



**TOPSOIL**

Responsibly sourced,  
consistently better -  
The experts that care



**BIGGA**  
Regional Patron

# Agenda

Introduction

How we source and make our products

How our products are used

Research & Development



# 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

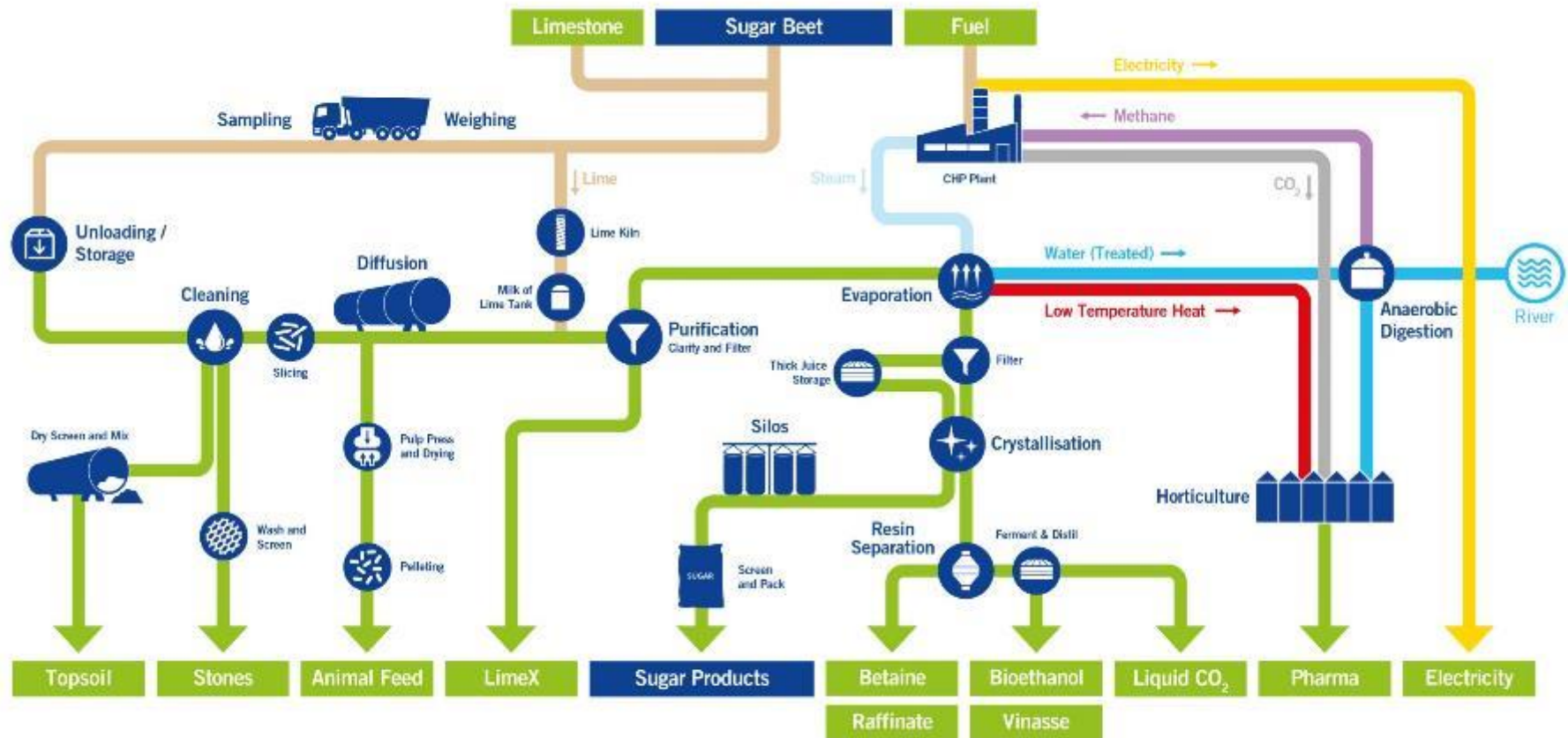


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# Using 99% of the outputs from the sugar making process



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# #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



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The background features a series of overlapping, curved, concentric shapes in shades of yellow and green, creating a dynamic, organic feel. The colors transition from a bright yellow on the left to a deep green on the right.

# How we Source & Make our Products

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

The beets are harvested by 6 row machines, £.5M  
Topped and cleaned before delivery to our factories



# The TOPSOIL PROCESS



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# The TOPSOIL PROCESS

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



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**Landscape**  **20**

How our Products are Used

**Sports**  **&Turf**

# Our Rational

- Soil based Rootzones contain nutrients, help to hold moisture to promote sustainable healthy turf growth while saving on inputs
- Sand's are inert and free draining
- Why use sands to construct tee's, approaches and dress on fairways

Saturated Hydraulic Conductivity (Guide 150mm/hr USGA Green)	
Last 3 results	35
	54
	29

Sample No.	Source.	pH	P <sub>2</sub> O <sub>5</sub> (mg/l)	K <sub>2</sub> O (mg/l)	Mg (mg/l)	Ca (mg/l)
A19860-1	S&T	6.3	75	>241	73	>2000
A19860-2	SIO	6.8	52	>241	80	>2000

- Key:
  - P205 = OK at >30 mg/l, Low at 30-15 mg/l and Very Low at <15 mg/l
  - K20 = OK at >60 mg/l, Low at 60-25 mg/l and Very Low at <25 mg/l
  - Mg = OK at >50 mg/l, Low at 50-25 mg/l and Very Low at <25 mg/l Ca = OK at >150 mg/l, Low at 150-50 mg/l and Very Low at 50 mg/l
- OK = No need to apply this nutrient as part of your fertiliser programme

## STRI Feedback:

*Both materials I would describe as, pH is good, with a plentiful supply of K and Ca. P and Mg are good and not cause of concern*

Features	Benefits
Typically 60-65% sand	<ul style="list-style-type: none"> <li>• Holds moisture in summer but free-draining in winter</li> <li>• Easy-to-handle</li> </ul>
Valuable Horticultural Properties	<ul style="list-style-type: none"> <li>• Good rates of growth when turving and planting</li> </ul>
Regular Independent Analysis	<ul style="list-style-type: none"> <li>• Confidence for regulators and clients</li> <li>• Compliant to BS3882:2015</li> </ul>
No Chemical Contamination or Sharps	<ul style="list-style-type: none"> <li>• Totally safe</li> </ul>
Available All-Year-Around	<ul style="list-style-type: none"> <li>• No downtime during major projects</li> </ul>
Low Stone Content	<ul style="list-style-type: none"> <li>• Eliminates expensive stone picking</li> </ul>
One Source	<ul style="list-style-type: none"> <li>• Consistent product and growth rates</li> </ul>



Over 1,000 tonnes of Landscape20 has been used as part of the two-year development plan to renovate 52 bunkers.

“Landscape20’s year-to-year consistency enables me to effectively work with the course and help deliver work with lasting results.”

- Peter Jones, Course Consultant and Agronomist

“Landscape20 is great at promoting grass growth throughout the year giving a professional finish to bunkers. Members have really enjoyed playing the course with the improvements that have been made.”

- Wesley Walker, Course Manager

## Bury St Edmunds Golf Club 2020

The re-shaping and re-contouring of the green complex was achieved with 120 tonnes of British Sugar TOPSOIL's *Landscape20* topsoil

- The existing sandy loam soil was shaped, de-compacted and levelled using a purpose-built rake
- Landscape20 placed at a depth of 15-20cm over the course's natural sandy loam soil
- Dwarf perennial rye grass turf was laid over the *Landscape20*.
- Throughout the entire operation the putting surface of the green was left intact

Consultant Peter Jones chose *Landscape20* because of the success he had had with it on similar projects.

He said: *"The properties of Landscape20 allow you to create the structural shapes needed around bunkers and greens, and the naturally occurring nutrients within it result in great turf growth."*



Features	Benefits
<p>90% total sand 50% V Coarse to Medium sand</p>	<ul style="list-style-type: none"> <li>• Free draining</li> <li>• Easy to apply</li> </ul>
<p>Sub Angular Sand</p>	<ul style="list-style-type: none"> <li>• Open free draining</li> <li>• Less likely to cap</li> </ul>
<p>Screened to 6mm</p>	<ul style="list-style-type: none"> <li>• No issues with stones</li> </ul>
<p>Typically contains 50% Coarse and Medium Sand</p>	<ul style="list-style-type: none"> <li>• Won't block or cap existing fairway material</li> </ul>
<p>BS3882:2015 compliant topsoil</p>	<ul style="list-style-type: none"> <li>• Promotes and sustains growth               <ul style="list-style-type: none"> <li>• Nutrient retentive</li> <li>• Assists seed establishment</li> </ul> </li> </ul>
<p>STRI Analysed</p>	<ul style="list-style-type: none"> <li>• Peace of mind</li> </ul>
<p>Saturated Hydraulic Conductivity Average 50mm/hr (Range 30mm to 50mm/hr)</p>	<ul style="list-style-type: none"> <li>• Performs in line with a Soil Based Pitch / Fairway / Tee (0-15mm/hr)</li> <li>• Assuming there is a good structure and a maintenance plan</li> </ul>

## Northwood Golf Club, 2016

- Construction of three new tees -on the 6th and 17th holes
- Winter tee on the 11th hole.
- Utilised on site material for the sub base, depth 150mm
- Sports&Turf, laid at a depth of 150mm
- Seeded with a dwarf perennial ryegrass

Course Manger Wesley Walker said:

*"I chose this material as we have had great success with it in the past" Wesley explained. "The sandy nature of this rootzone is not only great to work with but performs really well in wet conditions. The growth of turf on this rootzone is excellent."*





Applied through spinning disc or drop brush spreader

## Application rate

- One application 12kg/m<sup>2</sup>
- Split 2 X 6kg/m<sup>2</sup>

## 2016 STRI trial

*“Application of Sports&Turf resulted in visibly greener turf on the fine turf tee sward in 2016. There were no negative effects of applying Sports&Turf and it did not encourage broadleaved weed invasion.”*



The background features a vibrant yellow-to-green gradient. On the left side, there are several overlapping, curved, semi-transparent shapes in shades of green and yellow, creating a sense of depth and movement. The text 'Research & Development' is centered on the right side of the image.

Research & Development

## 2016: Randomised and Replicated Plot trial

The aim of this trial was to evaluate the effectiveness of Sports&Turf on turf performance on golf tee and fairway turf.

The top dressing treatments were applied in four equal dressings:

- Beginning Oct 2016 / End Oct / April / May 2017
- Wear was applied at a rate of one pass per week, when the prevailing ground conditions were suitable

**Table 11: Turf colour (1-10 scale) on turf managed as a fairway with various top dressings and untreated plots.**

Treatment	08.11.16	07.12.16	09.01.17	01.02.17	02.03.17	28.03.17	11.04.17	24.04.17	22.05.17	12.06.17	19.06.17
[1] Untreated control	6.0	7.0	6.5	6.5	6.5	5.8	5.5	5.5	5.8	5.0	6.0
[2] Sand only at 3.3 kg/m <sup>2</sup>	6.0	7.0	6.5	6.5	6.5	5.8	5.5	5.5	6.0	5.3	6.0
[3] Sand only at 6.7 kg/m <sup>2</sup>	6.2	7.0	6.5	6.5	6.5	5.8	5.5	5.7	6.0	5.8	6.2
[4] Sand only at 10 kg/m <sup>2</sup>	6.2	7.0	6.5	6.5	6.5	6.0	5.5	5.7	5.8	6.0	6.0
[5] Sports&Turf at 3.3 kg/m <sup>2</sup>	6.2	7.0	6.5	6.5	6.5	5.8	5.5	5.5	5.8	6.0	6.3
[6] Sports&Turf at 6.7 kg/m <sup>2</sup>	6.3	7.0	6.5	6.5	6.5	6.0	5.5	5.5	6.0	6.2	6.5
[7] Sports&Turf at 10 kg/m <sup>2</sup>	6.3	7.0	6.5	6.5	6.5	6.0	5.7	5.5	6.0	6.2	6.2
P	NS	†	†	†	†	*	*	*	NS	0.036	NS
LSD	-	-	-	-	-	-	-	-	-	0.76	-
d.f.	12	-	-	-	-	12	12	12	12	12	12
c.v. %	4.2	-	-	-	-	-	-	-	5.0	7.3	4.6

NS Not statistically significant

† Insufficient variation to carry out statistical analysis

\* Data skewed and therefore parametric statistical analysis not possible

## 2020 Randomised and Replicated Pot Trial Comparing Landscape20 and Sports & Turf against:

- USGA style free-draining mix (80:20 sand: peat mix) / Tee's mix (70:30 sand: peat mix)/ Sand: soil mix (80:20 sand: soil mix) / Clay loam soil

The aim of the trial was to give clubs the independent, scientific evidence that is needed when considering alternatives to traditional sand and compost-based mixes for construction projects or as a topdressing.

With our customers experiencing a changing climate and increasing budgetary constraints we wanted to see if the use of a soil-based rootzone and dressing could reduce the requirement for both irrigation and additional inputs of inorganic fertilisers

- Weekly assessments of: Turf quality / Turf colour / Turf density / Turf uniformity / Turf stress / Sward height / Rooting length and density

Results: *“When mixed with the correct sand and with the correct maintenance programme in place a sustainably sourced soil based rootzone and topdressing will deliver a good supply of valuable nutrients to sustain healthy tees, approaches and fairways whilst also delivering the drainage rates needed. The British Sugar TOPSOIL products tested in this trial demonstrated benefits for the turf grown on them in terms of their natural nutrient content and water holding capabilities”*



## 2022-2023 Randomised and Replicated Plot Topdressing Trial:

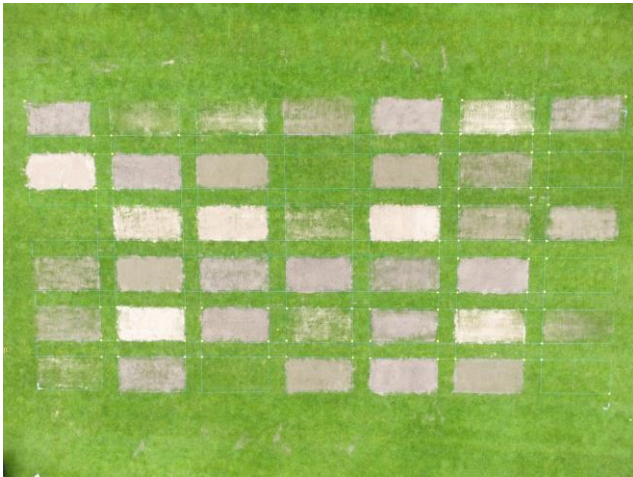
The aim of the trial is to assess the benefits of using Sports & Turf as a topdressing

### Results to date

More data on optimum application rates

- One application 12kg/m<sup>2</sup>, max
- Split 2 X 6kg/m<sup>2</sup>

Trt.	Product	Rate per pitch (tonnes/year)	Rate (kg/m <sup>2</sup> )
1	Untreated	-	-
2	Sand	50	7.8
3	Sand	75	11.7
4	Sand	75	5.85+5.85*
5	Sand	100	15.6
6	Sports&Turf	50	7.8
7	Sports&Turf	75	11.7
8	Sports&Turf	75	5.85+5.85
9	Sports&Turf	100	15.6
10	Sand&Compost	50	7.8
11	Sand&Compost	75	11.7
12	Sand&Compost	75	5.85+5.85
13	Sand&Compost	100	15.6



# Microbial Biomass

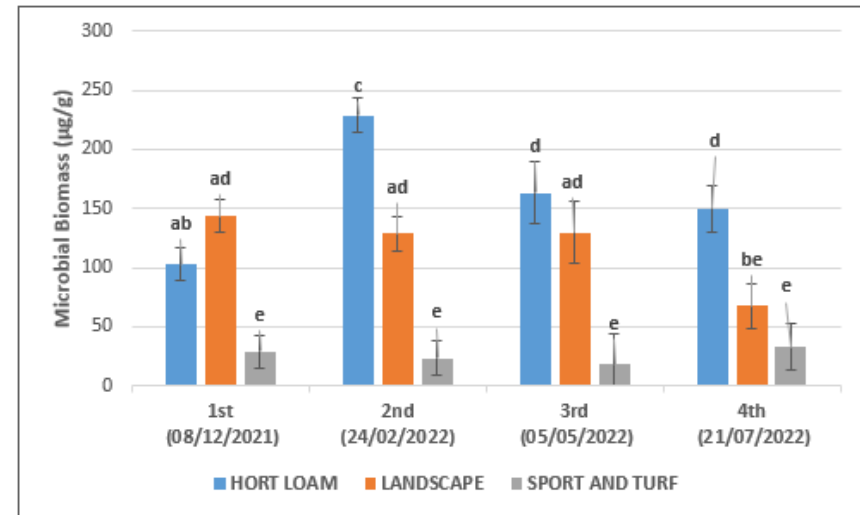


Aim of this work was to understand the health of our products through measuring the Microbial Biomass

Sand is inert

## Conclusion

- “Sport and turf” consistently had reduced microbial biomass compared to the other two soil types, with little change over time
- “Hort Loam” has the greatest microbial biomass overall
- “Landscape” microbial biomass is slightly reduced compared to “Hort Loam”, particularly for the 4th sampling point.



To find out more about British Sugar 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](http://www.bstopsoil.co.uk)

