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Planning for a greener future – Envirostream’s micronutrient field trial begins

HIGHLIGHTS

- **Envirostream Australia trials fertilisers blended with slow-release zinc and manganese micronutrients derived from spent alkaline batteries.**
- **Controlled field testing of the fertiliser blends for wheat seeding has commenced in Western Australia.**
- **Discussions with fertiliser manufacturers regarding commercial use of Envirostream Australia’s micronutrient blends are ongoing.**

Introduction

Lithium Australia NL (ASX: LIT, ‘the Company’), mindful of its environmental, social and governance responsibilities, is committed to the creation of a circular battery economy. As part of that commitment, the Company’s 90% owned subsidiary Envirostream Australia Pty Ltd (‘Envirostream’) is currently assessing the use of zinc and manganese derived from recycled alkaline batteries as micronutrients in blended fertilisers ([see ASX announcement dated 22 May](#)).

While fertilisers incorporating rapid-release micronutrients derived from alkaline batteries are available commercially in the northern hemisphere, the micronutrients Envirostream is producing are slow-release variants tailored specifically for broad-acre farming in Western Australia (‘WA’). It is hoped that the use of such nutrients in slow-release form – believed to be a first for the Antipodes – in the sandy soils, low in zinc and manganese, that characterise WA’s wheatbelt region will provide growers with significant benefits.

Envirostream’s fertiliser/wheat-seeding trial is being held near Kojonup, located about 260 kilometres southeast of Perth, the capital of WA.

Micronutrient/fertiliser agglomeration

The zinc and manganese micronutrients used in the blended fertilisers were recovered by Envirostream from single-use, disposable alkaline batteries (the type commonly found in torches, toys and remote-control units) in the form of mixed metal dust (‘MMD’) at its recycling facility in Victoria, Australia. For the field trials, the MMD was agglomerated with mono-ammonium phosphate (‘MAP’) fertiliser.

Field seeding trials

There were five types of furrow treatment in the controlled Kojonup seeding on 5 June:

- no fertiliser in seed furrows;
- application of MAP only to furrows;
- addition of commercial fertiliser with added zinc and manganese to furrows, and
- use of MAP agglomerated with two different dosages of Envirostream’s MMD.

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The packaged fertiliser variants, plus the specialised equipment used and seeding in progress, are shown in the images below.



Harvesting at the trial site is planned for December 2020, with results to follow in the first quarter of 2021.

Blended fertiliser development

In addition to conducting micronutrient field trials, the Company is exploring the use of Envirostream's alkaline MMD as a source of micronutrients with a number of fertiliser manufacturers. To date, discussions have been positive, and the Company will provide further updates as matters progress.

Comment from Lithium Australia MD Adrian Griffin

"Using recycled batteries to enhance fertilisers has the potential to divert toxic materials from landfill, provide the fertiliser industry with more sustainable inputs and improve crop yields. The slow-release nature of the micronutrients produced by Envirostream could prove a real advantage in terms of local crop conditions. We look forward to the outcome of the trials later this year."

Authorised for release by the Board.

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About Lithium Australia NL

Lithium Australia aims to ensure an ethical and sustainable supply of energy metals to the battery industry (enhancing energy security in the process) by creating a circular battery economy. The recycling of old lithium-ion batteries to new is intrinsic to this plan. While rationalising its portfolio of lithium projects/alliances, the Company continues with R&D on its proprietary extraction processes for the conversion of *all* lithium silicates (including mine waste), and of unused fines from spodumene processing, to lithium chemicals. From those chemicals, Lithium Australia plans to produce advanced components for the battery industry globally, and for stationary energy storage systems within Australia. By uniting resources and innovation, the Company seeks to vertically integrate lithium recycling, extraction and processing.

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