Shawn Rana Discusses the Carbon Impact of Fertilizer

Fertilizer Can Have a Significant Carbon Impact, and Shawn Rana Is Here To Review its Impact

LINCOLN, NEBRASKA, UNITED STATES, June 8, 2021 /EINPresswire.com/ -- Fertilizer Can Have a Significant Carbon Impact, and Shawn Rana Is Here To Review its Impact
Shawn Rana knows that a lot of research has gone into increasing crop yields. The reality is that modern society would have a hard time feeding everybody without access to techniques and materials that can help increase the yield of certain types of crops. That has led to the growth of fertilizer as well. On the other hand, it is important for everyone to do their part to protect the planet. Many people do not realize the impact that fertilizer has on someone's carbon footprint. Shawn Rana who is an industry expert is here to review the carbon impact of fertilizer and what this means for the future.

The Benefits and Drawbacks of Nitrogen Fertilizer
Nitrogen fertilizer has been a key factor when it comes to increasing the yields of modern agriculture. Nitrogen fertilizer works to increase the production of individual crops on certain farms. On the other hand, nitrogen fertilizers also represent one of the largest sources of greenhouse gas emissions. According to Shawn Rana nitrogen fertilizers production does create carbon dioxide, which contributes to climate change and global warming. Therefore, many people in the industry have been looking closely at how they can reduce the use of nitrogen fertilizers and what this might mean for the industry moving forward.

The Answer Has Always Been In Front Of Us
The three main types of nitrogen fertilizer in use today are ammonia, urea, and UAN. All existing large scale fertilizer producers convert most or all of their ammonia to Urea and/or UAN. These are considered “value added” products and companies can charge a higher price per unit of nitrogen for these value added products. However, with the focus shifting to low carbon footprint fertilizers, it turns out that ammonia is actually the lowest carbon footprint fertilizer out of the three types. Urea contains, and is made with, CO2, which is then released at the farm level. UAN is similar plus it is made in a process that releases N2O which is 300 times more powerful as a greenhouse gas than CO2. To be clear, ammonia production does produce CO2 but the molecule as a fertilizer does not release CO2 as the other two do. Plus ammonia is more efficient and contains higher units of nitrogen compared to the others. The challenge for large fertilizer companies is their existing production assets are designed to convert as much ammonia into urea and UAN as possible because that's what generates the higher profits. And

several decades ago, little attention was paid to the carbon footprint of fertilizers and agriculture.

The best news for ammonia, is that it is easily made today with renewable electricity and water. Now, you have a nitrogen fertilizer that is made with near ZERO CO2 emissions, and releases ZERO CO2 emissions at the farm. This is a dream come true for the reduction of carbon in agriculture but its a challenge for those companies already producing urea and UAN. However, there is an innovative yet simple answer for that issue which we will discuss in the next paper.

Corn Is a Major User of Nitrogen Fertilizer
According to Shawn Rana corn is a common user when it comes to nitrogen fertilizer. A large proportion of N2O emissions from agriculture stem from UAN nitrogen fertilizer related to corn. As a result, a lot of research has gone into trying to find other ways to fertilize corn and encourage growth without using nitrogen fertilizer. After all, if it is possible to use something other than nitrogen fertilizer, it may be possible to reduce greenhouse gas emissions without harming corn yields. According to experts such as Shawn Rana this is one of the major focuses of the industry moving forward.

Shawn Rana Reviews What This Means for the Future
Ultimately, nitrogen fertilizer is still incredibly important when it comes to increasing the yield of certain types of crops. On the other hand, there are other types of fertilizer that might be just as effective. If it is possible to take advantage of specific types of fertilizer that can reduce the carbon impact of farming, it might be possible to save the planet without having to harm crop yields in the process. Shawn Rana understands that this could be difficult. On the other hand, it is important for the industry to adapt for the benefit of the environment. It will be interesting to see where the industry moves from here when it comes to the use of fertilizers based on nitrogen.

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