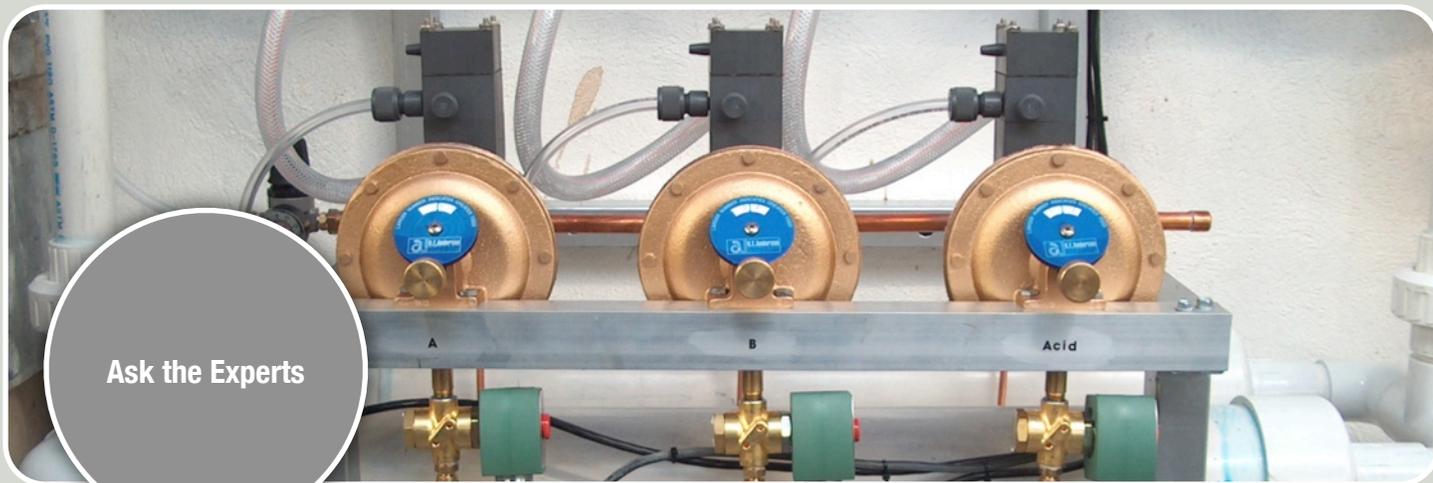


# GREENHOUSE - Q AND A

# TIPS AND ADVICE

Agroponic Industries Ltd.  
Calgary, Alberta, Canada  
ph 403 241 8234  
email: [agropon@agroponic.com](mailto:agropon@agroponic.com)



Ask the Experts

**Question :** How much fertilizer / mixing rate

We get asked with this one everything we do an injector installation.

Here's a simple easy little trick. It doesn't matter what type of fertilizer that you are using ( pre formulated or single source ). Here's a great method. If you take 10 grams of any fertilizer and throw it into 100 liters of water PPM = percentage. Its quite simple. But.... because of the fertilizers act, phosphorus content is expressed as phosphoric acid and potassium is expressed as soluble potash one has to divide the phosphorus ( phosphoric acid ) by 2.23, and the potassium ( soluble potash ) by 1.21 . Other others PPM = percentage if 10 grams is added to 100 liters water.

So lets say a grower is injecting at 1:100 ratio. They want 150 PPM of Nitrogen ( N ) and is using 20-20-20 fertilizer.

At 1:100 injection one liter of stock solution is equal to 100 liters of irrigation water. Stock solution is the fertilizer dissolved fertilizer in solution.

150 PPM target/20 % Nitrogen (N) = 7.5

Therefore for every liter of water in the stock solution tank if you add  $10 \times 7.5 = 75$  grams of 20-20-20. This will get the nitrogen levels up to 150 PPM.

What about phosphorus .... well it will be  $150/2.23 = 67$  PPM

and potassium ..... it will  $150/1.21 = 123$  PPM

And if furnished with a trace package --- simply

multiply the % of each by the factor 7.5 and you have them in PPM as well.

What PPM of Calcium ( 19% CA ) is added when 60 grams of Calcium Nitrate is added to a litre of stock solution and the injection ratio is 1:100.

$$60/10 = 6 \text{ and } 6 \times 19 = 114 \text{ PPM Ca}$$

and if the Nitrogen % in the Calcium Nitrate is 14.5%, then the contribution of nitrogen will be 87 PPM.

It's not that confusing if you think about it for a while.

If you have any questions please feel free to contact our office.

Agroponic Industries Ltd.

ph 403 241 8234

email : [agropon@agroponic.com](mailto:agropon@agroponic.com)

web : [www.agroponic.com](http://www.agroponic.com)

*Consultants, Suppliers and Installer to the  
Commercial Greenhouse Industry*

