Hybrid Rye for Alcohol Applications

Alcohol Applications

Hybrid Rye - Distilling

- **Spicy and earthy flavor** and texture
  - New market options as a **novel ingredient** compared to maize, wheat, hops and barley
- **Alcohol yield** is comparable to current soft wheat standards (within 7 - 10% *)
- **Environmentally friendly** in the supply chain – rye uses far less nitrogen, fungicide and water to grow and produce than most other cereals
- **Versatile uses** as rye whisky, rye malt, pot still rye, crystal rye, rye IPA and lager, gin, vodka and others

*Source SWRI (Scotch Whisky Research Institute)

work undertaken for KWS, 2017

Alcohol Applications

Hybrid Rye - SWRI Update Dec 2019 (1)

- **PSY*** – Rye is around 96% of that of spring barley – ie 4 % lower (based on 420 v 435 L/ Ton)
- **Flavor creation** may off-set this lower PSY and most distillery's would accept the "trade off" in terms of flavor and raw material differentiation
- **DP*** – Rye is significantly lower and there may be some progress to be made from testing different hybrids - relevant where enzyme use is prohibited (e.g. Scotland) but not relevant to Ireland & England

*PSY Alcohol Yield
*DP Diastatic Power

*Source SWRI (Scotch Whisky Research Institute)
work undertaken for KWS, 2019

Alcohol Applications

Hybrid Rye - SWRI Update Dec 2019 (2)

- **Grain N** – with rye requiring a lower N application there is some scope to look are **raising PSY by reducing applied N** to the rye crop – i.e.; current spring barley receives around 110 – 115 Kg/ Ha – winter rye receives around 110 – 130 Kg/ Ha

- **Physical handling** – rye is slower to process owing to its very high RV* – this means distillery's have to be set up and handle it differently and accept lower throughputs

*Source SWRI (Scotch Whisky Research Institute)

work undertaken for KWS, 2019 *Residue Viscosity

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