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PRODUCT MANUAL

Loughran Family Malt grows and supplies the finest range of grains for use by Irish Distilleries.

Our grains are grown on a rich clay-loam soil over limestone which grows well formed grains, rich in flavour and high in starch, leading to better extract in the distillery.

At Loughran Family Malt our agronomy programs are designed to produce grains that will provide optimum performance in the distillery. During harvest we select only the finest portion of our crop for use by our distilling customers, with the remaining portion being used for animal feed, which helps us create a sustainable economy and environment on our farm.

After harvest, our selected grains are cleaned and prepared before being placed in specific storage units to allow for grain maturation. Once matured, the grain is packed and dispatched to our valued customers.

Pot Still Barley

Moisture Content:	<14.0%
Screenings @ 2.3mm:	0%
Protein:	10.8%
Aspirated:	Yes
Variety:	Prospect
Packaging:	25kg bags, 1 tonne bags or bulk
Malted:	No, this is an unmalted barley
Rolled Option Available:	Yes
Origin:	Co. Louth
Organic Option Available:	Yes, from crop year 2021 only

Loughran Family Malt's Pot still barley is grown locally in Co. Louth. The East winds of early spring help dry our fields allowing for early planting. The deep loamy soils help the plant grow vigorously producing plump grains prefect for whiskey production. Our flagship grain is used and valued by distillers across Ireland for the flavour it imparts on new make spirit.

Function:

Pot still whiskey must be made with a minimum of 30% malted barley and 30% unmalted barley. Loughran Family Malt Pot Still Barley may be used as the 30% unmalted barley required to make this whiskey.

Unlike feed grade barley, which is often used to fill this need, Loughran Family Malt Pot Still Barley offers the following benefits to distillers:

- **Dried to less than 14.0% moisture**. Lower grain moisture means a higher starch content, which results in more whiskey output. In comparison, feed grade barley in many cases is not tested for protein content, which may be as high as 13%, resulting in a much lower starch content.

- Screened over a 2.3mm screen to remove all small grains. Our Pot Still Barley is screened finer than feed grade barley, which can contain up to 10% screenings. This increases the average grain size and increases the overall percentage of starch. Larger grains = better surface to starch ratio = MORE WHISKEY!

- Grown and selected for its low protein content. Only barley, with a protein content less than 10.8% is considered good enough for Loughran Family Malt Pot Still Barley. In comparison, feed grade barley, is not tested for protein and can by up to 13%. Less protein = more starch = MORE WHISKEY!

- Selected from a single variety of barley. For crop year 2020, we have chosen Prospect. A cross between KWS Irina and Overture, this variety was chosen for its high thousand grain weight and its earliness of ripening allowing to harvest in better weather conditions. By using a Pot still Barley consisting of a single variety, the distiller can be sure of better consistency between batches, allowing them to dial in their production process and extract a greater amount of whiskey (liquid) from the process. Greater consistency = more productivity = MORE WHISKEY!

Loughran Family Malt are also able to offer this product in rolled format. By using Rolled Pot Still Barley, instead of milled or hammer milled barley, the distiller may achieve a coarser grist. This may allow them to change their mash patterns and milling regime for malted grains, allowing for better over all extract and improved runoff.

Clermont Farms Haggardstown, Dundalk, Co. Louth, Ireland, A91 HPK7

Distilling Oats

Moisture Content: Aspirated: Variety: KPH: Packaging: Malted: Rolled Option Available: Origin: Organic Option Available: <14.0% No Husky >54 25kg bags, 1 tonne bags or bulk No, this is an unmalted oat Yes Co. Louth Yes, from crop year 2021 only

Loughran Family Malt distilling oats may be used as part or all of this 5% and can impart a creaminess/oiliness to the liquid. This texture is found as a result of the natural oil extracts found in the husk of the oat grain.

Function:

Pot still whiskey MAY be made with up to 5% of cereals other than malted and unmalted barley, such as oats and rye. Loughran Family Malt Distilling Oats may be used as part or all of this 5% and can impart a creamy/oiliness to the liquid, due mostly to the oil content of the grain found mainly in the husks.

Unlike Feed grade oats, which are often used to fill this need, Loughran Family Malt Distilling Oats offers the following benefits:

- **Dried to less than 14.0% moisture.** Less moisture equals more starch, which equals more whiskey ouput. Compared to feed grade oats, which is dried to 15% moisture, our drier Distillers Oats can help improve yields in your distillery. Less moisture = more startch = MORE WHISKEY!

- **Retained husks.** These husks provide much of the oil content associated with oats which contribute to mouthfeel. The husks are retained by avoiding the aspiration process (removal of outer grain husk) which takes places in oats used in the animal feed industry. Husks also provide filtration to the mash allowing for better lautering and filtration and improved extract (= more whiskey).

- **KPH** > **54.** KPH (kilogramme per hectolitre) a measure of grain quality, reflects the size and weight of the grain. A higher number indicates a higher starch content (more starch = more whiskey). This higher KPH is achieved through careful selection of our oats and through a dedicated crop husbandry programme to ensure maximum grain size and starch content.

- Selected from a single variety of oat. For crop year 2020 we have selected Husky. This early maturing German bred variety was chosen because of its' high KPH and grain quality. By using Distilling Oats consisting of a single variety, the distiller can be sure of better consistency between batches with less variability, allowing them to dial in their production process and extract a greater amount of whiskey (liquid) from the process.

Loughran Family Malt are also able to offer this product in rolled format. By using Rolled Distilling Oats, instead of milled or hammer milled oats, the distiller may achieve a coarser grist. This may allow them to change their mash patterns and milling regime for malted grains, allowing for better over all extract and improved runoff.

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Distilling Wheat

Moisture Content:	<14.0%
Aspirated:	Yes
Variety:	Graham
KPH:	>74
Screenings @ 2.3mm:	0%
Packaging:	25kg bags, 1 tonne bags or bull
Malted:	No, this is an unmalted wheat
Rolled Option Available:	Yes
Origin:	Co. Louth
Organic Option Available:	Yes, from crop year 2021 only

Function:

Pot still whiskey MAY be made with up to 5% of cereals other than malted and unmalted barley, such as oats and rye, may be used. LFM Distilling Wheat may be used as part of or all of this 5%.

Unlike Feed grade wheat, which is often used to fill this need, LFM Distilling Wheat offers the following benefits:

- **Dried to less than 14.0% moisture.** Less moisture equals more starch, which equals more whiskey ouput. Compared to feed grade wheat, which is dried to 15% moisture, our drier Distillers Wheat can help improve yields in your distillery. Less moisture = more startch = MORE WHISKEY!.

- Screened to 2.3mm - our distilling wheat is screened over a 2.3mm screen to remove all small grains. Where feed grade wheat is used in the distilling process it can contain up to 10% screenings. This increases the average grain size and increase the overall Percentage of starch. Larger grains = better surface to starch ratio = MORE WHISKEY!

- **KPH** > **74.** KPH (kilogramme per hectolitre) a measure of grain quality, reflects the size and weight of the grain. A higher number indicated a higher starch content. (more starch = more whiskey). This higher KPH is achieved through careful selection of our wheat and through a dedicated crop husbandry programme to ensure maximum grain size and starch content.

- Selected from a single variety of wheat. For crop year 2020 we have chosen Graham. This early maturing variety was chosen solely because of its' high KPH and grain quality. By using a Distilling Wheat consisting of a single variety, the distiller can be sure of better consistency between batches with less variability, allowing them to dial in their production process and extract a greater amount of whiskey (liquid) from the process.

Loughran Family Malt are also able to offer this product in rolled format. By using rolled distilling wheat instead of milled or hammer milled wheat, the distiller may achieve a coarser grist. This may allow them to change their mash patterns and milling regime for malted grains, allowing for better overall extract and improved runoff.

Clermont Farms Haggardstown, Dundalk, Co. Louth, Ireland, A91 HPK7

Distilling Rye

Moisture Content: Variety: KPH: Screenings @ 2.3mm: Packaging: Malted: Rolled Option Available: Organic Option Available: TBD KWS Bono TBD 25kg bags, 1 tonne bags or bulk No, this is an unmalted rye Yes Yes, from crop year 2021 only

Function:

Pot still whiskey MAY be made with up to 5% of cereals other than malted and unmalted barley, such as oats and rye, may be used. Loughran Family Malt Distilling Rye may be used as part of or all of this 5%.

2020/2021 is the first year that Loughran Family Malt will be offering Rye to our distilling customers. This new addition to our product line will allow us meet the needs of distillers who wish to include Rye in their mash.

As the crop is not yet grown or harvested the quality and specifications of this crop are yet to be determined. However we do know the our 2021 Rye will be all from a single variety, KWS Bono. This English bred varied is extremely drought tolerant and shows exceptional resistance to Ergot. It also has a protein content of 9-11%. This product will be screened to remove all small grains and aspirated to remove fines, dust and straw, leading to a cleaner, more productive & efficient product.

Loughran Family Malt are also able to offer this product in rolled format. By using rolled distilling rye, instead of milled or hammer milled rye, the distiller may achieve a coarser grist. This may allow them to change their mash patterns and milling regime for malted grains, allowing for better over all extract and improved runoff.

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Speciality Grains

Loughran Family Malt supply a wide range of speciality grains from our warehouse at Dundalk. These grains are available whole or crushed, in 25kg bags, 1 tonne bags or bulk. These grains are produced by the leading maltsters in the UK and Europe including Thomas Fawcett & Sons (U.K), Castle Malting (Belgium) and Bestmaltz (Germany).

These grains allow a distiller to add variety to the mash and create flavour profiles that would otherwise be absent.

Malted Cereals

Loughran Family Malt can supply a range of malted grains including Malted Barley, Wheat, Rye and Oats.

Roasted

Loughran Family Malt can supply a range of roasted grains included Roast Barley Wheat, and Rye These grains are unmalted and have been cooked at up to 215°C to produce rice dark flavours.

Crystallised

Loughran Family Malt can supply a range of crystallised grains included Crystal Barley, Wheat, and Rye. Crystalised grains have been allowed to germinate, but rather than being kilned, they have instead been roasted at a low temperature over a longer period of time to create a milliard reaction of the endosperm resulting in a sweet grain with sugary characteristics.

Micronized

Loughran Family Malt can supply a range of miconized grains included Flaked Barley, Torrefied Wheat, and Flaked Oats. These grains are unmalted and have been cooked under infra red heating resulting in gelatinisation of the starch molecules. These gelatinised starch molecules are digested faster by yeast producing new flavour profiles and changing the fermentation profile of the liquid.

Seed to Still Programme

Loughran Family Malt invite our distilling customers to join our Seed to Still Programme, a bespoke grain growing & production initiative. Cereal grain growth & development can be influenced by a number of factors such as grain variety, soil type, microclimate and agronomy practices. This programme allows customers to work closely with Loughran Family Malt throughout all stages of the grain growing process, including decisions on field selection, variety choice & crop husbandry. These grains can then be kept separate all the way through growing, harvest, drying and storage ensuring the distiller receives a fully traceable product with proven provenance and unique story.

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