

NZ PHOSPHATIC FERTILISERS

CADMIUM REPORTING PROGRAMME

July to December 2023 Status Report

BACKGROUND

This report was prepared for the Fertiliser Quality Council so that the cadmium levels in phosphatic fertilisers sold in New Zealand could be monitored. This report was independently prepared by the Fertmark auditor.

This report is part of a series that began in July 1997. It covers the six-month period 1 July to 31 December 2023. It is proposed that the next report will cover the six-month period from January to June 2024. Work on this is underway.

SUMMARY

The voluntary cadmium limit in operation during the period of this report is 280 mg Cd/kg P. This limit has been in place since January 1997.

Cadmium monitoring information has been sourced from the two large phosphatic fertiliser suppliers and some of the smaller suppliers. It is estimated to cover more than 99% of the phosphatic fertiliser sold in New Zealand.

All of the phosphatic fertiliser samples tested in the period covered by this report were below the voluntary limit.

Achieving lower cadmium levels in phosphatic fertilisers continues to be based primarily on sourcing phosphate rock with appropriate cadmium levels.

Cadmium test results continue to be reported on an individual sample or weekly dispatch composite basis and there continues to be independent validation of the test results. There also continues to be complete integration of the cadmium monitoring programme with the Fertmark programme.

VOLUNTARY CADMIUM STANDARDS

For some time, the New Zealand fertiliser industry has had in place voluntary standards for the levels of cadmium in phosphatic fertilisers. These voluntary standards were negotiated by the Fertiliser Manufacturers Research Assn Inc (FMRA). Originally, these standards proposed a phased reduction as follows:

- Jan 1995 - Jul 1997- 420 mg Cd/kg P
- July 1997 - Jan 2000 - 340 mg Cd/mg P
- Jan 2000 onwards - 280 mg Cd/kg P

This phased approach was thought necessary as it was believed that blending trials would have to be undertaken and there was a possibility that plant modifications would have to be undertaken to ensure compliance. However,

due to the success achieved by blending phosphate rock from different sources, while at the same time satisfying Resource Consents and meeting agricultural nutrient requirements, it was possible to fast-track the reduction programme. The new lower limits agreed to were:

- July 1995 to Dec 1996 - 340 mg Cd/kg P
- January 1997 onwards - 280 mg Cd/kg P

The level that applies during the period of this report is, as noted, 280 mg Cd/kg P.

PARTICIPATION

During the period covered by this report there were two participating companies importing phosphatic fertilisers into New Zealand. Also, during this period there were three local manufacturers operating on seven sites.

The information used in the preparation of this report came mainly from these companies. This represents the vast majority of the phosphatic fertiliser sold in New Zealand. It is intended that future reports will continue to have the fullest possible participation.

RESULTS

Results for the July to December 2023 period averaged 193 mg Cd/kg P on a weighted average basis. This represents little change when compared to the previous two period results of 171 and 199 mg Cd/kg P.

This level continues to be below the voluntary limit of 280 mg Cd/kg P that applied during this reporting period.

We can report that none of the 168 results reported for individual or weekly dispatch composites in this six-month period exceeded the voluntary limit.

INTEGRITY OF THE REPORTING SYSTEM

This report is based on information supplied by the fertiliser companies, both during audits and separately, and on 22 results obtained from samples taken and analysed independently by the Fertmark auditor. The proficiency of the participating laboratories testing for cadmium was examined during audits and separately. It has been found to be satisfactory.

I have no reason to suspect that the data supplied by the fertiliser companies is not correct, accurate and reliable.



Peter Wood
Fertmark Auditor