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Harvest Minerals Limited ('Harvest' or the 'Company')

Positive Agronomical Test Results of KP Fértil® on Sugarcane

Harvest Minerals Limited, the AIM listed remineraliser producer, is pleased to announce positive agronomic test results for sugarcane plantation areas using KP Fértil®, Harvest's direct application natural remineraliser produced at the Company's 100% owned Arapua Fertiliser Project in Brazil ('Arapua').

Highlights:

- Agronomic tests using KP Fértil® have returned superior yield performance in sugarcane plantation areas compared to the more traditional and widely used reactive phosphate Bayóvar fertiliser
- The higher the doses of KP Fértil®, the higher the yields presented
- The yields using KP Fértil® were also significantly higher when compared to that of an area with a control treatment without phosphorus application
- Tests were conducted under the leadership of Dr. Gaspar Henrique Korndorfer, one of the leading and most respected sugarcane specialists in Brazil

Brian McMaster, Chairman of Harvest, said: *"The yield performance from the agronomic tests using our KP Fértil® in sugarcane plantations is outstanding. It compares very favourably to the highly soluble Bayóvar, which is widely used by the Brazilian sugar mills, giving us a strong opportunity to develop a new sales market. It should be highlighted that the positive results were achieved in two different types of soils, distantly located from each other, and that the yield results should improve year upon year due to the residual set of nutrients left by our product. We are therefore confident that these agronomic results give just a small indication of the significant benefit that our KP Fértil® product can offer.*

"Looking at the new market opportunity, Brazil is the world's largest sugar producer and accordingly sugar cane is one of the largest and most important crops in the Country. Our commercial team will use these agronomic results to build our presence within this significant market and increase our client portfolio."

Further Information:

The agronomic experiments were installed in March and June 2019 in two areas with different soil types: the Santo Angelo Sugar Mill, located in the city of Veríssimo, state of Minas Gerais, and the Mata Sugar Mill, located in the city of Guararapes, state of Sao Paulo.

Both field trials intended to evaluate the yield of sugarcane as a function of phosphorus ('P') doses (in kg ha^{-1} of P_2O_5) sourced from two different products:

1. the remineraliser KP Fértil® (3.2% total P_2O_5), and,

2. the reactive phosphate of Bayóvar (29% total P_2O_5).

The treatments consisted of three doses of 80kg, 160kg and 320kg per ha^{-1} of P_2O_5 for both KP Fértil® and Bayóvar, with each applied over the selected areas in both sugar mills. A control treatment area without phosphorus application was also tested, with 4 repetitions.

The application of both P sources occurred after the planting of sugarcane. Following the first sugarcane harvest, the yield performance was assessed based on three parameters:

1. total of stalk per hectare (TSH);
2. tonnes of sucrose ("POL") per hectare (TPH), and;
3. total recoverable sugar (TRS).

According to the summary of the analysis as seen in the charts below, the application of KP Fértil® returned superior yields related to all three TSH, TPH and TRS parameters analysed, compared to the application of Bayóvar at both rates of 160kg and 320kg per ha^{-1} of P_2O_5, the latter in general returned a decreasing yield rate performance as the doses were higher.

In conclusion, the tests have shown that the higher the doses of KP Fértil®, the higher the yields. The yields using KP Fértil® were also significantly higher when compared to the control area that had no phosphorus application.

The tests were conducted under the leadership of Dr. Gaspar Henrique Korndorfer, who is one of the most respected sugarcane consultants in Brazil and is widely referenced in sugarcane and silicon research, having worked in more than 60 sugar mills in the states of Sao Paulo, Minas Gerais and Goiás. He is also an active consultant for the Minister of Agriculture (MAPA), a position he has held since 1999.

Total Stalk per Hectare (TSH)

At the Santo Ângelo Sugar Mill, the use of KP Fértil® as a source of nutrients for sugarcane yielded gains of 12.4 tonnes of TSH when compared to the yield of the control treatment area (Figure 1). Better TSH results were obtained with higher doses KP Fértil®, which reached an increase of up to 6.7 tonnes per ha^{-1}, when compared to the application of Bayóvar at the same 320 kg ha^{-1} doses' rate. On the other hand, it was observed that the increased doses of Bayóvar at 160kg and 320kg per ha^{-1} resulted in a decline in yield from its best result reached at 80 kg ha^{-1} of P_2O_5.

At the Mata Sugar Mill, the use of KP Fértil® at a rate of 160 kg ha^{-1} of P_2O_5 yielded gains of up to 16 tonnes TSH when compared to the yield of the control treatment area (Figure 1). Again, the results from Bayóvar application decreased with the higher application rate by hectare.

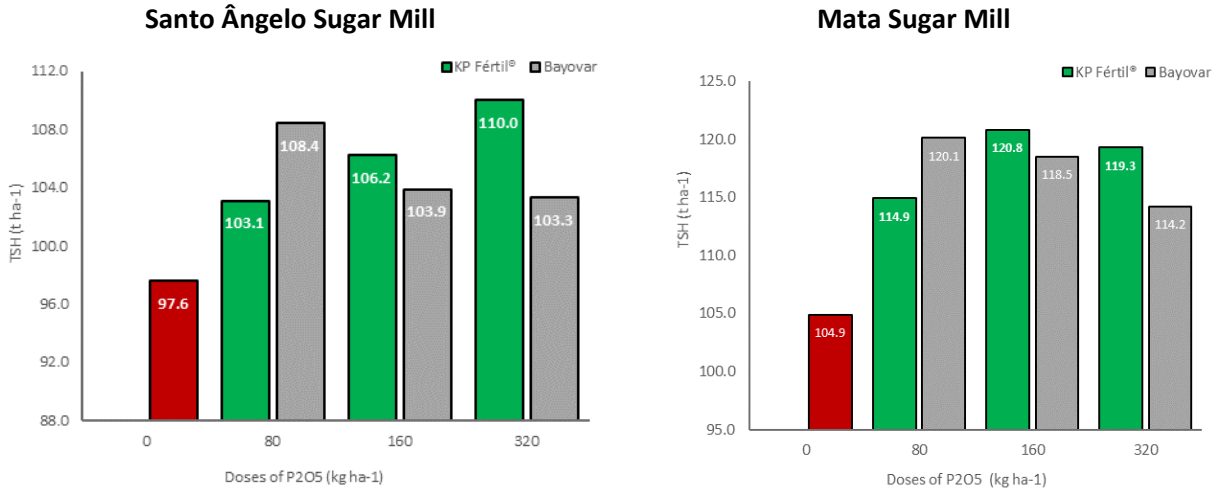

Figure 1: Total of stalk per hectare (TSH) t ha^{-1} as a function of different doses of P_2O_5 through the sources KP Fértil® and Bayóvar.

Tonnes of POL per Hectare (TPH)

Similar to the results found with the TSH analysis, KP Fértil® doses at a rate of 160kg and 320 kg ha^{-1} have also returned superior TPH results than the ones observed at same rate with the application of Bayóvar in both Santo Ângelo Sugar and Mata Sugar Mills. Again, the results from Bayóvar application decreased with the higher application rate by hectare.

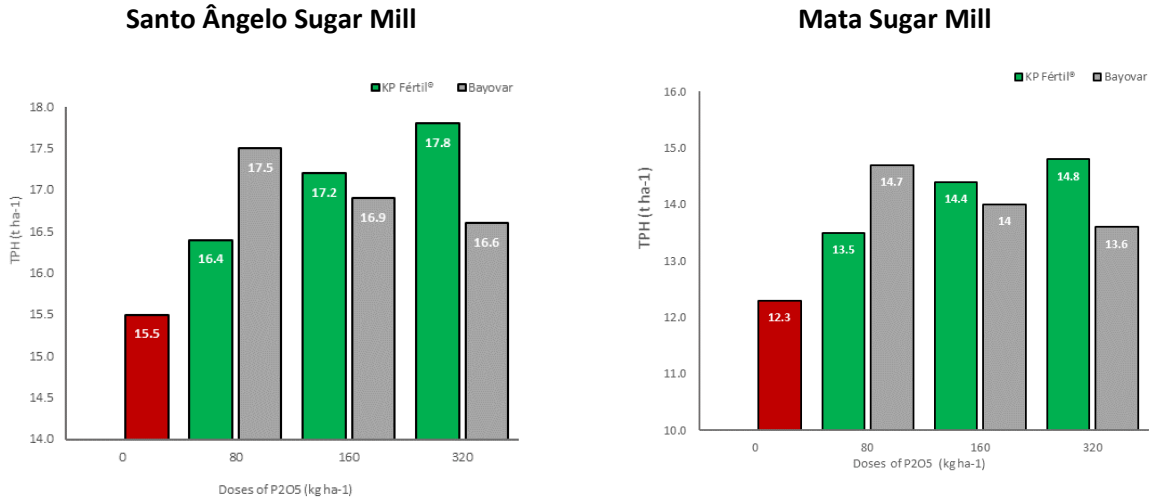

Figure 2: Tonnes of POL per Hectare (TPH) t ha^{-1} as a function of different doses of P_2O_5 through the sources KP Fértil® and Bayóvar.

Total Recoverable Sugar (TRS)

Regarding the quality of the raw material, at the Santo Ângelo Sugar Mill, the application of KP Fértil® resulted in increases of TRS values that vary from 0.5 to 3.6 kg t^{-1} when compared to the results obtained in the control treatment area (Figure 3). When compared to Bayóvar, KP Fértil® application resulted in increases of up to 1.3 kg t^{-1}, when both were applied at a dose of 320 kg ha^{-1} of P_2O_5.

At the Mata Sugar Mill, KP Fértil® application at a rate of 320 kg ha^{-1} of P_2O_5 resulted in an increase of 6.8 kg t^{-1} of recoverable sugar compared to the control treatment area and 5.2 kg t^{-1} compared to the treatment Bayóvar applied at the same dose rate.

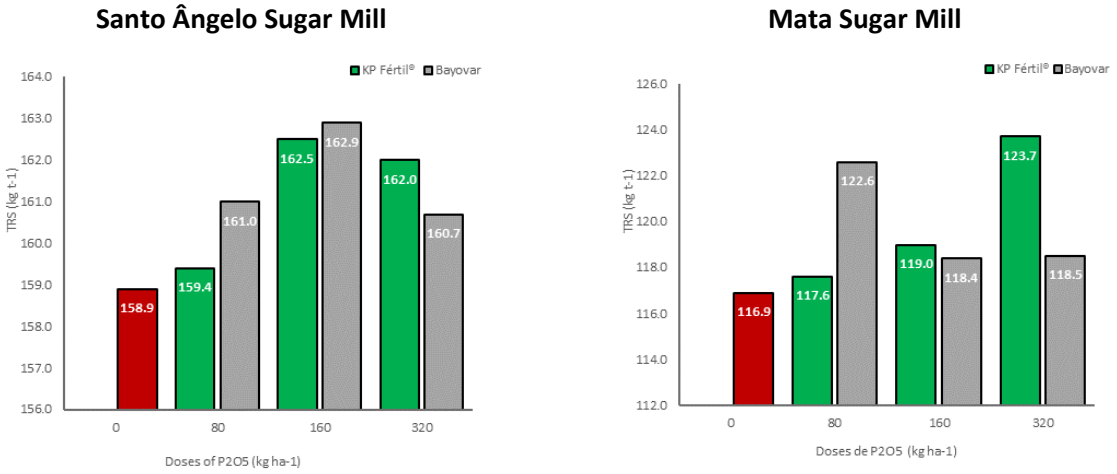

Figure 3: Total Recoverable Sugar (TRS) kg t^{-1} as a function of different doses of P_2O_5 through the sources KP Fértil® and Bayóvar.

****ENDS****

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Notes

Harvest Minerals Limited (HMI.L) is an AIM-quoted low-cost and high margin Brazilian remineraliser producer, located in the heart of the largest and fastest growing fertiliser market in Brazil.

The Company's product, KPFértil, is a registered and approved organic multi-nutrient direct application fertiliser. It contains many of the essential nutrients and minerals required by plants and, unlike most fertilisers, it does not require any complex processing or chemically alteration, instead it can be applied directly to crops.

KPFértil is produced at the wholly owned Arapua project, that consists of a fully permitted mine, production and storage facilities able to produce and deliver KPFértil to customers. Known mineralisation at the Project is expected to support 100+ years' production at 450Ktpa and to capitalize on this the Company has a dedicated in-country sales and marketing team with the skills, experience and contacts to sell KPFértil into the potential multi-Mtpa market on the doorstep of the Project.