmers can rest assured that Hygrotech will not only be able to supply them with fodder and pasture seed of exceptional performance but can also render other crucial services to our clients who will be cultivating such crops this season. Hygrotech boast one of the most comprehensive fertilizer, biological and foliar ranges currently on the market. Speak to your representative regarding these products, as well as our soil analysis and fertilizer recommendation services.



For more information regarding these and other pasture crops contact your nearest Hygrotech branch, representative or send us a mail at:

voerenweiding@hygrotech.co.za

happy summer farming!

Written by Robert Young
Business Unit Leader: Southern Cape



New Italian Ryegrass

Hygrotech has yet another variety to strengthen its already very competitive, high yielding, high quality forage division by adding another strong competitor Italian type ryegrass by the name of LIBECCIO.....

The tetraploid Italian ryegrass variety LIBECCIO has a good yield potential and produces palatable fodder of high quality. LIBECCIO is a good rust resistance variety with very good persistency.

Main Characteristics (score max 5)

• Persistence	4
• Rust resistance	4
• Yield	3
• Seed/Ha	25 kg

The use of LIBECCIO fits in perfectly for planting before the winter in March until June and will constantly perform and produce high quality forage in the cold winter months. When planting after the winter, in spring (September and October) LIBECCIO will perform very good if irrigation is available. The producer will then have grown very good quality forage for summer.

In our annual forage trial at George we have planted LIBECCIO against all other Italian ryegrass varieties and the results so far are absolutely astonishing. We are looking forward to see how LIBECCIO does when grown under normal conditions when being grazed and when handling hoof traffic.

Not to forget about our flagship in the Italian segment, the Italian stallion JEANNE must not be overlooked when planting in spring (Sept,Oct). JEANNE has been the top variety for many producers and still doesn't disappoint.

Main Characteristics

Jeanne has an impressive DM Potential
Jeanne has the "legs" to maintain its superior potential over a very long growing season
Jeanne has an excellent disease resistance package and very good standing ability

BE SURE TO LOOK OUT FOR THIS NAME IN FORAGE CIRCLES & CONTACT YOUR NEAREST HYGROTECH OFFICE FOR FURTHER INFORMATION.

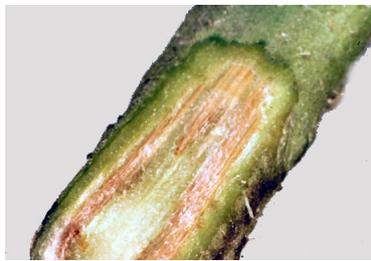
TOMATO DISEASES:



TOMATOES ARE ECONOMICALLY AND GASTRONOMICALLY ONE OF THE MOST IMPORTANT VEGETABLE CROPS. UNFORTUNATELY DISEASES ALSO LOVE IT AS A FOOD SOURCE.

FUSARIUM & VERTICILLIUM:

Soil borne fungi that cause vascular wilt diseases in tomatoes. Most varieties are resistant to *Verticillium* and *Fusarium* race 1 and 2. Race 3 was first reported in Brasil in 1966 and has recently been identified in the US and even South Africa. So far resistance found to race 3 is monogenic causing concern that the pathogen could eventually overcome this resistance.



THE FOLLOWING CONDITIONS FAVOUR THE DEVELOPMENT OF *FUSARIUM*:

- Soil and air temperature of 28°C
- Soil moisture optimum for plant growth
- Plants low in N and P and high in K
- Low soil pH
- Low light intensity
- Root damage from improper cultivation

HYGROTECH SOLUTION: PLANT *FUSARIUM* RACE 3 RESISTANT VARIETIES:

- *Sylviana** (IR), *Whoopee**, *Julia** & *Isabel** (DS)



WHOOPEE*

Ensure that Calcium levels within the plant is optimal. Optimal Calcium helps to keep cell walls strong helping to prevent pathogen infection. Use SoluCal (Ammonium-free Calcium Nitrate).

TOMATO SPOTTED WILT VIRUS (TSWV):

TSWV is spread by Western Flower thrips which is very difficult to control. TSWV causes distinctive yellow ring spots on mature fruit. Foliage can also be affected with plants stunted and tip leaves showing a purplish discoloration.



HYGROTECH SOLUTION: PLANT TSWV RESISTANT VARIETIES:

- *Big Red**, *Mkuze**, *Amaneta**, *Afamia**, *Alfar**, *Sylviana**, *Roxanne**, *Sisley*, *HT 083** (IR)
- *Cristina**, *Granadero*, *Pamela* (IS)
- *Degas*, *Scarlet**, *Settler* (DR)
- *Jennifer**, *Whoopee**, *Julia**, *Isabel**, *Cameron** (DS)



ROXANNE*

Once a virus has infected a plant there is no chemical that will eradicate this infection. There are however procedures that can be put in place to keep the plant healthy and “live with the virus”.

Ensure good nutrition that includes all required nutrients in a balanced program with soil and water taken into account. Open field hydroponics with Hygroponic as base is used very successfully.

Plant manipulants like Grotonic will help strengthen the plants own resistance system as well as help distribute metabolites to the places the plant needs them most.

TOMATO YELLOW LEAF CURL VIRUS (TYLCV):

Infected tomato plants initially show stunted and erect or upright plant growth. However the most diagnostic symptoms are those in leaves. Leaves of infected plants are small, curl upward and show strong crumpling and interveinal and marginal yellowing. The internodes of infected plants become shortened and, together with the stunted growth, plants often take on a bushy appearance. Fruit production is dramatically reduced, particularly when plants are infected at an early age. TYLCV is transmitted by *Bemisia* whitefly.



HYGROTECH SOLUTION: PLANT TYLCV RESISTANT VARIETIES:

- **BIG RED***, **HT 083***, **MKUZE***, **TYMAXX***, **ALFAR***, **SYLVIANA***, **ROXANNE*** (IR)
- **LOJAIN*** (DR)
- **JULIA***, **ISABEL*** (DS)



ALFAR*

Same cultural practices as with TSWV should be employed as well as early application of registered products against White Fly.

Biological control measures are available to help control White Fly (Nesibug).

EARLY BLIGHT (ALTERNARIA SOLANI):

Early blight is also known as *Alternaria* leaf spot or target spot. Premature loss of lower leaves is the most obvious symptom of the disease. Warm, wet weather favours rapid spread of early blight. Early blight can infect plants at any stage during the growing season but usually progresses most rapidly after plants have set fruit.



TO CONTROL ALTERNARIA LEAF SPOT A COMBINATION OF CULTURAL PRACTICES

IS OFTEN NEEDED:

- Do not crowd transplants in order to help foliage dry rapidly
- Water at the base of the plant and in the morning rather than evening to minimise time that leaves are wet
- Remove plant debris (disease overwinter in residues)

- Rotate crop
- Avoid working with wet plants to avoid spreading of disease
- Fungicide can be used
- Avoid potato in rotations and harvest all ripe fruit at every picking to avoid infecting other fruit.

HYGROTECH SOLUTION:

Preventative control with Copper Count-N (Liquicop) should start shortly after transplant before symptoms appear and repeated every 7-14 days, depending on the weather conditions and infection pressure.

ANTHRACNOSE (COLLETOTRICHUM COCCODES):

This is probably the most common fruit attacking disease of tomato. Symptoms first become visible on ripe or ripening fruit as small, circular, indented spots in the skin. As these spots expand, they develop dark centres or concentric rings of dark specks. Anthracnose appears most commonly on overripe fruit. Spores are spread largely by rain splash. Warm, wet weather causes the disease to spread and symptoms to develop. Control measures same cultural practices as for *Alternaria*.



HYGROTECH SOLUTION:

Reduce infection pressure by disinfecting plants during periods of high humidity and temperatures with Sporekill (Reg. no. ACT29GNR529/27555/070/210)

LATE BLIGHT (PHYTOPHTHORA INFESTANS):

Can devastate tomato plantings during periods of cool, rainy weather. Late blight may infect upper or lower leaves. It first appears as water-soaked areas that enlarge rapidly, forming irregular, greenish black blotches. Control measures same cultural practices as for *Alternaria*.



HYGROTECH SOLUTION:

Reduce infection pressure by disinfecting plants during periods of pressure, especially after the first harvest has commenced with Sporekill (Reg. no. ACT29GNR529/27555/070/210)

BACTERIAL SPOT (XANTHOMONAS CAMPESTRIS PV. VESICATORIA):

Bacterial spot infects both tomato and pepper. Spots that appear on leaves and stems are small, circular to irregular in shape and have a slightly greasy feel. Fruit symptoms are more distinctive than leaf or stem symptoms. Spots on green fruit first appear as black, raised, pimple-like dots surrounded by water-soaked areas. As the spots



enlarge they become gray-brown and scabby with sunken, pitted centers. Warm, rainy weather favors rapid spread of bacterial spot. Control measures are essentially the same as for *Alternaria*. However, obtaining disease-free transplants is crucial and avoid rotating with peppers. It is advisable to avoid handling plants (pruning and tying for example) any more than necessary as wounds caused by handling allow bacteria to enter plants.

BACTERIAL SPECK (*PSEUDOMONAS SYRINGAE* PV. *TOMATO*):

Bacterial speck does not affect pepper or other solanaceous crops but may survive on non host plants. Tiny dark spots appear on leaves, surrounded by yellow halos. However, as with bacterial spot and canker the fruit symptoms are most characteristic. The numerous specks that develop on young green fruit are slightly raised and have well defined margins. The specks are considerably smaller than the spots caused by Bacterial spot, do not penetrate the fruit deeply, and can be scraped off with a fingernail. Infection is favoured by cool (less than 21°C). Epidemics often follow rainstorms that cause abrasion of leaves and splash soil onto the foliage.



FOR CONTROL FOLLOW THE SAME CULTURAL MEASURES AS FOR *ALTERNARIA*.

HYGROTECH SOLUTION: PLANT RESISTANT VARIETIES:

- DOMINGO, HTX14 TURBO, QWANTO, KAMATLA (P)
- JENNIFER*, KATIA*, WHOOPEE*, JULIA*, CAMERON* (DS)



JENNIFER*

Copper Count-N (Act 36, 1947; Reg. No. L2602) is registered as an early preventative control for both Bacterial Speck and Spot.

Infection and spread of both diseases is worsened by free water, high plant density as well as excessively vegetative conditions and growth. Ensure good nutrition, especially sufficient Calcium.

Good cell wall strength (bacterial infection reduced) may be improved with the regular application of Calmabon Plus as well as the use of Ammonium free SoluCal Calcium Nitrate.

BACTERIAL CANKER (*CLAVIBACTER MICHIGANENSIS* SUBSP. *MICHIGANENSIS*):

Bacterial canker can cause serious losses in tomato plantings. Young transplants may wilt suddenly and completely. On older plants, leaflets begin to turn brown at the edges, then die back progressively toward the leaf midrib. Often only one side of a leaflet or a plant develops symptoms first, but symptoms eventually spread.



HYGROTECH SOLUTION:

Use seed only from a trusted source: Hygrotech sources seed only from seed-houses that do extensive testing to ensure that seed is free from this pathogen.

Disinfection and hygiene: Sporekill® (Reg. no. ACT-29GNR529/27555/070/210) plays a major role in preventing and eradicating this disease.

NEMATODES (*MELOIDOGYNE* spp.):

Root knot nematodes cause characteristic galls on roots. These galls interfere with the flow of water and nutrients to the plant. Infected plants appear less vigorous than healthy plants, may be yellowed, are prone to wilt in hot weather and respond poorly to fertiliser. Several varieties are resistant to nematodes and should be used where nematodes are present. Rotation with resistant varieties and non host crops is as effective as fumigation.



HYGROTECH SOLUTION: PLANT RESISTANT VARIETIES:

- BIG RED*, HT083*, MKUZI*, AMANETA*, AFAMIA*, ALFAR*, SYLVIANA*, ROXANNE*, MONET, SISLEY (IR)
- CRISTINA*, SAVANTAS, GRANADERO, PAMELA (IS)
- DEGAS, SETTLER (DR)
- JULIA*, ISABEL* (DS)



SYLVIANA*

LIST OF ABBREVIATIONS:

- R = ROUND
- S = SALADETTE
- P = PROCESSING/HAWKER
- I = INDETERMINATE
- D = DETERMINATE

REFERENCES:

Tomato diseases and disorders – M.L. Gleason & B.A. Edmunds. 2006
How to manage pests. UC Pest Management Guidelines. Tomato Yellow Leaf Curl. March 2008.
How to manage pests. UC Pest Management Guidelines. Nematodes. January 2008.

Written by Paddy de Vries
National Technical manager: FertAgChem, VUP

BAMBI & FRIENDS CAUSING PROBLEMS?



BURN BAMBI BURN!

FRESH SHOOTS IN SPRING ARE AS DELECTABLE FOR THE RABBITS, RODENTS AND BUCK AS THEY ARE FOR OUR OWN SELECTIVE CONSUMERS. THE HASSLE IS THAT THESE BEASTIES DON'T PAY FOR THE HARVEST!

Many farmers have the problem, especially early in the season, of so called problem animals eating their young bean, cabbage, lettuce and other crops. Normally there is little that can be done other than keeping personnel permanently employed to chase these pests away. The other rather harsh option is eradication.

THERE IS ANOTHER OPTION!!!

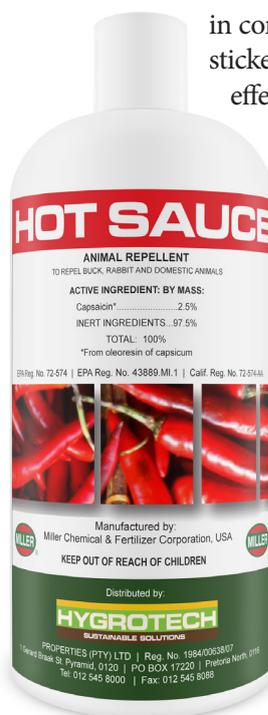
Enter *HOT SAUCE* Exit Bambi...

Hot Sauce is an animal repellent. This well tried and tested product is a water-miscible, highly concentrated, extract derived from hot peppers and contains Capsaicin. Capsaicin is the ingredient in hot peppers that make us sweat and, at high levels, may cause very quick acting and very uncomfortable burning and swelling of mucus membranes in the mouth, throat, eyes etc.



Animals attempting to feed upon treated plants are believed to get a "warm" uncomfortable sensation in the mouth and throat, and are discouraged to ingest more of the target plants. Animals quickly learn that a particular area is not tasty or pleasant to eat and move on to sweeter pastures (the neighbor's untreated blocks?).

The Capsaicin in Hot Sauce is a naturally volatile substance, and therefore has to be applied in a form that protects the active ingredient (Capsaicin) from volatilisation as well as breakdown by our harsh SA sun (Ultra Violet). Hot Sauce must be applied



in combination with Pinolene, an extender, sticker-spreader, that will prolong the effective lifespan of the product, giving the crop a better chance of being protected for a longer period.

To ensure good product stability and efficiency, it is important to pre-mix *HOT SAUCE* Animal Repellent and Pinolene separately with water before they are added to the bulk of the water in the spray tank or other vessel. In two separate containers, 250ml Hot Sauce and 2L Pinolene is stirred into 5L water until well mixed. These two components are then added to 400L of water in the spray tank and applied to the field.

The application should be done so that there is at least 2 hours of good sunlight and no rainfall expected in this timeslot. This is to ensure that the Pinolene "sets" and better rain fastness is ensured.

First application should be done as soon as seedlings are established and there is danger of animals feeding on the crop. Re-application should be done every 2 – 3 weeks, depending on the crop type (growth speed) as well as feeding pressure. Last application should not be closer than 14 days from harvest since the taste of the product may be slightly spicy if done too close to marketing.

Many growers apply the product to the entire crop while others apply a broad band on the outer border of the crop.

Although Hot Sauce is not a guarantee that no animal will do a taste test on your juicy produce, it will definitely give Bambi and his brethren a burning warning to rather go to sweeter pastures!

THE Brachiarias

FROM BRAZIL

General Information

FODDER CROPS FROM BRAZILIAN ORIGIN WERE VERY POPULAR IN THE RECENT AGRICULTURAL MEDIA. SPECIES THAT WERE MENTIONED BELONG TO THE GENERA *Panicum* AND *Brachiaria* AND ARE DIRECTLY RELATED TO OUR INDIGENOUS *Panicum maximum* (WHITE BUFFALO GRASS) AND *Brachiaria brizantha* (COMMON SIGNAL GRASS). ACCORDING TO LITERATURE SUPPLIED BY BRAZILIAN SEED COMPANIES MANY OF THESE CULTIVARS WERE SELECTED FROM MATERIAL THAT WAS COLLECTED DURING THE LATE 1980'S IN AFRICA, IN COUNTRIES LIKE BURUNDI, UGANDA AND TANZANIA.

The species involved in these fodder crops from Brasil are:

- Common signal grass (*Brachiaria brizantha*),
- Surinam or Signal grass (*Brachiaria decumbens*)
- Creeping signal grass (*Brachiaria humidicola*)

Two Common signal grass cultivars (cv BRS Piata and Xaraes), one Suriname grass cultivar (cv Basilisk) and one Creeping signal grass cultivar (cv Humidicola) were tested recently in South Africa.

Common signal grass

The two cultivars (cv BRS Piata and Xaraes) under investigation are described as well adapted to humid tropical conditions with a minimum rainfall of 800 mm per year. They grow well on medium to fertile soil and are both strong tufted grasses.



The cultivar BRS Piata grows slower than Xaraes, and can reach a height of 0.8 to 1.1 m. An outstanding characteristic is its thin stems that make it more palatable and an excellent foggage crop for winter utilization. It flowers relatively early in January/February. Xaraes is a fast grower and can reach a height of 1.5m. It has a long growing season and flowers only in May/June.

Surinam/Signal grass

Surinam grass (cv Basilisk) is a low-growing (up to 1.0m) grass, that can be erect or decumbent, with a creeping habit. It grows on a wide range of soil types including soils with low fertility and



low pH (as low as pH 3.5). It grows in the humid tropics and warmer subtropics with a rainfall of 700–1600 mm and temperatures above 19°C. This species is becoming more popular in different countries in recent times (e.g. Queensland Australia, Venezuela, India and several African countries).

Creeping signal grass

Creeping signal grass (cv Humidicola) is a strong creeping perennial grass, forming a dense ground cover, with a maximum height of 0.8 m. It grows on a wide range of soil types from very acid and infertile sandy soils to heavy cracking clays. It grows well in infertile soils with low P levels, but will respond well to N and P fertilizers. It is tolerant of poor drainage and often found on seasonally wet clays in valley bottoms.



In Brazil it grows in areas where annual rainfall varies from 600–2800 mm.

RECENT SOUTH AFRICAN RESEARCH

Research started in February/March on Dewagensdrift, Hygrotech's Experimental farm near Moloto in the Pretoria area. The specific soil, where the experiment was done, can be classified as relative unfertile sandy soils. The grass was established on the 6th of March 2013 and fertilized with 350 kg/ha chicken manure just before planting and 200 kg/ha LAN (28%N) after establishment. The total rainfall for the period March to June was 218 mm. In the same period irrigation was applied at a rate of 22 mm/week (total: 388 mm). Rainfall plus irrigation added up to 608 mm for the 105 days.

The cultivars included were Common signal grass (cv BRS Piata & Xaraes), Creeping signal grass (cv Humidicola) and Surinam grass (cv Basilisk).

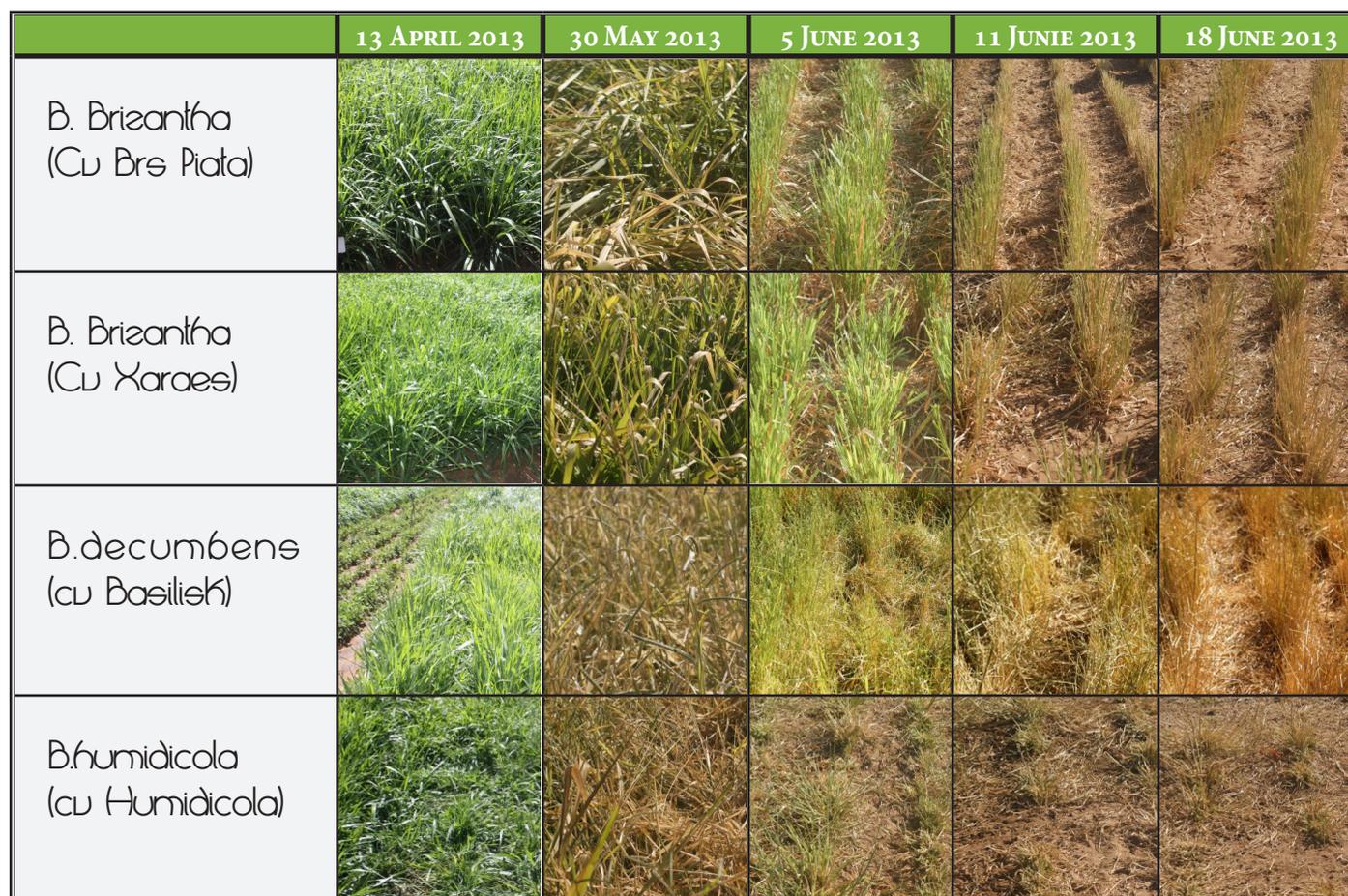
The dry matter (DM) was measured on 7 May 2013 (56 days after planting) and 19 June 2013 (105 days after planting) and the results are given in Table 1.

Table 1(right): The Dry matter production (t/ha) of four *Brachiaria* cultivars on two different cutting dates.

CULTIVAR	CUTTING DATE	
	7 May 13	19 June 13
Common signal grass (cv Xaraes)	5.6 t/ha	5.9 t/ha
Common signal grass (cv BRS Piata)	7.4 t/ha	6.3 t/ha
Creeping signal grass (cv Humidicola)	6.8 t/ha	5.3 t/ha
Surinam grass (cv Basilisk)	5.7 t/ha	4.8 t/ha

The total DM production varied from 4.8 to 7.4 t/ha for a relative short period (105 days), but which lasted long (till June) for a summer growing grass. Common signal grass (cv Xaraes) was the only one that grew from May to June, which confirms the general statement that it is a long growing season type. All the other cultivars showed a decrease in DM, from May until June, because of frost and decay. The highest producer was Common signal grass (cv BRS Piata) followed by Surinam grass (cv Basilisk).

FIGURE 1: A COMPOSITION OF PHOTOS TO ILLUSTRATE GRAZING OVER TIME ON THE DIFFERENT CULTIVARS



A second part of the experiment was also exposed to grazing by sheep. All four cultivars were in the same camp and the sheep were allowed to make their own choice of cultivar (so called cafeteria system). Photos were taken the day before grazing (13 April), on the 1st of June and the 7th of June (last day of grazing). The effect of grazing and to some extent the preference pattern, by sheep, can be seen in Figure 1.

The cultivar that drew the most attention in Figure 1 is Creeping signal grass (cv Humidicola). The production was high before grazing (6.8 t/ha) but the photo on 13 April 2013 was not so impressive in terms of volume. During the grazing period (30 May to 18 June) the sheep showed a definite preference for this cultivar if the photos on 30 May to 18 June are compared.

When the photos of the two Common signal grass cultivars are compared, from 30 May to 18 June, it seems that the BRS Piata plots were grazed more than the Xaraes plots, thus the sheep preferred the BRS Piata cultivar.

According to the photos shown in Figure 1 Suriname grass (cv Basilisk) was not grazed as much as the other cultivars.

CONCLUSION

The *Brachiaria* grass species will adapt and survive in South Africa in areas **with a rainfall higher than 800 mm/year or under irrigation**. They are doing well even late in summer (up to June) and Xaraes could be classified as a long season grower. Creeping signal grass (cv Humidicola) was the most acceptable cultivar (creepers are normally more acceptable to sheep). Of the common signal grasses BRS Piata seemed to be more acceptable than Xaraes. Cultivar Basilisk are popular in other countries and might be better cattle grazing than sheep grazing.

STOP THE ROT



GROWERS ALL KNOW THE DESPAIR WHEN A CROP, THE LIFE-BLOOD OF ECONOMIC SURVIVAL, SUDDENLY CONTRACTS AN INFECTION, APPARENTLY FROM NOWHERE. SOME GROWERS WILL USE A CHEMICAL TO TRY TO CONTROL IT, BUT THIS APPROACH IS OFTEN NOT EFFECTIVE. AS WITH EVERYTHING, PREVENTION IS BETTER THAN CURE. THIS STARTS WITH AN UNDERSTANDING OF WHAT CAUSES THE MOST LIKELY INFECTIONS OR THOSE THAT SEEM TO BE RECURRING ALL TOO OFTEN.

SOURCE OF DISEASE

A vector is something that helps the spread of a pathogen, this includes water, insects, staff, etc. For instance, it is not unusual for the irrigation water to be contaminated with bacteria and fungal spores. Through irrigation, pathogens¹ are introduced into the growing system. If a fungal spore lands on a plant root, the spore germinates and produces 'mycelium' threads that penetrate the plant root. If the fungus grows inside the plant and establishes itself, the plant is infected. Millions of spores will be produced and released. This infected plant is host to the fungus, and it then becomes a source of further infection.

// SPOREKILL®... PROTECTION FOR CROPS UNDER COVER //

Rapid spread to all plants can be caused by water, which is a notorious vector for pathogens such as fungal spores, bacteria, viruses and nematodes. If the "raw" water or the nutrient solution contains pathogens, the disease will spread rapidly to all plants. Filtration is not a solution, because fungal spores, bacteria and viruses are too small to



be caught by a simple filter. Constant proper treatment of water with a disinfectant is the only option. Use Sporekill* at a rate of 20ml/1000l of water for this purpose.

// Cleaning and disinfecting tools with Sporekill® as often as possible is very important //

People are an important vector too. Spores cling to people's clothes and are transmitted from one plant to another. Small amounts of soil or droplets of water stick to the workers' feet, hands or clothes, tools, wheels and crates. Even a crumb of soil or a droplet of water can contain millions of spores. A knife used for cutting plants (harvesting, pruning), will have plant sap on it that can be full of viruses. If that knife is then used on another plant, the virus is transmitted. Thus viruses often spread from plant to plant within a row. Use Sporekill* to disinfect knives.

Growers should be aware of visitors. They can bring an infection from another place into your greenhouse. The spread of pathogens can be reduced by strict hygienic practices, such as disinfecting shoes, wearing overalls (a different one in each compartment), disinfecting wheels, tools, avoiding moving from one compartment to another especially from older to younger blocks. Cleaning and disinfecting tools with Sporekill* as often as possible is very important. After every plant would be the ideal. Foot baths with a Sporekill* solution is also recommended, or even a spray bottle with the Sporekill* solution where foot baths are not available.



important to remove all diseased, old and dead plant material from the greenhouse before planting. Disinfect all hard surfaces in the greenhouse with Sporekill®* before planting.



A vigorously growing crop, empowers the plants to defend themselves against attacks and to “outgrow” any damage caused by a disease. Therefore it is important to avoid quick changes in conditions and to avoid extremes: too wet, too cold, etc. Essential factors are light, temperature, irrigation, pests, root-zone temperature, salinity (EC), acidity (pH), dissolved oxygen and composition of the nutrient solution.

POSSIBLE SOURCES (OR HOSTS) OF ROOT PATHOGENS ARE:

- GROWING MEDIA (SUBSTRATES)
- IRRIGATION WATER
- PLANT SAP ON TOOLS
- SOIL IN THE GREENHOUSE OR OUTSIDE
- DUST BLOWN INTO STRUCTURES
- NATURAL VEGETATION & WEEDS IN OR AROUND STRUCTURE
- GREENHOUSES NEARBY
- “COMPOST” HEAPS
- DRAINAGE SYSTEM
- RECIRCULATING NUTRIENT SOLUTION

POSSIBLE VECTORS (TRANSMITTERS) OF PATHOGENS INCLUDE:

- PEOPLE (WORKERS, VISITORS)
- BOOTS, WHEELS
- TOOLS, CRATES
- HANDS, CLOTHES
- KNIVES WITH PLANT SAP (CAN CONTAIN VIRUSES)
- INSECTS, MITES, NEMATODES, FUNGI, FUNGUS GNAT, ETC.
- BIRDS, MICE AND OTHER ANIMALS
- IRRIGATION WATER
- DRAIN WATER
- WATER SPLASHING UP FROM THE GROUND

ADVICE

Keep plants strong and be strict on hygiene. The best way to minimize root and virus diseases is by very strict hygiene and by creating strong plants. Strict hygiene reduces the sources (the presence of pathogens) and the vectors (that transmit the pathogens). After there has been a virus infection, it is



REDUCE YOUR VECTORS – THE PREVENTION MAY BE THE CURE

HEALTHY PLANTS GROW BIGGER, STRONGER, FASTER ... THE SECRET IS A WELL-BALANCED DIET, BIOLOGICAL BOOSTERS LIKE VITAZYME® IS A GOOD START.



* Before using Sporekill®, always refer to label and “Directions for Use” for full instructions. The patented formulation of Sporekill® contains 120 g/L didecyldimethylammonium chloride. Reg. No. ACT29GNR529/27555/070/210 – Compulsory Specification for disinfectants and detergent-disinfectants.

Reference: Elly Nederhoff & Bert Houter, CropHouse, New Zealand, Elly@CropHouse.co.nz with supplements added by World Garden Ltd. Spores in growing system

CLEAN IT... LIKE YOU MEAN IT

EFFECTIVE WASHING AND DISINFECTING IN AN ALL-ONE MULTI-PURPOSE PRODUCT?

YES, AND THEN SOME!

Effective washing prior to disinfecting of surfaces of animal husbandry facilities (such as dairy sheds and piggeries) is unfortunately a “necessary evil”. Organic matter reduces the efficacy of disinfectants, and therefore initial washing is required. Unfortunately scientific research proved that the pre-disinfection wash has a dramatic impact on the efficacy of the final disinfection against pathogens. During a pre-disinfection wash, pathogens are practically dispersed into every nook-and-cranny of the area to be disinfected. The consecutive disinfectant treatment, can then not reach these pathogens to kill them. Internationally, disinfectants containing quaternary ammonium compounds (QAC) are popular for conducting efficient and safe disinfection. It would thus be ideal to mix these disinfectants with soap. Then one can disinfect while also washing at the same time. Unfortunately, when mixed, soap greatly inactivates disinfectants in general. BUT this has changed with SANIWASH™.

MULTI-PURPOSE

Due to its unique combination of active ingredients Saniwash™ is, in light of the above, able to kill pathogens during the wash process. An unique blend of a selected QAC and Glutaraldehyde generates a synergistic effect whereby the efficacy of each active ingredient is broadened and amplified against bacteria, fungi, viruses and algae. All this, especially in the presence of organic matter, due to the addition of a very efficient washing agent, makes Saniwash a truly MULTI-PURPOSE disinfectant. This allows Saniwash to be applied in various areas, as well as through various application methods (in addition to just washing).

SANIWASH™ CAN BE USED IN

PIG FARMING:

- BREEDING UNITS, FARROWING PENS, FATTENING UNITS.

POULTRY FARMING:

- BREEDING FARMS, LAYERS, BROILERS, HATCHERIES.

OTHER ANIMAL FARMS:

- HORSE STABLES, DAIRY FARMS, BEEF CATTLE FARMS, OSTRICH FARMS, KENNELS ETC.

VETERINARY CLINICS:

- TO PREVENT CROSS-CONTAMINATION BETWEEN PATIENTS, ESPECIALLY IN THE CASE OF CANINE PARVOVIRUS INFECTION AMONGST OTHERS.

FOOD HYGIENE:

- IT IS FULLY EFFECTIVE FOR THE DISINFECTION OF SURFACES IN: SLAUGHTER HOUSES, COLD STORAGE ROOMS, CEREAL STORAGE, FOOD AND FEED TRANSPORT TRUCKS AND RESTAURANTS.

ADVANTAGES

In addition to its broad spectrum detergent activity (bactericidal, fungicidal, virucidal and algicidal) and effectiveness in the presence of organic matter, the following characteristics are also very beneficial:

- VERY STRONG WETTING POWER TO PENETRATE THOSE NOOKS-AND-CRANNIES.
- COMPLEMENTARY WITH NON-IONIC CLEANING PRODUCTS.
- NON-CORROSIVE.
- SAFE (WHEN USED AS DIRECTED: NON-TOXIC TO ANIMALS, NON-IRRITATING, LOW TOXICITY, BIODEGRADABLE).
- VERY STABLE.
- COMPATIBLE WITH INSECTICIDES BELONGING TO THE PYRETHROID GROUP.
- GOOD ACTIVITY IN HARD WATER.
- EFFICACY NOT AFFECTED BY PH OF WATER.
- COST EFFECTIVE.
- EASY TO USE (CAN EVEN BE USED AROUND THE HOME!).
- REGISTERED DISINFECTANT
- (NRCS REG. No. ACT29GNR529/239981/110/309)

Should you require any additional information regarding Saniwash contact your nearest Hygrotech Office, Liandra von Below (083-420-1392) or johann@icaonline.co.za Always refer complete registered directions for use (accompanying container) when using the product.



NEWBIES & CHANGES



The following staff changes have occurred as a result of expansion in the company. We would also like to welcome a few new faces to the Hygrotech family!

PADDY DE VRIES

Paddy is an old hand and very well-known in Hygrotech and the industry. Paddy accepted the position of National Technical Manager for the FertAgChem team, and will be responsible for technical assistance in the field to our distributors and internal personnel. He can be reached on 083 633 1222



LINDI OBERHOLZER

Lindi left Hygrotech a while back, but we are very pleased to say that Lindi came back. Lindi joined the Hygrotech operation in the George area, and will be responsible to look after the Blueberries, red berries and hops in that area.



PIETER VORSTER

Reeds 5 jaar deel van die Hygrotech span. Hy sal voortaan die Ellisras, Tom Burke, Swartwater, Baltimore en Tolwe areas bedien. Pieter vestig homself op Tom Burke en sal ondersteun word vanuit die Potgietersrus kantoor. Pieter is ook gekwalifiseerd om tegniese ondersteuning ten opsigte van kunsmis en blaarvoeding te gee. Pieter kan gekontak word by - 072 603-5428



WAYNE GRACIE

He was previously employed by Capstone and then moved to join AAM a livestock auctioneering company. Wayne is based in KZN and is responsible for technical sales support on the grass and forage crops. He can be reached on 0827903789.



ALTA SMIT

Started with Hygrotech in 2005 and has been in the Export department until recently. In June 2013 Alta accepted the position of Personal Assistant to the CEO of Hygrotech, Mr Habe Roodé.



JACO STRAUSS

Jaco is in Julie 2013 aangestel in die Oos-Gauteng gebied as 'n Veldbeampte. Hy het 12 jaar ondervinding en is beslis nie 'n nuwe gesig nie. Jaco het 'n groot passie vir die bedryf en het reeds gewys waar sy hart lê. Skakel hom gerus by 071 440 2167.



CHARLES BOOYSEN

Om die Groblersdal, Marble Hall en Springbokvlakte te bedien is Charles Booysen as Verspreidingsagent aangestel. Charles sal buiten die groentesaad veral konsentreer op Hygrotech se FertAgChem produkkreeks wat insluit bruinbemesting, MCF produkte en blaarvoedings. Charles kan gekontak word by - 071 492-9858



JEANINE HORDIJK

Jeanine joined the FertAgChem team on 1 August 2013. Jeanine will be responsible for doing all the laboratory work, doing quality checks, compatibility of products and help with the development of future products.



STEPHEN LE ROUX

Stephen is met ingang 1 Augustus 2013 aangestel om die areas van Louis Trichardt, Vivo, Polokwane, Potgietersrus, Warmbad en Marble Hall te bedien. Stephen het uitgebreide kennis en ondervinding en is tegnies goed aangelê. Stephen sal vanuit die Potgietersrus kantoor opereer. Stephen kan gekontak word by - 071 337-5344



ELIZNA SWANEPOEL

After 3yrs at Hygrotech Ellisras (now Lephale) Elizna was offered an opportunity to relocate to our Head Office. Now working partly as financial assistant to Theo Harmse and as general assistant to the technical crew. She is very free-spirited, a good listener and likes to motivate people.



BRAAM VAN NIEKERK

Hygrotech Wes-Kaap is baie ingenome met n nuwe aanstelling wat begin Julie 2013. Braam werk tans vanaf die Stellenbosch kantoor as chemiese adviseur en sy hooftaak is om Chemiese Agente in die Wes-Kaap te diens met tegniese advies ten opsigte van al die chemiese produkte binne Hygrotech se reeks. kontak hom by 079 156 7716



Written by Hugo Burger
Technical Manager: Southern Region

IRON LADY*

BETREE DIE PAMPOENMARK



Die afgelope seisoen is 'n kommersiële aanplanting van Iron Lady* gedoen in die Lutzville distrik teenoor ander bestaande opposisie kultivars. Die resultaat was baie goed met 'n land vol grys pampoene. Op die foto staan 'n baie tevrede Willem Bester. Wat Iron Lady* nog meer indrukwekkend maak, is die uniformiteit van die vrugte. Elke vruggrootte en vorm was grootendeels dieselfde. Goeie resultate is ook ontvang vanaf produsente in die Oos Kaap. Dit is dus duidelik dat Iron Lady* aanpasbaar is in verskeie klimatologiese gebiede. 'n Totale opbrengs per hektaar word geraam op 80 ton.



Hierdie pampoene met 'n siektepakket van PRSV, WMV en ZYMV produseer vrugte van ongeveer 6kg. Die vrugte het 'n medium geribte voorkoms, klein saadholte, diep oranje vleiskleur en met 'n goeie hou vermoë. Omdat Iron Lady* 'n rank groeiwyse het, is 'n plantestand van 6000 tot 8000 plante per hektaar ideaal. Daar is egter sekere produsente wat 'n hoër plantestand per ha doen, maar dit is in gebiede waar dagliglengtes en temperature meer gunstiger is, soos Clanwilliam, Vredendal, Noordoewer en omliggende gebiede.



Moet dus nie die geleentheid mis om die komende seisoen hierdie uitstekende kultivar aan te plant nie. Iron Lady* het haar reeds bewys op alle gebiede.

PRSV= PAPAYA RING SPOT VIRUS ; WMV= WATERMELON MOSAIC VIRUS
ZYMV= ZUCCHINI YELLOW MOSAIC VIRUS

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For more information on availability and tariffs contact Justin at:
seeddesign@hygrotech.co.za

HYGROTECH MASSMART INITIATIVE

Written by Peter Ngoma
Research Technician | FertAgChem

THE GOOD NEWS FOR EMERGING FARMERS

ONE CAN HAVE ALL THE MONEY IN THE WORLD, BUT WITHOUT SOUND TECHNICAL KNOWLEDGE OF AGRICULTURAL PRODUCTION, IT IS ALMOST IMPOSSIBLE TO PRODUCE SUCCESSFULLY FOR THE MARKET.



Having realized a gap in technical knowledge of production, Hygrotech and Massmart embarked on a partnership to give the necessary knowledge of crop production to small and emerging commercial farmers. In August 2013, the two parties signed a Memorandum of Understanding to show their commitment to uplift emerging farmers in South Africa.

Through training, in-season technical assistance and the establishment of good supply of farming inputs, the Hygrotech-Massmart partnership aims to raise at least 1 500 emerging farmers into commercial farmers by the year 2016.



Since the beginning of the year 2013, three courses named Introduction to Sustainable Crop Production have been offered to emerging farmers in Pretoria, Tzaneen and Strydkraal. The course covers all the general aspects of crop production from how to prepare for production, how to produce sustainably and what to do with the produce.



The response of the audience to the course has been overwhelming as most of the farmers found the course to be very informative. Miss Mangakane Debeila (31) from Ngwana Mante Farming Cooperative in Strydkraal, Limpopo, gladly indicated that she has learnt a lot in the course, including:

1. To farm successfully and sustainably one needs to look after the soil
2. Good irrigation practices and improving of soil texture over a continual time period will lead to healthy soils and a more productive farming enterprise for her and the other members in the cooperative.

Just as Hygrotech support their large commercial growers, support and sharing of knowledge will be part of the package offered to these small scale farmers who will be identified as growers who share in the project by loyalty cards.



Through the Ezemvelo Direct Farming Initiative, Massmart has offered financial assistance to some groups of the Hygrotech-Massmart Initiative beneficiaries. This is one of the ways in which Massmart walks an extra mile in ensuring the development of these emerging farmers.

The Massmart-Hygrotech Programme will cover all parts of South Africa and we do welcome inputs and suggestions from readers of our Forum. Email us on soil@hygrotech.co.za

soyield

...eersteklas sojaboon genetika

HYGROTECH SA BIED HIERDIE JAAR AAN GRAANBOERE DIE GELEENTHEID OM HULLE HANDE OP TOP SUID AMERIKAANSE SOJABOON GENETIKA TE KRY.

Die sojabone wat onder die Soyield vaandel bemark word is die produk van indiepte proewe in al die vernaamste soja produserende areas. Meer as 40 varieteite vanuit Argentinië, Uruguay, Paraguay, en Suid Brazilië is gepeef teenoor top opposisie varieteite en geselekteer op grond van opbrengs, siekteweerstand en aanpasbaarheid vir Suid Afrikaanse toestande.

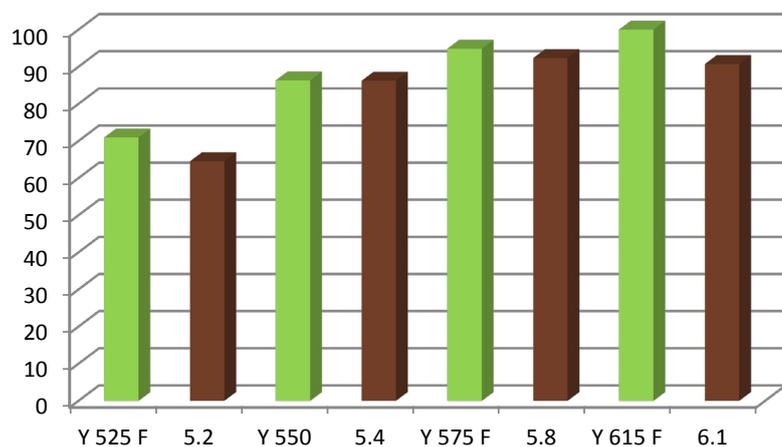


Al vier die Soyield varieteite wat die jaar bekend gestel word besit Round up Ready tegnologie wat bestuur van die gewas vir boere vergemaklik. Boonop is al die varieteite onbeperkte groeiers wat tot groot voordeel vir produsente is in areas waar weerpatrone onvoorspelbaar is en onherstelbare skade aan beperkte groeiers aangerig word.

Hierby was varieteite geselekteer sodat die program aan boere se behoeftes kan voldoen ongeag bestaande bestuurspraktyke of aanplantingsareas.

ARGRONOMIESE EIENSKAPPE	Y 525 F	Y 550	Y 575 F	Y 615 F
GROEIKLAS	5.3	5.5	5.6	6.1
GROEIWYSE	Onbeperk			
VERTAKKING	Medium	Hoogste	Hoog	Hoog
STAANVERMOË	Uitstekend	Uitstekend	Baie Hoog	Uitstekend

SIEKTEPAKKET				
PHYTOPHTHORA WORTELVROT 1	Tolerant	Vatbaar	Vatbaar	Weerstandig
GROOTOOG BLAARVLEK	Weerstandig	Tolerant	Tolerant	Tolerant
KNOPWORTEL AALWURM	Tolerant	Tolerant	Tolerant	Tolerant
SUDDEN DEATH	Weerstandig	Weerstandig	Tolerant	Tolerant
STAM KANKER	Weerstandig	Weerstandig	Weerstandig	Weerstandig



* VERGELYKENDE OPBRENGS GEMEET TEEN TOP OPPOSISIE VARIËTEITE OOR 6 HOOF SOJA PRODUSERENDE AREAS



OPSOMMING VAN ONS VARIËTEITE

Y 525 F

- GROEIKLAS 5.3
- HOË POTENSIAAL EN AANPASBAARHEID
- VROEË AANPLANTINGS
- VIR NOU RYE EN HOË PLANTPOPULASIES
- MIN VERTAKKING, DUS IDEAAL VIR LANDE MET SCLEROTINIA

Y 550

- GROEIKLAS 5.5
- HOË AANPASBAARHEID IN VERSKEIE AREAS
- VROEË TOT MIDDEL AANPLANTINGS
- GESKIK VIR HOË PLANTPOPULASIES
- "BOMB PROOF" SOYA

Y 575 F

- GROEIKLAS 5.7
- HOOGS AANGEPAS TOT VERSKEIE AREAS EN BESTUURSTYLE
- MIDDEL TOT LAAT AANPLANTINGS
- UITERS GESKIK VIR WYE RYE AANPLANTINGS

Y 615 F

- GROEIKLAS 6.1
- HOOGS AANGEPAS TOT VERSKEIE AREAS EN BESTUURSTYLE
- MIDDEL TOT LAAT AANPLANTINGS
- UITERS GESKIK VIR WYE RYE AANPLANTINGS

SAAM MET DIE SOYIELD PAKKET BIED HYGROTECH BOERE OOK DIE BESTAANDE REEKS BLAARVOEDINGS, BIOLOGIESE PRODUKTE, KUNSMIS EN ENTSTOWWE UIT DIE BASF STAL.

HYGROTECH SOJABOON BEMESTINGSPROGRAM

VOOR PLANT BEMESTING:

Vul peil opbrengs in en bereken as volg:

_____ ton /ha × 200 = _____ kg /ha

Transition 4:3:10 + Mikro elemente*
of

300kg/ha Terra Beuno 3:3:3 + Mikro elemente*

SAADBEHANDELING:

100 ml per 100 kg saad 

400 ml per 100 kg saad Rhizoflo® of Histick®

125 g per 100 kg saad Trichoplus®

1STE ROUND-UP BESPUITING:

1 liter per hektaar 

1.5 liter per hektaar Assistance

2 liter per hektaar Hygro Boost Flo

150 ml per hektaar Nu Film P

2DE ROUND-UP BESPUITING:

1.5 liter per hektaar Assistance

0.5 liter per hektaar Onespray

150 ml per hektaar Nu Film P

*Bykomend tot grond balanseringsprogram

KONTAK JOU NAASTE HYGROTECH TAK OF
VERTEENWOORDIGER EN PLANT DIE SEISOEN...

soyfield
UITSOEK GENETIKA • UITMUNTENDE OPBRENGS
UITSTEKENDE KEUSE

ANOTHER SUCCESSFUL PASTURE DAY

HYGROTECH'S ANNUAL PASTURE DAY, HELD AT OUR BRANCH IN GEORGE ON 4 SEPTEMBER 2013, WAS A HUGE SUCCESS WITH 60 FARMERS ATTENDING. MANY FARMERS HAVE TRAVELLED AS FAR AS 300 KM!

There were a big selection of standard and new varieties on display in the trials that will be available in future.



The focus point at the pasture day, was the use of foliar feeding spraying programmes on pastures.



Hygrotech wants the farmers to use foliar feeding to ensure better and sufficient grass for higher milk yields and meat production. Grass, like any vegetable, needs trace elements to produce.



Hygrotech also promotes an increase in the organic matter in the soil by adding Terra Nova, which is a wonderful catalyst for natural processes to optimize plant growth whilst enhancing the soil at the same time.

Vitazyme contains biostimulants and biological activators for the plant and 'good' bugs alike. When using Vitazyme there is a dramatic increase in the population of good organisms in the soil.

Spray NITROSPRAY and HYGROBOOST FLO. and see the magic happens!

NITROSPRAY 7:3:1(34) SOLUTION :

Nitrogen 220 g/l ,Phosphorus 90g/l, Potassium 30 g/l,Iron 1005 mg/l,Manganese 510mg/l, Zinc 510 mg/l , Copper 510 mg/l , Boron 261 mg/l , Molybdenum 8.4 mg/l,Cytokinins 1.0 mg/l

HYGROBOOST FLO :

Nitrogen 198 g/l , Manganese 20.7 g/l , Zinc 50.0 g/l , Copper 32.7 g/l , Boron 8.7 g/l

PRAGRAMME :

BASIC	4/3/2013	150kg (2:3:4) and 160kg Terra Nova /ha
SOWING	6/3/2013	25 kg/ha
1ST DRESSING	14/5/2013	100 kg LAN/ha
FOLIAR FEEDING	21/5/2013	Vitazyme 1L/ha
1 ST CUT	27/5/2013	
2 ND DRESSING	28/5/2013	80 kg/ Terra Nova and 50 kg LAN /ha
FOLIAR FEEDING	4/6/2013	Nitrospray 2 L/ha
2 ND CUT	1/7/2013	
3 RD. DRESSING	2/7/2013	150 kg Terra Nova /ha
3 RD CUT	5/8/2013	
4 TH DRESSING	6/8/2013	75 kg Urea/ha
FOLIAR FEEDING	12/8/2013	Hygroboost Flo 2 L /ha
4 TH CUT	1/9/2013	

BECAUSE WHITE POWDER ONLY LOOKS GOOD ON BABIES



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VINE CROPS

What Do We Plant To Make Money?

Written by Hugo Burger
Technical Manager:
Southern Region

THIS IS THE MOST COMMON QUESTION I GOT ASKED THE LAST COUPLE OF MONTHS AND IF I KNEW THE ANSWER, I MOST PROBABLY COULD RETIRE!

Growers have no choice but to be successful with the crops they choose to grow. This is important for their own future in agriculture as well as sustainable agriculture in general. By growing the right crop at the right time, the grower will make a good profit. But when is the right time? The answer to this question is not straight forward. Market trends and other market related influences can be interpreted to help growers with their choices. At this point in time we know that growers in general are avoiding labour intensive crops, for example, several traditional melon growers' in the Western Cape are planting less hectares because of very high production cost like fuel, labour etc. Other crops like patty pans, baby marrows and beans are also under pressure because of labour costs.

WE CAN THUS DEDUCE THAT THE ABOVE PRODUCE WILL BE LESS AVAILABLE THAN IN PREVIOUS YEARS AND THAT THOSE GROWERS WHO HAVE PRODUCT WILL GET HIGHER PRICES!

Let me then focus on the above crops to make variety recommendations that will benefit both growers and consumers alike:

A baby marrow variety like Aretusa with an unique disease package: PRSV, ZYMV, CMV and Px, produces cylindrical, dark green fruit with small blossom-end scars. The fruit length is 17cm with a diameter of 3.5cm. The fruit stay cylindrical even if it gets longer and bigger in size. Due to this good disease package and strong growth habit, you can easily harvest 30 days longer than other commercial varieties with good growing practices. Aretusa is a must to try this coming growing season, you will not be disappointed.

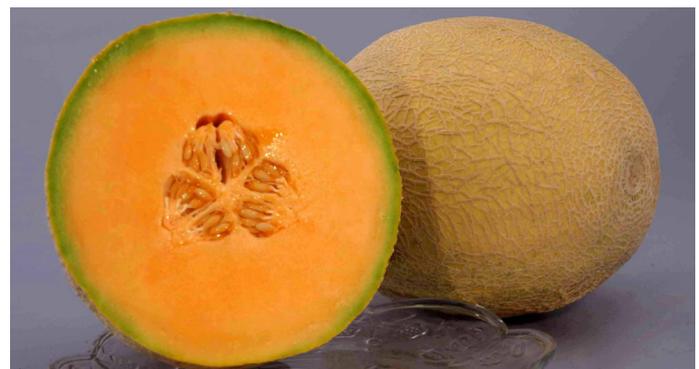


Sunny Delight is still the yellow patty pan that is acceptable to all consumers. It produces attractive yellow fruit with no colour change when temperatures go above 35°C. Some other

commercial varieties turn green on the blossom-end side when temperatures are too high. Sometimes this is wrongly seen by the consumers as a virus infection. An average yield per plant is 500g during a two months harvest period.



Sweet melon production for the local market, like Cape Town Fresh Produce Market, is under huge pressure for reasons already mentioned. The demand for sweet melons varies every month and is most popular during the festive season. This is why most of the growers try to get into the market early, but it is only possible for growers with moderate temperatures during late Winter/Spring, like Northern Cape, Bushveld and Namibia. Another factor to keep in mind is that the types of melon differ from the South to the North of our country. The consumers in the South prefer a melon fruit that has a cream skin color with a real musk flavour and soft flesh like Strike and Homerun. The consumers in the North prefer fruits with a grey/ light green skin colour, firm flesh and also a musk flavour. These types of melons keep longer in storage than others with a cream skin colour. It is very important to find and develop an affordable melon variety that can fit into different markets because this will be beneficial for growers, traders, hawkers and other parties who are part of the so called food chain getting the fruit off the farm onto consumer's plates!



ZYMV =Zucchini Yellow Mosaic Virus ; CMV =Watermelon Mosaic Virus ; PRSV =Papaya Ring Spot Virus ; Px =Podosphaera xanthii

SPRING SALAD

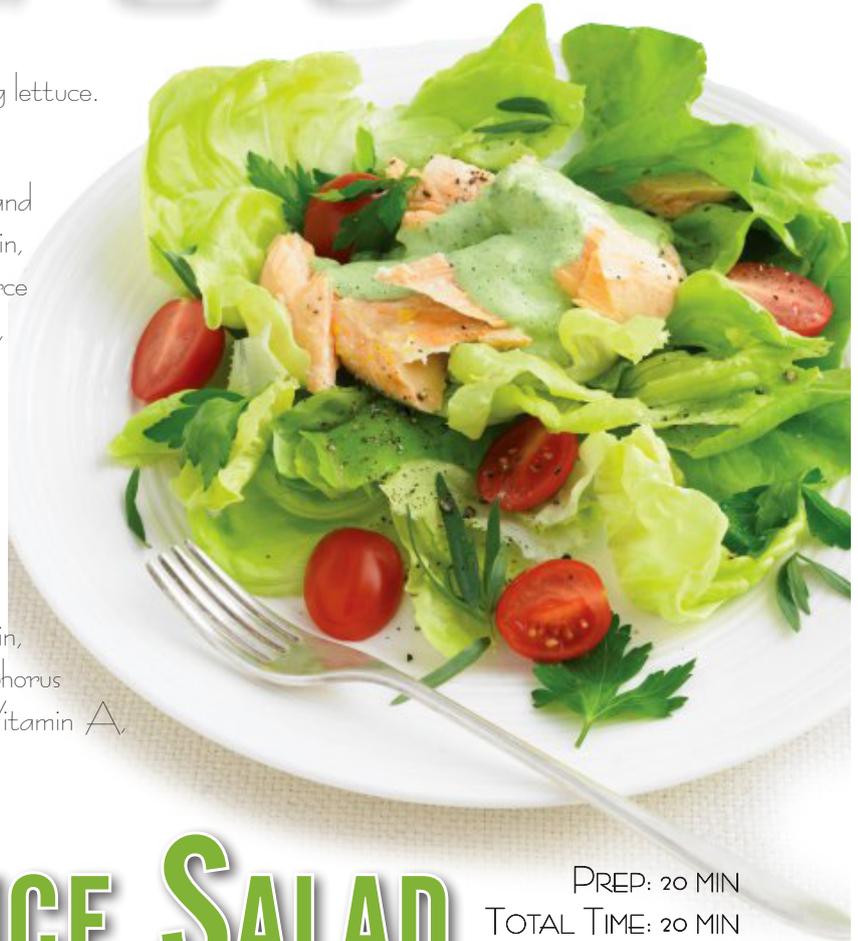
Butter Lettuce or Boston Bibb lettuce is a type of heading lettuce.

Scientific Binomial Name: *Lactuca sativa*

Butter Lettuce is low in Sodium, Saturated Fat, and Cholesterol. It's also a good source of Thiamin, Riboflavin, Calcium, Magnesium and Phosphorus, and a great source of Dietary Fiber, Vitamin A, Vitamin C, Vitamin K, Vitamin B6, Folate, Iron, Potassium and Manganese.

A cup of cherry tomatoes contains 27 calories.

Cherry Tomatoes are low in Sodium, and very low in Saturated Fat and Cholesterol. They're also a good source of Vitamin E (Alpha Tocopherol), Thiamin, Niacin, Vitamin B6, Folate, Magnesium, Phosphorus and Copper, and a great source of Dietary Fiber, Vitamin A, Vitamin C, Vitamin K, Potassium and Manganese.



BUTTER-LETTUCE SALAD

PREP: 20 MIN
TOTAL TIME: 20 MIN
SERVINGS: 4

WITH POACHED SALMON, CHERRY TOMATOES & HERBS

INGREDIENTS:

- 4 skinless salmon fillets, (170g each)
- Zest of 1 lemon, peeled into strips with a vegetable peeler, plus 2 tablespoons lemon juice
- Coarse salt and ground pepper
- 1/2 cup light mayonnaise
- 1 small garlic clove
- 1/4 cup fresh basil leaves
- 1/2 cup fresh parsley
- 700g butter lettuce (variety Casanova is perfect!), torn into bite-size pieces
- 600ml cherry or grape tomatoes, halved (variety Sweet Hard if you want to use grape or Salomee if you want to use cherry tomatoes)

PREPARATION:

1. Place salmon in a medium skillet; cover with cold water. Add lemon zest; season with salt and pepper. Bring to a boil over high. Cover; remove skillet from heat, and let stand until salmon is opaque throughout, about 15 minutes.

DRESSING:

In a blender, combine mayonnaise, lemon juice, garlic, 3 basil leaves, 1/4 cup parsley, and 2 tablespoons water. Season with salt and pepper. Blend until smooth; set dressing aside.

In a large bowl, toss lettuce with tomatoes and remaining herbs. Divide salad among four plates; top with poached salmon, and drizzle with dressing.



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