



Ref: CTO 2019 046 [G]

Fish Products: Crab Shell Meal - Use as Fertiliser

CTO direction as to equivalent measure in relation to crab shell meal for use as fertiliser

Pursuant to section 27(1)(d)(iii) of the Biosecurity Act 1993, I, Leigh Sinclair, Manager (Acting), Animal Imports, Ministry for Primary Industries (under delegated authority), give the following direction for clearance of crab shell meal for use as fertiliser that is different from that included in the *Import Health Standard For Fish Food And Fish Bait From All Countries* (FISFOOIC.ALL; 2 December 2011).

Clause 7.2.3(i) of the above Import Health Standard allows biosecurity clearance to be given to fishmeal not intended for manufacture into fish food provided the consignment is accompanied by a manufacturer's declaration stating the fishmeal has been heat treated at a minimum core temperature of 80°C for a period of no less than 20 minutes. Under this clause, fishmeal can be used as fertiliser.

In industry jargon, the term "fishmeal" is broadly applied and could include crab shell meal. However, the IHS has not made this clear. This CTO Direction determines crab shell meal to be equivalent to fishmeal provided the biosecurity risks in the crab shell meal are mitigated. The *Import Risk Analysis: Crustaceans for Human Consumption* has identified the following as the risk organisms that have to be managed in imported crustacean products: *Hematodinium* spp., *Angiostrongylus cantonensis*, *Paragonimus* spp., and *Aphanomyces astaci*.

The reason for this direction is that the biosecurity risks associated with crab shell meal will be assessed through the permit system and managed effectively. For *Hematodinium* spp., *Angiostrongylus cantonensis*, and *Paragonimus* spp., the IRA recommends coagulation of the protein as one of the risk mitigation options. Based on information contained in Section 26.3.1 of the IRA, heating to 100°C for 5 minutes is deemed to achieve protein coagulation. For inactivating the fourth risk organism, the IRA recommends heat treatment at 100°C for one minute, or 90°C for 10 minutes. Since there is not enough information to determine if the IRA recommended time-temperature parameters are equivalent to the IHS's requirement of 80°C for 20 minutes, any permit issued for crab shell meal will require a manufacturer's declaration stating the product was heated at a temperature of not less than 90°C for a minimum of 20 minutes.

This direction takes effect from the date of signing and continues in effect until amended or revoked.