

Harvest Minerals Limited / Index: LSE / Epic: HMI / Sector: Mining

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

Leach Test Results See KPfértil Dramatically Outperform Traditional Products for Potassium Retention

Harvest Minerals Limited, the AIM listed fertiliser development company, is pleased to provide positive leach test results for KPfértil, its direct application natural fertiliser and remineraliser product produced at the Company's Arapua Fertiliser Project in Brazil. The test results demonstrate the superior behaviour of KPfértil over other traditional sources of potassium.

Overview

- Leach testwork completed comparing KPfértil with other conventional sources of potassium to determine how much potassium was lost from the soil due to leaching before it could be utilised by the plants
- Results indicate that only 0.07% of the contained potassium ('K') provided by KPfértil was lost from the soil due to leaching compared to 20.8% of the contained K lost due to leaching from conventional sources including potassium chloride ('KCl'), 19.2% from potassium sulphate ('K₂SO₄')and 21% from potassium Nitrate ('KNO₃')
- Tests are part of the ongoing agronomic testwork programme being conducted in conjunction with the Federal University of Uberlândia ('UFU')
- Results will be used in certification process of KPfértil as a remineraliser by the Brazilian Ministry of Agriculture, Livestock and Supply ('MAPA')
- Ongoing pre-certification sales drive progressing well, with Company anticipated to scale up once certification is received

Harvest's Executive Chairman, Brian McMaster, said, "These leach test results are fantastic, supporting previous agronomic testwork, which has also exceeded our expectations, and demonstrates that KPfértil works as both a fertiliser and a remineraliser. Importantly, the results indicate that unlike traditional sources of potassium, KPfértil can be applied in a single dose as the potassium will not be leached away before it can be used by the plants. Secondly, as the nutrients are not lost, there is likely to be a strong residual effect, supporting our view that KPfértil is an excellent slow-release fertiliser. As well as providing additional support for our remineralisation application with MAPA, these results assist in our marketing of KPfértil to potential customers, which continues to gain traction."

Leaching Testwork



Leach testwork was conducted by UFU, an institution approved MAPA, comparing KPfértil with other conventional sources of potassium, namely potassium chloride, potassium sulphate and potassium nitrate. The tests were undertaken to determine how much potassium was lost from the soil due to leaching before it could be utilised by the plants. All products were applied at surface to a sandy soil (10% loam) in a dosage equivalent to 3,000 kg/ha K₂O and irrigated by applying 1,789 mm of water over an 18-day period.



Figure 1: Lysimeters being irrigated during leaching testwork at the UFU

Soil samples from vertical lysimeters were collected and split into ten samples to determine how far the potassium had leached. Each sample, along with the leached solution, which had drained through the lysimeter, was submitted for chemical analysis for potassium.

The results shown in Table 1 below, indicate that only 0.07% of the potassium in the soil was leached when KPfértil was the source. In contrast, 20.8% of the potassium in the soil was lost from potassium chloride, 19.2% from potassium sulphate and 21% from potassium nitrate for the soil compositions tested. In addition, most of the potassium from KPfértil remained in the first soil layer. KPfértil's superior behaviour over other sources in the leaching test is due to its low solubility in water resulting in far less potassium being leached away.

Source of Potassium (K)



KCI	K_2SO_4	KNO ₃	KPfértil	KPfértil	Control	
(granular)	(granular)	(powder)	(powder)	(filler)	(without K)	
K leached - % of total applied						
20.8%	19.2%	21.0%	0.07%	0.07%	0.0%	

Table 1: Percentage of potassium in the soil solution leached for granular KCl, powder K₂SO₄, powder KNO₃ and powder and filler KPfértil

This announcement contains inside information for the purposes of Article 7 of EU Regulation 596/2014.

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Notes:

Harvest Minerals (HMI.L) is a Brazilian focused fertiliser Company targeting low cost, near term development projects. The Company's current focus is the development of its 100% owned Arapua Fertiliser Project from which it produces its KPfértil product, a proven, multi-nutrient, slow release, organic fertiliser and remineraliser, which is produced from a weathered potassium and phosphate rich lava and offers many economic and agronomic benefits. Covering 14,946 hectares and located in the heart of the Brazilian agriculture belt in Minas Gerais, Arapua is a shallow, low cost mine with an indicated and inferred resource of 13.07Mt at 3.1% K₂O and 2.49% P₂O₅. This resource translates into a mine life of over 100 years at a rate of 450k tonnes per annum and crucially is based on drilling just 6.7% of the known mineralisation, leaving significant upside potential. With a trial mining licence in place, allowing Harvest to extract 50kt of product on a rolling basis whilst the full mining licence application process is underway, and official registration of KPfértil as a remineraliser expected around the end of 2017, Harvest is ideally placed to address the significant demand for locally produced fertiliser in Brazil; Brazil has abundant agricultural land but lacks domestic fertiliser, with the country currently importing 90% of the potash it uses. Furthermore, the Brazilian Government has set a target to be self-sufficient in fertilisers by 2020, creating significant market opportunity



for Harvest and its KPfértil product. Additionally, the Company has four assets at various stages of development and continues to explore other opportunities that fit its investment criteria.