

**Year of study:** 2013






**Compiled by:** Dr. Ewen Mullins

**Date:** December 9<sup>th</sup>, 2013

**Context:** The below information is provided as per condition 5.8 of the EPA consent to Teagasc of July 25<sup>th</sup>, 2012 on the field release of cisgenic potato line A15-031.

**Update:**

Planting of the 2013 site started on June 18<sup>th</sup> with all three varieties planted by June 21<sup>st</sup>. Harvesting commenced October 23<sup>rd</sup>, with all harvesting operations completed by Friday, October 25<sup>th</sup>. To assist in the segregation of the varieties post-harvest, different coloured bags were used depending on the variety in question (e.g. white for Sarpo mira, red for GM Desiree and orange for non-GM Desiree) with all bags (n=271) stored in the contained glasshouse at Oak Park post-harvesting. A total of 253 bags were processed for destruction via steaming, which was completed by December 5<sup>th</sup>. Bag lots were steamed for a minimum of 16 hours after which manual inspection confirmed tuber destruction before the material was removed for composting (see below). The composting cycle will be for a minimum of 10 months.

Steam destruction of tubers for $\geq 16$ hrs	Arrangement of bags post-steaming	Tuber lot post-steaming, illustrating destroyed tubers
		
Tuber lot post-steaming, illustrating destroyed tubers	Manual verification of steam destruction	Compost heap for biodegradation of steamed tubers
		

As a provision for the 2014 season, the remaining 18 bags (cisgenic variety) are to be stored in the glasshouse until sowing and establishment of the 2014 crop is assured.

The below additional information is provided in accordance with condition 5.8 of the consent for notification No. B/IE/12/01. Specifically, detail is provided in regards to condition 3.3, 3.5 and 5.6.5 as follows:

**Condition 3.3:**

During the growing season, the site was inspected twice weekly. On the evening of August 9<sup>th</sup>, three persons gained entry to the field with their greyhounds with the intention to train them for coursing rabbits/hares. On being challenged by Teagasc staff they left the field and were removed from the campus. All plots were then inspected as was the perimeter of the field with no damage recorded to any of the plots therein. The minor damage made to the fence was repaired that evening and there was no repeat event since. There was no evidence of burrowing by animals within or around the perimeter of the site during the 2013 growing season; however during harvesting evidence of small-animal burrowing was recorded in a Sarpo Mira plot. A follow up inspection of the other plots across the field did not find any other occurrences.

On monitoring the 2012 site during the 2013 season, there was no evidence of volunteers arising from true potato seed. Groundkeepers were recorded (6 cisgenic-plantlets and 4 non-cisgenic) on 03.05.2013 and a single groundkeeper (origin non-GM Desiree) was recorded on 02.09.2013. In both cases, plants were destroyed with an herbicide-based treatment.

**Condition 3.5:**

Harvesting was completed by mechanical means and all exposed tubers/tuber pieces were handpicked from the soil surface. As per condition 3.4.1, the tubers from each plot were collected in labelled bags which were then sealed on site before removal to the contained glasshouse at Oak Park. All plots were repeat harvested (x2) in accordance with condition 3.4.2 to ensure the removal of all visible tubers and/or tuber pieces. Material collected during the post-harvest inspections were placed in labelled bags and removed as per condition 3.5.1, prior to storage in the glasshouse and subsequent steam destruction. No volunteers/groundkeepers have been noted to date on the 2013 plots and dependent on the weather conditions the site will be prepared for perennial ryegrass sowing as early as possible in 2014 (condition 3.5.2). No tubers taken from the 2013 site have been used as animal feedstuff (condition 3.5.4).

**Condition 5.6.5:**

Post-harvest, monthly inspections have been ongoing (6/11/2013 and 2/12/2013) and no groundkeepers, volunteers were evident within or adjacent to the site. This monitoring will continue as required by the license.