



Northern Periphery and Arctic Programme

Northern Cereals – New Markets for a Changing Environment

## **USING LOCAL CEREALS FOR PRODUCING BEER OR SPIRITS IN THE NORTH ATLANTIC REGION**

### **Guidelines**

(Deliverable T4.2.4 ii)

## **1 Introduction**

These guidelines present general considerations which should be taken into account if end-users are thinking about using locally sourced barley for beverage production in the North Atlantic region (NAR). Since this is a new development in recent times for many parts of the region, the guidelines also consider some of the advantages and challenges of doing this. They do not include technical details about brewing and distilling, which are beyond the scope of the crop-focused nature of the project.

## **2 Why use local cereals to produce beers or spirits?**

There are several factors which have made it more viable to use local cereals for beverage production in the NAR in recent years:

- Over the past twenty years, countries in the region have experienced a huge expansion of tourism which has created new markets for local food and beverage products, especially those made from local ingredients
- Worldwide, there is growing consumer interest in high provenance beverage products which has created significant potential for developing export markets. Products from the North Atlantic area benefit from a perceived "natural and unspoilt" image
- With the recent major expansion of microbreweries and microdistilleries, beverages can be produced in unusual, remote locations. Similarly, small-scale production allows beverages to be made from special barley varieties or from barley grown in special ways
- With a little extra investment, it is not difficult to add further value to beers and spirits (e.g. by maturing them in special casks)
- Changes in climate and the availability of locally adapted cereal varieties are allowing cereals to be grown for grain in parts of the NAR where this was not possible 40 years ago

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Purchasing locally grown cereals also has the added attraction of providing local growers with income which helps to strengthen local communities.

### **3 What are the challenges ?**

Even though it has become more feasible to use local cereals for beverage production within the NAR, there still remain major challenges which potential users must be aware of:

- The cost of using local grain is likely to be higher, especially after including its malting cost
- Local grain will probably not meet the criteria commonly used for malting in more southerly regions and malt made from it is likely to give a lower alcohol yield than imported malt
- Local malting facilities are unlikely to be available. Possible solutions to this are: i) to develop local facilities; ii) to send grain away for malting; iii) to use enzyme technology for fermentation
- Some locations will have a higher risk of crop failure than others. This could result in an interrupted availability of products
- Local grain and malt may vary in quality from year to year, producing variable products. Annual variability has to be embraced as part of the product story. One possibility is to release products as annual vintages

### **4 Develop a grain supply chain**

Underpinning the successful use of local grain is the formation of a resilient local supply chain. Examples of this are described elsewhere in project publications (e.g. *Developing An Orkney Supply Chain For Producing Malting Barley For Local Whisky Production – Case Study Deliverable T4.2.4*). Important basic considerations for this are:

- Weather records for recent years for the locality where the barley is to be grown should indicate temperature and rainfall patterns mostly suitable for growing and harvesting barley for grain. In spite of climate change, local weather still challenges this in several parts of the NAR
- The soil should be appropriate for growing barley
- Farmers must have the appropriate knowledge about growing barley for malting, or be able to access this
- Appropriate machinery for cultivation, harvesting and processing the crop must be available
- Where knowledge or experience is lacking, the feasibility of growing should be tested with an initial research phase or small-scale project over a couple of years

### **5 Collect relevant information for marketing**

Part of the rationale for using locally grown cereals in beverage products is that this helps to link these products to a special location, providing them with a unique provenance and genuine marketing story. To take advantage of this link, producers need to collect information and photographs which can be used on social media or for marketing. Ideally,

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this should be done in collaboration with the supply chain. The following are examples of information used by some producers in the NAR:

- Photographs and video footage of supply chain operations and personalities. These are particularly powerful as they capture a unique moment in time and are useful for immediate release on social media and also, in the future, for marketing. For the latter, a core set of professionally taken, high resolution photographs is especially useful. Where it is expected that products will be released in the future as annual vintages, photographs relevant to each vintage are important. A diverse range of photographs should be collected, including: the crop and cropping environment, growers, growing operations, processing the crop and stages in production of the final product and its maturation
- Information about the growers and each growing season can also be useful. This is considered in the next section

## **6 Collect data for understanding annual variations in grain production and quality**

Both the beverage producer and the supply chain have an interest in understanding the variations in grain production or quality which are likely to occur. This requires the annual collection of data on growing conditions and supply chain operations and may also be useful for marketing purposes. Since some of this information is easily lost or forgotten, its collection should be the responsibility of a specific individual who could be the supply chain manager or grower, or someone within the beverage company. Analysis of the data may require assistance from a research centre. The following are examples of the type of data which have been used by producers and supply chains in some areas:

- Names of farmers, locations of farms, area of barley grown, quantity of grain supplied
- Agronomic data: variety of barley grown, soil analysis results, dates of planting and harvesting, use of fertiliser, details of any crop protection measures, grain moisture content at harvest
- Weather data for each cropping season, especially: average monthly temperature, monthly rainfall, sunshine

## **7 Research local history, archaeology and traditions**

Local history, archaeology and traditions are often a useful source of inspiration for developing or complementing a marketing story for beverage products using local cereals. These do not necessarily need to be about local barley growing or beverage production, however.

## **8 Acknowledge the supply chain**

Growing cereals in the NAR is challenging, and a strong collaborative relationship between end-users and growers can be an important motivator. Acknowledging the contribution of

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growers in marketing material and on the final product is a good way for the end-user to strengthen relationships with the supply chain and is often of interest to consumers.