

Agenda

- **Start 10.00am**
- **Andy Spetch** from British Sugar TOPSOIL who will be introducing the session 10.00am to 10.30
- **Tim O'Hare**, of Tim O'Hare Associates LLP will discuss sources of topsoil, pitfalls, sampling and testing 10.30am to 11.00am
- BREAK: 11.00am -11.30am
- **Matthew Lennard** from NHBC will present NHBC Requirements for soil capping systems 11.30am to 12.30
- **Mandy Dennis** from East Northamptonshire Council will discuss Local Authority requirements 12.30 to 1.00pm
- Lunch 1.00pm



Raising Standards. Protecting Homeowners



British Sugar TOPSOIL



Andy Spetch

Presentation

ABF / AB Sugar / British Sugar

British Sugar TOPSOIL

Analysis & Questions to ask a supplier



Associated British Foods & British Sugar

Background

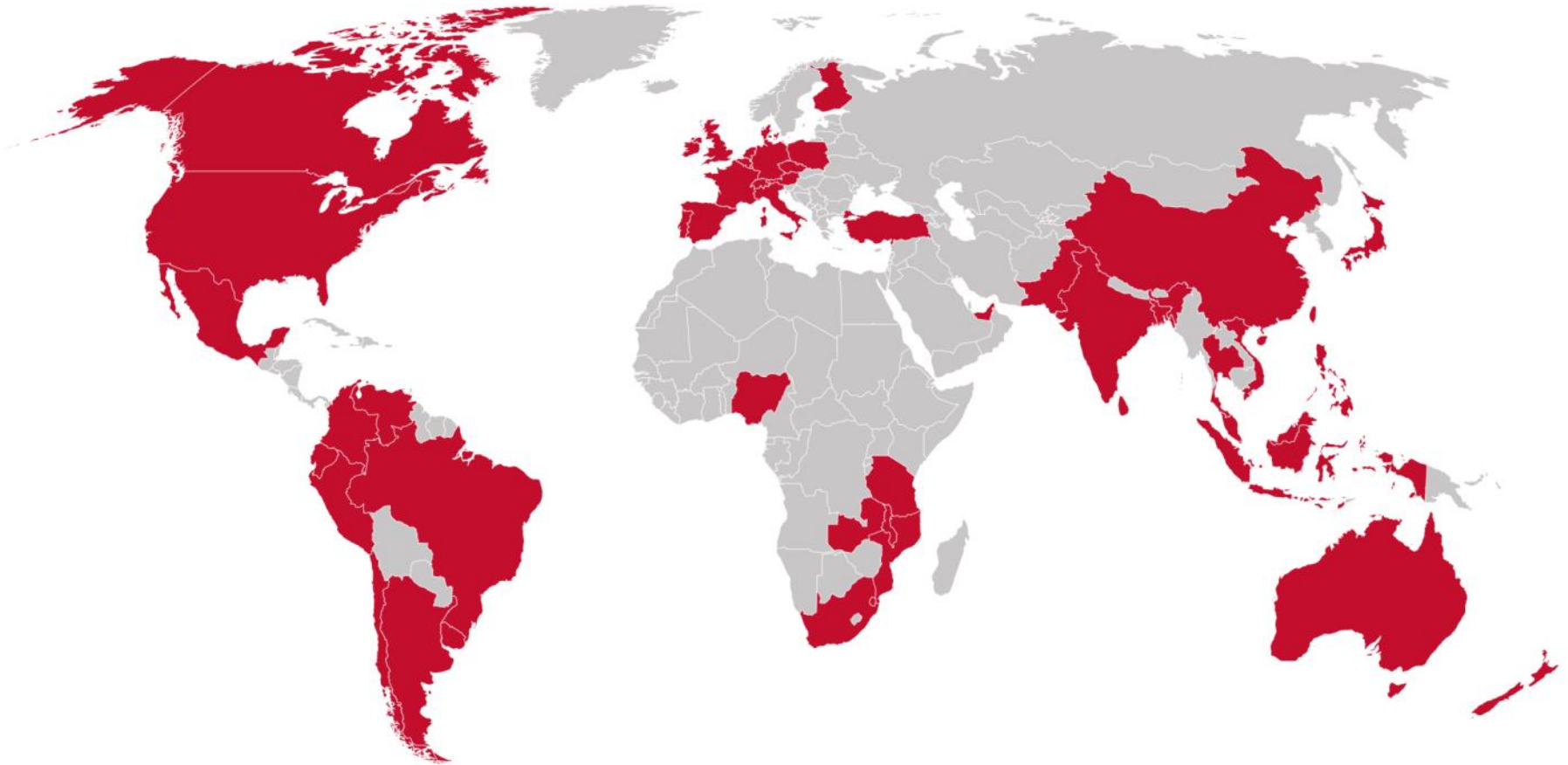


BritishSugar

An AB Sugar company

Andy Spetch
National TOPSOIL Manager

Associated British Foods (ABF) Global Presence



ABF sells into more than 100 countries worldwide with operations in 50 countries across Europe, southern Africa, the Americas, Asia and Australia.

ABF Group at a glance

GROCERY	SUGAR	AGRICULTURE	INGREDIENTS	RETAIL
				
<p>Grocery comprises consumer-facing businesses that manufacture and market a variety of well-known brands both nationally and internationally. Products include hot beverages, sugar and sweeteners, meat, vegetable oils, bread, baked goods and cereals and world foods.</p>	<p>A leading multinational in the expanding international markets for sugar and sugar-derived co-products, with operations in the UK, Spain, southern Africa and China.</p>	<p>AB Agri occupies a unique position across the agri-food supply chain. Its focus is to add value and drive profit for partners all along that chain by improving the sustainability of food production.</p>	<p>Yeast and bakery ingredients production supporting and enabling the world's bakers, both large and small, across craft/artisan and industrial as well as high-value ingredients for food and non-food applications.</p>	<p>Primark is a major retail group employing 73,000 people. It operates over 345 stores in the UK, Ireland, Spain, Portugal, Germany, the Netherlands, Belgium, Austria, France, Italy and the US. It offers customers quality, up-to-the-minute fashion at value for money prices.</p>

AB Sugar A diverse geographic footprint



4.5 mtpa



PRODUCTION
CAPACITY



600 mlpa

ETHANOL
PRODUCED

24



PLANTS



2,000
GWh

POWER
GENERATED

British Sugar at a glance

- **Four advanced manufacturing plants processing sugar beet in the UK**

- Bury, Cantley, Newark and Wissington and head office in Peterborough
- Over 3,000 growers
- Lowest cost sugar processor in the EU

- **A major contributor to UK economy, especially in East Midlands and East Anglia**

- In 2015 farmers received ~£320m in receipts from British Sugar
- Total spend on goods and services was in excess of £600m
- Paid more than £200m in corporation tax in past five years
- Support a further 9,500 jobs in the UK economy

- **More than simply sugar**

- Power generation for a city the size of Peterborough
- Fuel ethanol, animal feed, topsoil, pharmaceuticals, betaine...

- **A valuable part of UK agriculture**

- Profitable, reliable part of arable rotation
- Aids soil health, pest and weed control
- Positive sustainability story



Our Sites

Newark

Details

- Circa. 200 permanent and seasonal employees
- 700 growers supply 1.6 million tonnes of sugar beet every year

Wissington

Details

- Circa. 320 permanent and seasonal employees
- 1,000 UK growers supply over three million tonnes of sugar beet every year
- Largest beet sugar factory in the world

Peterborough

Head Office
Circa. 250 permanent employees

Cantley

Details

- Circa. 160 permanent and seasonal employees
- Over 700 growers supply over 1.3 million tonnes of sugar beet every year
- Cantley was the first sugar factory built in the UK in 1912

Bury St Edmunds

Details

- Circa. 320 permanent and seasonal employees
- Over 700 growers supply over two million tonnes of sugar beet every year
- Bagged sugar packaging facility

Innovation is at our heart

Top facts

- We employ 1,400 people directly at our facilities and support up to 9,500 UK jobs in the wider economy
- We employ apprentices, graduates and experienced professionals for roles across the business and throughout the supply chain including engineers, accountants and project managers
- Over past 10 years, we have recruited and trained over 100 graduates and 90 apprentices
- Over the past twenty years, we have invested over £1bn in our four advanced manufacturing plants
- Jointly, with our growers, we fund the British Beet Research Organisation, investing over £2 million a year in its programme of focused, near-market research.



‘British Sugar is the leading supplier of sugar to the UK and Irish food & beverage markets’

#BackBritishSugar

Creating a level playing field for the British beet sugar industry

- Buy homegrown British Sugar - look out for the Silver Spoon brand



- Show your support for a great British industry on Twitter (@BritishSugar)
- or Instagram (@BackBritishSugar) using #BackBritishSugar





British Sugar TOPSOIL

Annually we purchase 7.5MT of Sugar Beet from 3.6K growers between September to February



The topsoil is excavated, dried and blended over 2 years



Sampling & Analysis:

We analyse for 70 different parameters to

- Samples are taken in accordance, at least, to BS3882:2015 every 5,000m³ (8KT)
- 25 sub samples are taken to ensure the bulk sample is representative
- We analyse our products over 30 times each year and hold historical data
- Laboratory analysis is undertaken at a UKAS and MCERT accredited laboratory
- Tim O'Hare Associates report includes
 - Declaration of compliance BS3882:2015
 - Analytical schedule
 - Results of analysis
 - Conclusion
 - Recommendations
 - Certificate of Analysis



We ensure a representative sample is taken

*We have 40KT of covered storage:
Ensuring Quality “On time and in Full every time”*



British Sugar TOPSOIL has been successfully used in Landscaping & Amenity for over 25 years



British Sugar TOPSOIL Product Range

Landscape²⁰

Landscape²⁰ is a fully-analysed and compliant to BS3882:2015, sandy loam, TOPSOIL. It is ideal for general landscaping projects such as seeding and turfing .

Hort^{Loam}

Hort^{Loam} is a BS3882:2015 compliant planting topsoil. With optimum reserves of organic matter and nutrients, Hort^{Loam} is ideal for planting rootball trees, shrub bed, retained planters and vegetable planting projects.

Sports^{&Turf}

Sports & Turf is a dressing that is ideal for use on soil based winter sports pitches, golf approaches and lawns.

A blend of 80% medium to coarse sub angular sand with 20% British Sugar TOPSOIL providing the optimum environment for seed establishment and growth..

Features and Benefits of British Sugar TOPSOIL

FEATURES	BENEFITS
One source of prime arable topsoil	Consistency / Food safety audits carried out on the crop / full traceability.
Friable / Low stone content / Nutritious	Easy to handle and work with. Good rates of growth
Stored undercover	Available all year round, consistent and easy to use
Fully analysed	Consistent and known quality. Confidence in the product
Delivered packages	One point of contact
Supplied from 4 sites	Competitive haulage rates, national availability.
Comprehensive web site and literature	Free technical resource

Delivering quality OTIF every time



British Sugar TOPSOIL



Andy Spetch

A good analysis report should include

- Compliance to BS3882:20015
 - Date
 - Source of soil
- UKAS and MCERTS accredited lab / Methods
- Horticultural Properties
 - e.g.. pH, drainage, aeration, fertility, organic matter, microbes
- Potential Contaminants - part of BS3882:2015
 - e.g.. Heavy metals, TPH, PAHs, BTEX, phenol, asbestos
- Interpretation and recommendations
 - Sample examination, Analytical schedule, Results
 - PSA, pH, %OM, fertility, Potential Contaminants
 - Conclusion & Recommendations

Declaration of Compliance BS3882:2015

Soil source: British Sugar TOPSOIL

This declaration confirms that the topsoil represented by the attached Topsoil Analysis Report conforms to the requirements of the British Standard for Topsoil (BS3882:2015).

The sample was sampled and tested in accordance with the requirements of BS3882:2015

- Samples are taken for analysis every 8000 tonnes (5000 m3) of product
- Samples are taken from all TOPSOIL products ready for despatch
- *Landscape 20* and *Sports 10* are sampled after screening
- Analysis certificates are retained for a period of 5 years
- Laboratory analysis is undertaken at a UKAS and MCERTS accredited laboratory
- All laboratory methods are in accordance with BS3882:2015
- All British Sugar TOPSOIL products are produced to a Quality Management System approved by Lloyd's Register Quality Assurance to ISO 9001:2008 standard

British Sugar plc Co-Products
LANDSCAPE 20 TOPSOIL Analysis
Willington - W L20-64KT

Tim O'Hare Associates

ANALYTICAL SCHEDULE

The sample was submitted to a UKAS and MCERTS accredited laboratory for a range of physical and chemical tests to confirm the composition and fertility of the soil, and the concentration of selected potential contaminants. The following parameters were determined:

- particle size analysis and stone content;
- stone content (2-20mm, 20-50mm, >50mm);
- pH and electrical conductivity values;
- exchangeable sodium percentage;
- major plant nutrients (N, P, K, Mg);
- organic matter content;
- C:N ratio;
- heavy metals (As, B, Ba, Be, Cd, Cr, Cu, Pb, Hg, Ni, Se, V, Zn);
- total cyanide and total (mono) phenols;
- speciated PAHs (US EPA16 suite);
- aromatic and aliphatic TPH (CS-C35 banding);
- benzene, toluene, ethylbenzene, xylene (BTEX);
- asbestos screen.

The results are presented on the attached Certificate of Analysis and an interpretation of the results is given below. The interpretation considers the use of the LANDSCAPE 20 TOPSOIL for general landscape purposes and its compliance/non-compliance with our general landscape specification.

RESULTS OF ANALYSIS

Particle Size Analysis and Stone Content

The sample fell into the *sandy loam* texture class, which is usually considered suitable for general landscape applications provided the soil's physical condition is maintained.

The sample was virtually stone-free and as such, stones should not restrict the use of the soil for general landscape purposes.

pH and Electrical Conductivity Values

BS3882:2015: Good but not always the full answer.

Don't forget contamination analysis

- Only applies to IMPORTED TOPSOIL
 - Multipurpose Grade
 - Specific Purpose Grade (acid / alkaline / low fertility)
- It is not the 'be all end all'
- A good starting point
- Read the notes below Table 1

NOTE 3 Attention is drawn to the Environmental Protection Act 1990 [3] (EPA) and to the National Planning Policy Framework (NPPF) [4], under which there is a requirement for topsoil to contain no concentrations of chemical contaminants that would cause a significant risk to human health and the environment.

NOTE 4 Attention is drawn to the possibility that Site Specific Assessment Criteria (SSAC) or Generic Assessment Criteria (GAC) might have been set for the intended recipient site under the EPA or NPPF. Further guidance is given in Contaminated Land Exposure Assessment (CLEA) model (EA/DEFRA:2009) Soil Guideline Values [5] and Chartered Institute of Environmental Health (CIEH)/Land Quality Management (LQM) Generic assessment criteria for human health risk assessment (2nd Edition, 2009) [6].

- Build 'project specific' soil specifications for each scheme
- Don't always think that compliance to BS3882:2015 means you will get a good topsoil delivered!

Don't forget the subsoil BS8601:2013

Subsoil shouldn't mean cheap!

- Only applies to IMPORTED Subsoil
 - Multipurpose Grade
 - Specific Purpose Grade (acid / alkaline / low fertility)
- It is not the 'be all end all'
- A good starting point
- Build 'project specific' soil specifications for each scheme
 - Consider the drainage?
 - Consider the topsoil?
 - Consider the planting scheme?
- Don't always think that compliance to BS8601:2013 means you will get a suitable subsoil delivered!

Questions for suppliers

Visiting is always recommended

- What is the source of your topsoil is it BS3882:2015 compliant?
 - Greenfield / Brownfield / Skip / Manufactured ?
 - Do you use PAS100 compost?
 - Is there an auditable process ?
 - Are quality ingredients being used?
- How is the topsoil stored?
- What tonnage is available?
 - Period of availability ?
 - Is there enough for my project
- What is their sampling protocol ?
 - Who does your sampling?
 - Can I have a copy of your analysis?
 - Date of last analysis?
 - Suite of analysis ?
- Do you have testimonials?
- Affiliation to Trade Organisations? (BALI)



Top ten tips for soil sourcing and on-site management

To give your landscape project the best chance of success:

1. Assess the quality and suitability of the site soils (preferably before stripping the topsoil) by conducting a Soil Resource Survey (separate from a normal Ground Investigation);
2. If imported soils are required, use only BS 3882:2015 compliant topsoil and BS 8601:2013 compliant subsoil from reputable suppliers who must provide a valid load-specific Declaration of Analysis (including contamination analysis);
3. Refer to both the above Standards for advice on correct soil sampling, handling, storage, soil preparation and depths;
4. Avoid handling topsoil in wet conditions;
5. Create a dry, clean, segregated holding area for storing topsoil, and seal in or cover the heap;
6. Minimize the amount of human and mechanical traffic from the area to be landscaped to avoid compaction;
7. Set levels for topsoil application – minimum depth 150mm, maximum depth 300mm;
8. Avoid compacting newly laid topsoil;
9. Slightly consolidate the new topsoil by lightly pressing with the back of a excavator bucket;
10. Work off a board when planting or turfing.

Visit our production facility and find out more about quality topsoil

To arrange a visit or for more information on TOPSOIL products call 0870 240 2314
or visit our web site www.bstopsoil.co.uk

 **@Topsoil_BS**



PlantNetwork