

Why Madura Guano Gold®-Kwik Start® **and it's important Silicon component work so well**

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Silicon is an element present in the soil in a very insoluble form (sand) and at high levels similar to that of calcium, magnesium and even phosphorus.

Silicon is essential plant nutrient especially for the growth of grasses such as wheat, oats, barley, sorghum, rice, rye, tricale, sugar cane etc. These crops require "silicon at levels higher than any other mineral" - Plant Health Centre Pittsburgh, P.A. Dr. M. Kernam >phcmike@nb.net<.

The function of Silica in plant tissue is to then:

- a) Provide structural rigidity and strength as silicon is deposited as silica in the cell walls. Plant tissue lays down a ridged barrier of 90% pure silica mineral between the waxy later and the epidermis, therefore
- b) Silicon reduces OR prevents damage or attack that involves tissue penetration of the outer epidermis, e.g. fungal diseases.
- c) Silicon reduces the significant problem of lodging of crops.
- d) Silicon allows more efficient use of water loss by plants through reduced evapotranspiration.

Why the Silicon breakdown process stops working

To become available to plants silicon must be absorbed as H_4SiO_4 (monosilicic acid) which exists in a normal paddock of biodiversity (ie in a natural state containing clover, grasses, weeds, trees etc), new farming country or those after a lay crop. This level of silicon is at a level of 100 times higher than phosphorus.

This high level of monosilicic acid will bind (react) with manganese, aluminium and iron in the soil to **tie up** these elements and allow phosphorus to remain therefore freely available in the soil.

Consequently this cycle of changing insoluble silicon to plant available and soluble monosilicic acid in the case of grass paddocks, forests and home garden is due to microbial action. Bacteria, fungi and lichen actually breakdown insoluble silicon – sand to monosilicic acid.

Consequently in modern broadacre farming we have via monoculture where weeds are removed as part of fallow management and organic matter is reduced – so are the soil microbes. V.A.M or Long Fallow Disorder is a classic example of this problem and it has been well documented by the Department of Agriculture.

A record crop producing 2.5 tones per hectare will use and remove 245g to 700g of silica, with the higher level removed if some of the stubble is also removed.

How did I use this data in my business

1. Provide a soluble form of silicon to meet plants initial needs using **Guano Gold** fertiliser.
2. Educate clients in soil microbiology. (Which involved educating myself)

An example of this would be to blend **Guano Gold** with other HiFert and or other credible products or simply using **Guano Gold** alone in the redder soil types (where Iron, Aluminium and pH are issues to consider) to provide silicon.

Secondly by using bio-stimulant such as **Agrispon** to create the environment for fungi, bacteria and protozoa growth. The **Agrispon** has been applied with pesticides such as Roundup, Stomp, trifluralin, MCPA, bromocide, delta metherin or Roger.

Education

As a 33 year old who finished Ag Science 12 years ago, it was hard to accept that I was doing some things wrong. But the drive to be ethical to my clients by at least offering sustainable solutions to their problems and trying to educate them to understand their own problems drove me to think about what I saw happening in the paddocks and to challenge my own comfort zone. Many of my clients would not turn up to

education days, would not read mailouts, and would always focus on \$\$\$. But at least I have offered them the tools.

What should you do now

If you are interested in **Guano Gold** or **Agrispon** then you should:-

- a) Read the data provided by John Jashar of Guano Australia Pty Ltd.
- b) Listen to the tape by Dr. Neil Kinsley.
- c) Ask your agronomist about the function of VAM, silica and function of microbial life. Ask your agronomist about the soil tests they are using – are they adequate? Also ask your agronomist how they try to educate their clients.
- d) Attend a training day run by Guano Australia Pty Ltd.
- e) Above all else listen and investigate this and at the end of the day you can say its all rubbish or it isn't.

Please note that John Jashar of **Guano Australia Pty Ltd** does **not pay me** any money at all, I do this because I have a drive to make Australian Agriculture sustainable.

This summation is proudly provided by Mr. Robert Drewitt to **Guano Australia Pty Ltd** in order to support Agronomists, Distributors and farmers, appreciate the real understanding of above points.

For any further information and or assistance please contact:

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