

Chitosan
PC Code: 128930

DP Number(s): 386109
EPA Reg. or File Symbol No. 83729-1



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION/OFFICE OF PESTICIDE PROGRAMS

MEMORANDUM

DATE: 5 /19/ 2011

SUBJECT: Science review of efficacy data for label amendment of registered product, YEA! Yield Enhancing Agent, EPA Ref. No. 83729-1, containing 0.25% w/w of Chitosan, as its active ingredient.

Decision Numbers: 444246
DP Numbers: 386109
EPA File Symbol Numbers: 83729-1
Chemical Class: Biochemical
PC Code: 128930
CAS Number: 9012-76-4
Tolerance Exemptions: 180.1072
MRID Numbers: 483519-01

FROM: Clara Fuentes, Ph.D. Entomologist
Biochemical Pesticides Branch
Biopesticides & Pollution Prevention Division (7511P)

A handwritten signature in black ink, appearing to be "Clara Fuentes", written over a horizontal line.

TO: Gina Casciano, Regulatory Action Leader
Biochemical Pesticides Branch
Biopesticides & Pollution Prevention Division (7511P)

ACTION REQUESTED

AgriHouse, Inc. is submitting efficacy data in MRID 483519-01 in support of label amendment for registered product, YEA! Yield Enhancing Agent, EPA Ref. No. 83729-1, containing 0.25% w/w of Chitosan as its active ingredient. The product is used to promote plant growth, boost seed germination, and enhance plant vigor and quality in grasses, trees, ornamental and agricultural crops. The proposed label amendment indicates that the product promotes induced plant resistance and offers protection against three species of tree beetles, and plant pathogens, virus and fungi.

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RECOMMENDATIONS AND CONCLUSIONS

Product Chemistry: Acceptable. There are no inconsistencies between information listed on the CSF and stated on product labels.

Product Performance: Acceptable. The registrant has clarified in a memo dated May 19, 2011, that the concentration of chitosan in the registered product, which is 4 to 160 times lower than reported in the submitted data volume MRID 48361901, is that time more efficacious than historical uses, because of the proprietary methods of solubilization of chitosan. The label dosage instructions are consistent with these findings.

STUDY SUMMARIES

The registrant submitted data from the scientific published literature documenting that Chitosan is a biodegradable, naturally occurring substance that can be successfully employed to enhance plant vigor and ameliorate the adverse effects of plant pathogens, viruses and fungi, and some species on tree beetles on plant growth and yield production. There is enough information from the public literature on the mechanism for induce plant resistance by Chitosan, and its ability to protect many types of plants from disease vectors and insect damage.

cc: Reviewer: Clara Fuentes; RAL: Gina Casciano, BPPD Chron File, IHAD/ARS
FT, PY-S: date: 5 / 19 /11