



# Burdekin Productivity Services Grower Update

MARCH 2012 EDITION 5

## HOT TOPICS

### Itch Grass

Attachment 1 shows some photos of Itch grass, as you can see in photo 1, David Paine is on the bank of the NBWB Channel where Itch grass was found and removed. Please note the intake on the other side, this is the water intake for the P & K farm and distribution plot. I believe it is only a matter of time before Itch grass will be found on the P & K farm. If this eventuates, the plot will be closed immediately and no further sales will take place. Remember if you have Itch grass on your farm it is your responsibility to remove it and follow up with a residual herbicide to control any further germination. Photos 2, 3 and 4 are images of Itch grass on a sugarcane farm at Ramu, PNG. Photo 3 clearly indicates it can be controlled by herbicides. The photos were kindly donated by Bryce Davies who spent some time out there managing the farm. Please contact your BPS field office's regarding any information on the general locations. Individual farms will not be released for privacy reasons.

## NOTICES

### Approved Seed Cane

The prices for seed cane, harvesting etc. for the 2012 season will be released to the various grower organisations. by mid March. Seed cane prices have been kept the same as last year. Owen Menkens from the Home Hill plot and Gavin Jones from the P & K plot have now finished cutting seed cane. Expressions of interest have been called to find new contractors. We would like to thank both Owen and Gavin for their contributions over the past several years.

### *Availability*

Inkerman plot has enough to supply all the seed cane ordered with no restrictions on present orders.

For the Invicta area a lot of growers have not placed a seed cane order with Wayne. Remember the cut off date is March 31st. When all the orders are in, a calculation will be made to see if restrictions will have to be applied.

The situation at the P & K farm is considerably different. All the major varieties are over subscribed. For example, orders for Q183, Q208, KQ228 consists of 2250 tonnes. On the P & K farm we estimate there is only 1200 tonnes. Every grower will be places on a quota and this will result in your order being reduced. With the start of new varieties being released, more area will have to be planted. To prevent future reductions in quota, we will have to plant larger areas of seed cane and as a result we have approached P & K to consider using areas currently under 2nd ratoon. Obviously by taking cane to 2nd ratoon is much more profitable and allows the price of seed cane to be kept as low as possible. This is a decision P & K farming will have to make in the near future.

## **Variety release and seed cane distribution**

Due to the number of new growers entering the district, it is important you realise the complexity of Plant Breeding in cane. Please take the time to read the information sheet regarding Variety Release Timeline in attachment 2. Plant Breeders cross up to 100, 000 plants and after 10 years we may get a new variety that is suitable to be propagated in our mother plots for distribution.

I have also enclosed the process taken by BPS when we receive a new variety from the BSES, this is on the reverse side of Attachment 2. We have BSES permission to distribute small quantities of these new varieties on different soils in the Burdekin prior to their release so we can identify their qualities. This information is then released at the CPI meeting. If any new growers in the district are interested in learning any aspects of this please contact me for a tour of the isolation/mother/seed plots.

### **UPCOMING EVENTS**

Seed cane orders close 31 March 2012

### **ACROSS THE MANAGERS DESK**

## **Staff**

Rat trapping has now commenced and if any growers would like to monitor their fields for rats please contact Brad Woodford. At present the traps are randomly placed all over the district. After 5 years of trapping, Brad finally caught a Climbing Rat, they are rare in this district.

Wayne Squires and David Paine have been on road patrols spraying rogue stools of cane in drains, culverts, banks of creeks and on some roads. Itch grass is also being targeted. While out at Sheep Station Creek near the 4QN tower, Itch Grass was detected, this is of great concern that it has been found out there. Last week the staff pulled out over 2000 plants at the Rocks area on the Burdekin River. The staff have also sprayed hundreds of plants along the NBWB channel banks. We have also commenced our annual RSD sampling and testing program and will collect over 300 samples to send for analysis at the BSES lab in Mackay. Remember RSD is so easy to control by purchasing approved seed cane and keeping harvesters/stool splitters hygienic to prevent its spread. If any grower believes they have RSD or any other disease, please call us immediately.

I have recently engaged Kristine Grasso as a trainee. Kristine is the daughter of Sib and Tina Grasso from Brandon, the Grasso family are a well respected cane growing family in the Burdekin and have been growing cane in the district for over 60 years. Kristine has enrolled at the University of New England at Armidale to do her degree in Agriculture. This will be a great asset for BPS and will enable us to do agronomy trials for the growers in the Burdekin. From all the staff and myself we welcome Kristine on board.

## Important points on Potassium (K)

Potassium is one of the 6 major elements required in sugar cane growth. The others are Nitrogen (N), Phosphorous (P), Sulphur (S), Calcium (Ca) and Magnesium (Mg).

Potassium is abundant in the Earth's crust. It is the seventh most abundant element on this planet. The most abundant elements in the soil are:

Silicon (Si), Aluminium (Al), Iron (Fe), Calcium (Ca), Magnesium (Mg), Sodium (Na), It is also worthy to note that Phosphorous comes in at number 11.

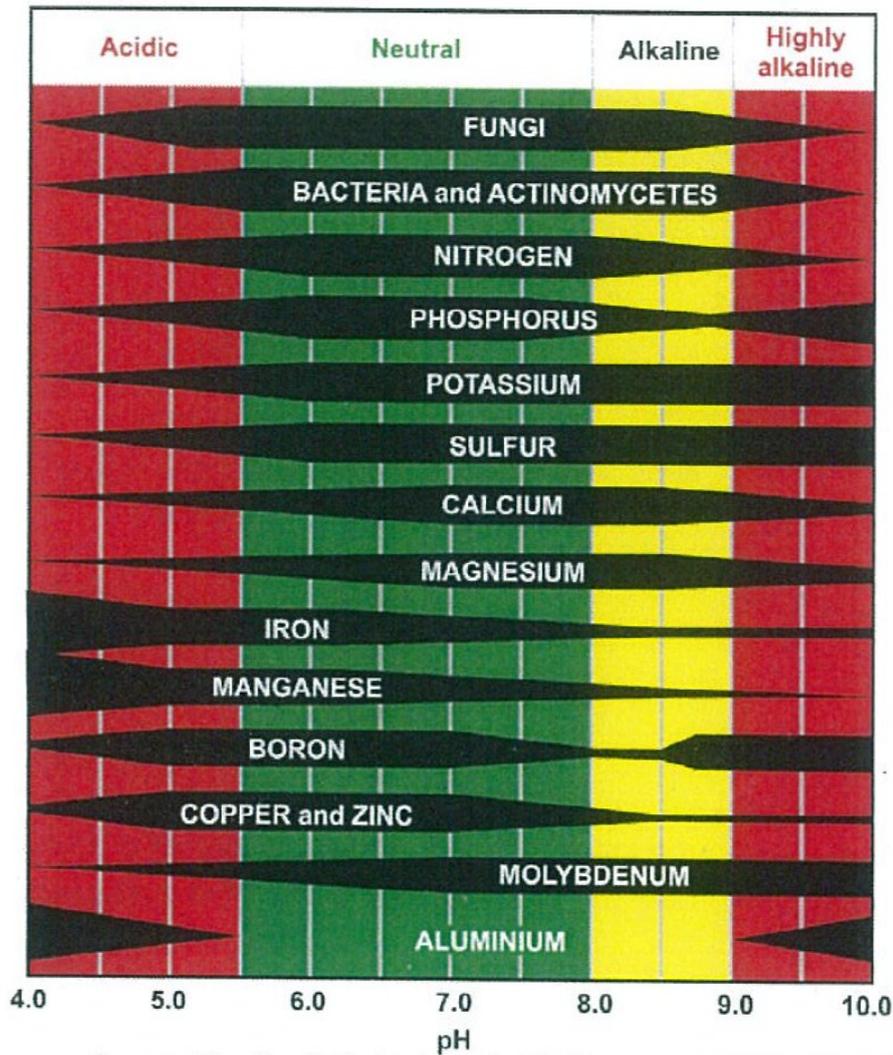
Potassium is also abundant in a lot of the water on the Burdekin Delta. The K content of soils vary and is dependent from the rocks and amount of weathering from where the soils originated from. The range of Potassium is usually between 0.5% to 2.5% of the Earth's crust. A soil containing 2% of Potassium would have 26 tonnes of Potassium/ha. This is worked out from 1 hectare of soil at 100mm deep with a bulk density 1.30Kg/L.

Although this sounds a lot, approximately 98% is unavailable to the plant because it is tied up in the crystal lattice in the clays. Sandy soils have the lowest Potassium content while clays and rich alluvial soils have the highest content. With constant cropping Potassium can become depleted even in clay soils.

Below is a table from the BSES manual that shows the amount of nutrients removed by a crop of cane. Sugar cane is a luxury user of Potassium and too much Potassium in cane will affect sugar quality because it drives up the ASH content of sugar.

<b>Average amount of nutrient removed by cane crop (cane tops trash) Kg/ha</b>	
Nitrogen	154
Phosphorous	37
Potassium	276
Calcium	55
Magnesium	57
Sulphur	47
<b>Cane Yield</b>	<b>119T/ha</b>

From the following soil pH chart it can be observed that Potassium is readily available from 6.0 pH and above.



Source: *Healthy Soils for Sustainable Vegetable Farms: Ute Guide*

Potassium is absorbed by the plant roots as a positively charged  $K^+$  ion. Potassium is highly mobile in plants, so older leaves exhibit deficiency symptoms before young leaves.

Potassium is essential for plant growth and photosynthesis. Also it controls the movements of sugars in the plant as well as root development. Potassium is often described as a quality element for quality crop production.

Potassium is also subject to leaching. It is less prone to leaching than Nitrogen and more prone to leaching than phosphorous. However, in soils with low CEC and organic carbon, Potassium is prone to severe leaching and should only be applied as a split application. From your soil analysis you will observe there are two analysis done for Potassium. The Potassium (Nitric K) is your reserve Potassium and your Potassium (amm—acet) is your available Potassium to the plant.

A brief summary of the chemistry behind the movement of Potassium could be described as.

1. Structural K: Tightly held in the lattice of the minerals that contain Potassium. This is slowly released as soil minerals are weathered.
2. Fixed K: These are fixed or trapped between layers of soil particles (clays) and are released slowly.
3. Exchangeable K: Readily available to plants and is held onto the negatively charged particle of organic carbon and clay colloids.
4. Solution K: This is the most available because it is dissolved in water. However this is the smallest amount of K. Most soils only contain 10kg/ha of K in solution. As the crop removes this K, then some of the exchangeable K moves into soil solution so the process goes on.

Finally, when Sodium (Na) exceeds Potassium (K) in the soil, the plant will take the sodium instead of the potassium because plants cannot distinguish between the two. This is the case in some high sodium blocks. A similar trial to this was conducted overseas and states, “...At high level salt concentration, chlorine (Cl) content in shoots and roots increased. Results showed that Sodium accumulation in sugar cane plants was greater than Potassium where Sodium concentration exceeds Potassium concentration in soils”.

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