Dairy One

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Hay Sampling Procedures for PCR Services

An analysis is only as good as the sample submitted. Taking a good representative sample of your forage is the first and most critical step of the analytical process, yet it is often the step that is the most taken for granted. Following good sampling procedures will help ensure that your analytical results truly reflect the composition of the sampled material.

These summarized guidelines are intended for use when collecting a sample of dry alfalfa hay for PCR testing at Dairy One Forage Laboratory and were primarily adapted from The Export-Import Inspection and Quarantine Standard of the People's Republic of China, Document SN/T1194 consultation draft – "Methods of sampling and preparation of samples for detection of genetically modified components in plants and their derived products" (replaces SN/T1194-2003).

植物及其产品转基因成份检测
抽样及制样方法

General Rules

Samples should be representative of the appropriate load or lot of hay. Hay loads or lots should be identified as a single cutting or a single field and variety. Combinations of different loads or lots of hay cannot be represented adequately and should always be sampled separately. Do not combine cuttings, fields, or hay types. If sampling a shipping container of hay, the number of bales sampled should represent all the cuttings, fields, or hay types that may be present in the shipment and then packaged as individual samples for analysis. Larger samples should be collected on site and then broken down into subsamples that are subsequently sent to the lab.

Be attentive to prevent contamination of the samples. Ensure all the extracting tools are clean, dry, and have no contamination from other samples. The container or package containing a sample should be used only once. To avoid cross contamination, use different sampling and sample preparation tools whenever possible to extract and prepare samples for different batches, loads, or lots. If unable to use different tools (for example when using mechanical sampling equipment), the appropriate method should be used to clean all appliances, equipment and preparation area after drawing and preparing a sample of the batch, load, or lot. The sampling tools and sample container(s) should be placed in a clean area to avoid contamination caused by foreign matter such as rain and dust. All sampling operations should be completed in the shortest possible time to avoid changing the composition of the samples.

Sampling Methods

When taking a sample, if mechanical sampling equipment is used, it should be able to adjust the sample size and sampling frequency within a wide range and also be conducive to inspection and cleaning. All cargos should have the same opportunity to enter the sampling device of a mechanical sampler.

When sampling manually, one should sample at a predetermined sampling interval. Extracting samples from new sections that are exposed during loading and unloading or a stopped conveyor belts facilitate

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the process. When sampling from a stopped conveyor belt, one should extract samples from bales across the entire bandwidth of the conveyor, not just a portion.

When sampling from a new section of cargo, one should alternately extract from the upper, middle, and lower cargo hold.

Samples for multiple assay parameters

Each unique sample collected is destined only for the detection of genetically modified organisms or verticillium wilt. It will not be split or sub-sampled and utilized for any other analyses. This is to minimize the potential for cross contamination from other genetically modified materials. If a full nutritional profile or other nutrient parameter is required, submit two separately bagged samples to the lab.

Sample packing

Collected samples should be placed in a quart sized zipper style plastic storage bag and sealed tight.

Sample identification

In a timely manner, record on each sample bag a unique label that is indelible to avoid loss of relevant information. The contents of the label should at minimum include information such as cargo name, lot number, company name, and company address. Record the same identification information on the sample submittal form.