



December 21, 2022

Regulatory Analysis and Development, PPD,
Animal and Plant Health Inspection Service
Station 3A-03.8,
4700 River Road Unit 118,
Riverdale, MD 20737-1238

Docket No. APHIS-2020-0030: Comment on Draft Environmental Impact Statement and Draft Plant Pest Risk Assessment for Determination of Nonregulated Status for Blight-Tolerant Darling 58 American Chestnut (*Castanea dentata*) Developed Using Genetic Engineering

Founded in 1983, the Northeast Organic Farming Association of New York (NOFA-NY) is the premier statewide organization growing a strong regenerative organic agriculture movement in New York State and is part of a regional network of seven Northeast Organic Farming Associations. NOFA-NY provides education and assistance to local organic and regenerative farmers; connects consumers with organic and regenerative farmers; advocates policies that support a sustainable and fair food and farm system at both the state and federal levels; and is the largest USDA-accredited organic certifier in New York, certifying nearly 1,100 organic operations in the state.

New York State is a top US producer of organic products, ranking second in number of organic acres, and third in number of organic farms nationwide, with over 1,900 organic certified entities statewide. With one of the biggest marketplaces in the world in the New York City metropolitan region, New York participates in a large portion of the over \$57 billion in organic sales nationwide. In 2021, New York certified organic sales of commodities was about \$328 million.

In October 2020, NOFA-NY submitted comments opposing a determination of non-regulated status for Blight-Resistant Darling 58 American Chestnut, and we do so again today. We agree with the APHIS determination of August 2021 that “the proposed determination of nonregulated status has the potential to significantly affect the quality of the human environment.”

To further detail our issues with this determination, we quote here the comments of Brian Caldwell, founding NOFA-NY member and current member of the USDA National Organic Standards Board:

“While thorough in many aspects, the draft DEIS for the Darling 58 chestnut falls short in important ways. The Darling 58 is indeed a plant pest risk.

“The DEIS assumes that the only important genetic change in the Darling 58 compared to wild type American chestnuts is an inserted gene for chestnut blight resistance. This is incorrect. Genes for

antibiotic resistance, promoters, and unknown genetic damage in random locations are present in this transformed plant. The extent of the random genetic damage can only be determined through complete DNA sequencing, and then identifying the function of disrupted locations.

“The DEIS assumes that if established, the Darling 58 would act as a wild type American chestnut in the forest environment. However, a critical additional effect would be to degrade the genetics of the wild American chestnut, possibly precluding its successful re-establishment. Introduction of the Darling 58 into forest ecosystems has the goal of allowing pollen from remaining wild type American chestnuts to pollinate it, to produce seeds carrying the resistance trait. These seeds would carry other undesirable genetic damage as well, but would have survival advantage due to blight resistance. It is likely that over time, individuals with this genetic inheritance would survive, while the wild type continues to decline. *Eventually, the wild type would be replaced by the Darling 58 genetics.* Indeed, this is the stated goal of the project. Thus, a cohort of trees with Darling 58 genetics would become established.

“That is the scenario that the DEIS should address. These trees would likely have genetic deficiencies that will reduce their contributions and competitiveness in the forest ecosystem, compared to wild type trees. It is likely that they would not grow as fast, would not make the same types of soil fungal associations, and not function as well in the forest ecosystem in other ways. These outcomes need to be determined before any widespread introduction of Darling 58 is allowed. Thus, ironically, ***the Darling 58 introduction could preclude the re-establishment of successful wild type American chestnut. It should be considered a plant pest risk, with potentially irreversible damage.***

“Please do not allow the Darling 58 chestnut to be deregulated until:

1. The DNA of the Darling 58 and the American chestnut clone from which is derived are completely sequenced, and the function of any disrupted locations is fully determined
2. The ability of Darling 58 x wild type American chestnut progeny to function in relevant forest ecosystems is studied, and outcomes found to be positive.”

NOFA-NY would also like to note that by not fully addressing the gene flow and other potential non-target impacts of the release of the Darling 58, there could be a serious negative impact on organic chestnut producers. While current numbers may be small, there likely will be a significant increase of organic chestnut acres in the next several years as a result of USDA climate-smart programs. The New York Tree Crops Alliance is part of a USDA-funded project that intends to see thousands of acres of new plantings of chestnuts in the East in the next five years. Most of those would be organic.

The projected widespread planting of Darling 58 chestnuts would endanger the organic status of these in the future, due to presence of GMO pollen. Pollen is transferred mostly by the wind, but also carried by many species of insects which are attracted to the male flowers when they are releasing pollen. The potential for movement of pollen beyond the 400m distance used in the DEIS is very real.

Therefore, NOFA-NY calls on APHIS to consider the Darling 58 a plant pest, and **not** grant non-regulated status to the Blight-Tolerant Darling 58 American Chestnut (*Castanea dentata*) developed using genetic engineering.