

NEPA Decision Summary

Based on a review of Permit 06-352-102r, the following determinations were made:

- No Federally listed threatened or endangered animal or plant species occur in Whitman County, Washington. Therefore, these field trials will not harm or have adverse or other significant effects on any threatened or endangered species.
- Over fifty field trials have been performed with transgenic barley plants under APHIS authority, and APHIS is familiar with barley biology and methods to manage confined barley field trials.
- Barley is 99% self-pollinated, and is not generally pollinated by insects. Association of Official Seed Certifying Agencies (AOSCA) isolation distances for certification of foundation, registered or certified nonhybrid barley seed is zero feet. Therefore a 50 foot fallow zone and a distance of 600 feet from any other barley as proposed by the applicant should be more than adequate to prevent unintended release of the transgenic barley into adjacent fields. This distance is sufficient to reduce outcrossing to insignificant levels.
- Barley does not hybridize with any other species growing in the United States. Therefore there is no risk of gene flow to wild and weedy species.
- Human lactoferrin and lysozyme are abundant proteins in saliva and human milk. They have no known toxic effects. Bovine lactoferrin and egg white lysozyme have been granted GRAS status by the FDA.
- The transgenic barley will be planted and seeds harvested by hand. Therefore there is no chance that seeds will be dispersed via mechanical equipment. Harvested seeds will be threshed and processed inside a designated laboratory. Therefore, viable seeds will not have the potential to be dispersed into the area outside of the test site during processing.
- The size of the proposed field test is very small, only 0.20 acres. Consequently environmental exposure will be negligible. Trials of such small size are and have been easily monitored and confined to permitted areas, under environmental mitigation measures similar to those specified in the permit application and in the standard and supplemental permit conditions.
- Seed dormancy has not been demonstrated with this barley cultivar; therefore, emergence of volunteers will be limited to the following season.
- Cultivated barley does not have the ability to establish itself permanently in natural plant communities. Any accidental movement of seeds will not result in plants from this test becoming established outside of the field test area.

- Any plant material left after harvest, containing only insignificant amounts of the proteins, will be plowed under the soil surface. The proteins have no known or foreseeable toxic effects, so this method of disposal should have no negative impacts on the environment.

For the above reasons, APHIS has determined that (1) pursuant to 7 C.F.R. §372, the field trials proposed under permit #06-352-102r will not significantly affect the physical environment and (2) there are no applicable, extraordinary, or other reasonably foreseeable circumstances under which significant environmental effects could occur given the protective and ameliorative measures specified above. Therefore, this field test is deemed confined within the meaning of 7 C.F.R. §372.5.