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BIRCH SYRUP – Tapping into a new Welsh food product

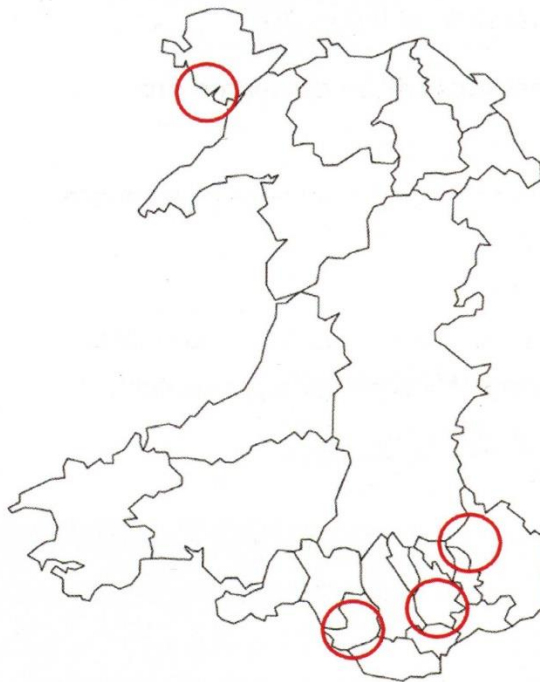
Maple syrup, the sweet condiment that can go on your cereal, on meat, and in your coffee is synonymous with Canada and North America. Birch syrup however is a product that the majority of us are unfamiliar with and is considered to be one of the rarest gourmet food products in the world. Birch syrup contains half the level of sugar of maple syrup but is higher in potassium, calcium and magnesium. It is produced on a very small scale in Alaska and Canada and can sell at up to five times the price of maple syrup. It has a very unique flavour, often described as being slightly salty with notes of currants and berries.

This EIP Wales project, taking place across four sites, will be the first in Wales to focus on birch sap production. Birch is the third most common broadleaf tree species in Wales covering an estimated 2,000 ha of the Welsh Government Forest Estate (NRW) and 11,000 ha of private woodland, much of which is on farms. With birch being a highly under-utilised resource in Wales typically used for firewood, birch syrup could provide an excellent opportunity to make better use of this common tree species.

The key barrier for commercial birch sap production is that it is highly perishable and only has a shelf life of 24 hours at 5°C. The sap needs to be preserved by increasing the concentration of sap several



A stand of well established birch trees



times over to turn it into a syrup soon after tapping to make it more stable for storage and transportation. Removing this barrier to market during harvesting would allow foresters and farmers to consider birch syrup as a viable diversification option.

During this two year project a minimum of 600 litres of sap will be extracted from a total of 60 trees across the four sites. Three different treatment methods will be compared for their effectiveness of turning sap into concentrate at different scales of production. Different methods of reducing the birch water might be more suitable for smaller or larger scale of production, and for where electricity or security is lacking. The project will investigate three different techniques.

- **Outdoor wood stove:** The sap is boiled down in evaporating pans to a sugar concentration of below 20%.
- **Reverse osmosis:** The sap is pushed through a vacuum pump and micro-porous osmosis filters which brings the sap down to around 15% sugar concentration.
- **Urn:** An electric thermostatically controlled urn heats the syrup and reduces it to a sugar concentration of below 20%.

These methods will be compared on:

- Capital set-up costs
- Preservation time to produce concentrate from sap
- Logistics
- Operating costs – in particular fuel costs
- Product quality e.g. total sugar content, colour and taste



A birch tree being tapped. The sap run takes place over 3-4 weeks in spring starting in late February and ending in early April with each tree being tapped once per season. Only well established trees with a diameter at breast height greater than 20 cm are suitable for tapping. A spile is inserted into the tree about 4 cm deep and between 30 and 80 cm from the ground and angled slightly downwards. The spile is then connected to a collection bottle via a tube and remains there between 10 - 20 days with the sap being emptied daily for preservation. A single tree can produce between 1-2 litres of sap per day. To produce 1 litre of syrup, 100 litres of sap is required!

This project will hopefully raise the awareness about this rare product and how it can provide enterprise opportunities at a range of scales. By increasing our understanding of the tapping process and preservation techniques this project should provide a strong basis for anyone who wishes to start producing birch syrup, to either sell themselves or to sell on to the gourmet food sector. Why not make birch syrup synonymous with Wales?

Further information can be found on the **Farming Connect** website.

<https://businesswales.gov.wales/farmingconnect/business/european-innovation-partnership-eip-wales/approved-eip-wales-projects/comparing-site>