

Debate Pack

14 April 2023

Number CDP-0086 (2023)

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Economic contribution of medicinal cannabis

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1

Background

Information on other aspects of the medical use of cannabis

This briefing focusses on the economic contribution of medical cannabis.

For other aspects, see the Library briefing [Medical use of cannabis](#).

1.1

Production and export

There are no official estimates of the size of the medicinal cannabis industry in the UK, and unofficial estimates of the size of the sector vary widely. However, we do know that the UK is the world's biggest producer and exporter of legal cannabis for medical and scientific purposes:

- 59 hectares were harvested in the UK in 2021, producing 329 tonnes of cannabis for medical and scientific purposes.
- The UK exported the equivalent of 213 tonnes of cannabis for medical and scientific purposes – more than half of the reported world total. ¹

These figures should be treated with caution:

- figures do not include all countries and may not include all production. For example, some companies in North America serve both medical and recreational markets.
- some data is being checked.
- in the extraction of cannabinoids from the cannabis plant, there may be large variations in the quantities used, depending on the processes employed. ²

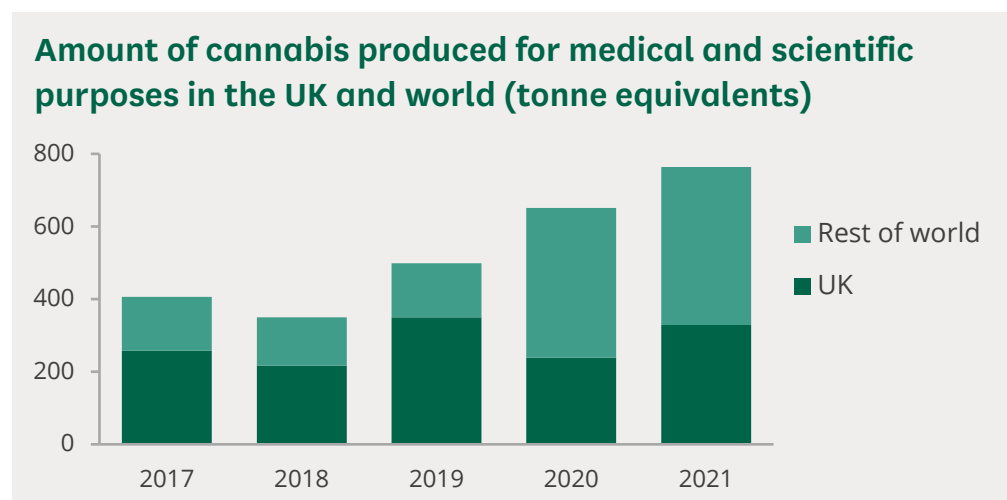
¹ International Narcotics Control Board, [Narcotic Drugs 2022](#), 2023. Note that data on cannabis extracts are expressed in terms of cannabis using conversion factors.

² International Narcotics Control Board, [Narcotic Drugs 2022](#), 2023; Financial Times, [Jazz agrees \\$7.2bn deal for British cannabis pioneer GW Pharmaceuticals](#), 3 Feb 2021

Trends

Globally there is a rising trend in the legal production and use of cannabis for medical and scientific purposes:

Until 2010, the United States was the only country reporting the licit use of cannabis for medical and scientific purposes. Since 2011, however, an increasing number of countries have started to use cannabis and cannabis extracts for medical purposes, as well as for scientific research. In the past 20 years, the global production of cannabis has therefore seen an increase, amounting to 764.3 tons in 2021, a further increase compared with the 650.8 tons recorded for 2020 [...]. The data need to be considered with caution, since manufacturing processes for cannabis are not standardized, and some data are being clarified in order to ensure consistency.³



Source: International Narcotics Control Board, [Narcotic Drugs 2022](#), 2023. Note: data on cannabis extracts are expressed in terms of cannabis using conversion factors. Data for the rest of the world in 2021 does not include Canada as this data was missing – in 2020 Canada had the second largest quantity produced after the UK.

1.2

UK production – companies and products

GW Pharmaceuticals and Jazz Pharmaceuticals

GW Pharmaceuticals was a British company that pioneered the development of medicinal cannabis products, developing and producing the two non-synthetic cannabis-based products that are licenced for use in the UK by the

³ International Narcotics Control Board, [Narcotic Drugs 2022](#), 2023. Note that data on cannabis extracts are expressed in terms of cannabis using conversion factors.

Medicines and Healthcare products Regulatory Agency (MHRA): Epidyolex and Sativex.⁴

GW Pharmaceuticals was acquired by Jazz Pharmaceuticals in 2021. Jazz Pharmaceuticals is headquartered in Ireland.⁵

Locations

At the end of 2021, Jazz Pharmaceuticals said it had offices in Oxford, Cambridge and London, a manufacturing facility in Southern UK, growing facilities operated by contract partners in Eastern, Southern and Northern UK and another growing facility under construction in Southern UK.⁶

One of these facilities is a British Sugar facility at Wissington:

Significant revenue comes from our horticulture business. At our Glasshouse, which is the size of 13 football pitches, we grow a non-psychoactive variety of cannabis that is specially cultivated for medical purposes. There is the potential for further growth demand from the pharmaceutical sector for this crop and we are investigating how we can expand capacity.⁷

Products

- Epidyolex, also known as Epidiolex, is licensed in the UK for the treatment of seizures associated with two rare forms of epilepsy and with tuberous sclerosis complex, a rare genetic condition.⁸ Net product sales in 2021 were \$658.3 million worldwide.⁹

⁴ Financial Times, [GW Pharma doubles in value after cannabis drug success](#), 14 Mar 2016; Financial Times, [Jazz agrees \\$7.2bn deal for British cannabis pioneer GW Pharmaceuticals](#), 3 Feb 2021.

Note: clarified that licensing is by the MHRA on 20 April 2023.

⁵ [Jazz Pharmaceuticals 2021 Annual Report](#)

⁶ [Jazz Pharmaceuticals 2021 Annual Report](#). Note that some of these locations had lease / contract expiration dates in 2022 and 2023.

⁷ Associated British Foods plc, [Annual Report 2022](#). British Sugar is a subsidiary of Associated British Foods. See also British Sugar, [Our factories](#) [undated, accessed 6 April 2023] – details for Wissington, Co-Products, Horticulture

⁸ National Institute for Clinical Excellence, [BNF: Cannabidiol](#) [undated, accessed 6 April 2023]; Home Office [Circular 001/2020: Epidyolex scheduling. \(SI\) 2020 No. 559](#), 24 June 2020; NHS, Overview: Tuberous sclerosis [undated, accessed 20 April 2023]; Jazz Pharmaceuticals, [GW Pharmaceuticals receives approval for EPIDYOLEX® \(cannabidiol\) from the MHRA for the treatment of seizures associated with tuberous sclerosis complex](#), August 2021

Note: information on tuberous sclerosis licensing added on 20 April 2023.

⁹ [Jazz Pharmaceuticals 2021 Annual Report](#). “Revenues from sales of products are recorded net of government rebates and rebates under managed care plans and commercial payor contracts, estimated allowances for sales returns, government chargebacks, prompt payment discounts, patient coupon programs, and specialty distributor and wholesaler fees.”

- Sativex is licensed for moderate to severe [spasticity](#) in adults with multiple sclerosis.¹⁰ Net product sales in 2021 were \$18.5 million worldwide.¹¹

1.3

Other UK operations

Certain UK producers make forms of medicinal cannabis that do not have a medicines license in the UK but can be supplied by healthcare professionals to meet the special clinical needs of a patient. For example:¹²

- Celadon Pharmaceuticals has a manufacturing facility in Birmingham, where it grows cannabis and extracts cannabinoid active pharmaceutical ingredients,¹³ as well as carrying out research. It was recently granted a Home Office licence to sell its products in the UK.¹⁴
- Target Healthcare makes certain Bedrocan cannabis oils in the UK.¹⁵

There are also various other companies operating in this area – for example those that provide clinical and pharmacy services in relation to medicinal cannabis and those that do related research and development work. These include the following:

- GROW Biotech, the R&D arm of the GROW Group, carries out research on cannabis-based products in Harpenden. The group does not grow its cannabis in the UK, importing it from the group's GROW Iberia operation in Spain instead.¹⁶
- Brown and Burk UK Ltd supply Nabilone – this is a licensed medicine that contains synthetic compounds structurally related to naturally occurring cannabinoids.¹⁷

¹⁰ NHS England, [Letter from Dr Keith Ridge re Prescribing of THC:CBD spray \(Sativex®\) in line with NICE NG144](#), 6 September 2021

¹¹ [Jazz Pharmaceuticals 2021 Annual Report](#)

¹² For more information, see MHRA, [The supply, manufacture, importation and distribution of unlicensed cannabis-based products for medicinal use in humans 'specials'](#), March 2020

¹³ Celadon Pharmaceuticals Plc, [Grow | Extract | Sell](#) [undated, accessed 6 April 2023] and Celadon Pharmaceuticals Plc, [Homepage: What we do](#) [undated, accessed 6 April 2023]

¹⁴ Financial Times, [Celadon becomes first UK medical cannabis group to win right to sell in Britain](#), 14 March 2023

¹⁵ [PQ 827 \[Epilepsy: Cannabis\], 18 May 2022](#)

¹⁶ GROW Group, [GROW Biotech](#) [undated, accessed 11 April 2023] and [GROW Iberia](#) [undated, accessed 11 April 2023]

¹⁷ NHS England, [Cannabis-based products for medicinal use: Frequently asked questions](#) [undated, accessed 6 April 2023]; Brown and Burk, [Our Products: Nabilone Capsules](#), [undated, accessed 6 April 2023]

There is also further investment in cultivation and extraction.¹⁸

¹⁸ BBC, [Medical cannabis company Hilltop Leaf secures £2m investment](#), 19 Jan 2023; The Scotsman, [Seven-figure funding boost for Hilltop Leaf, which is behind 'Scotland's first medical cannabis facility'](#), 18 Jan 2023

2 Parliamentary material

2.1 House of Commons written questions

Cannabis: Medical Treatments

14 Nov 2022 | HC79295

Asked by: Christopher Pincher

To ask the Secretary of State for Business, Energy and Industrial Strategy, pursuant to the Answer of 20 October 2022 to Question 62806 on Cannabis: Medical Treatments, with reference to the Government's Life Sciences Vision, published 6 July 2021, if he will make an assessment of the compatibility of the decision not to assess the potential economic merits of establishing a British-based medical cannabis industry with the UK's aspiration to be the world leader for the development, testing, access and uptake of new and innovative treatments and technologies; and if he will make a statement.

Answering member: George Freeman | Department: Business, Energy and Industrial Strategy

In developing the UK's Life Science Vision we have conducted wide engagement across the sector, including those involved with a wide range of therapeutic modalities, to understand matters of regulation, access and uptake of new products.

The Government is confident that its broad based strategy, focussed on improving the competitiveness of every aspect of the UK Life Science environment, is the correct approach, and will enhance the UK's competitiveness across all therapeutic modalities.

As part of BEIS work on regulation for innovation we are reviewing the TIGRR report and will be continuing delivery plans in due course.

Cannabis: Medical Treatments

28 Sep 2022 | HC45558

Asked by: Martyn Day

To ask the Secretary of State for Business, Energy and Industrial Strategy, if his Department will make an assessment of the impact of the medical cannabis industry on (a) the economy and (b) employment levels.

Answering member: Ms Nusrat Ghani | Department: Business, Energy and Industrial Strategy

The Department has no plans to make an assessment of the impact of the medical cannabis industry on the economy or employment levels. The Department annually publishes data on the impact on the economy and employment of the wider Life Sciences sector in the [Bioscience and health technology sector statistics\(opens in a new tab\)](#), this includes analysis of the bio-pharmaceuticals sector of which the medical cannabis industry is an important part.

2.2 House of Commons Debates

[Medical Cannabis: Alleviation of Health Conditions](#)

4 November 2021 | House of Commons | 702 cc1096-1122

2.3 House of Lords Debates

[Cannabis: Medicinal Use](#)

12 July 2022 | House of Lords | 283 cc1359-1362

[Medicinal Cannabis](#)

6 July 2020 | House of Lords | 804 cc891-893

2.4 Early Day Motions

[Specialist consultant prescribed medicinal cannabis](#)

EDM 68

Tabled on 18 May 2021

Primary sponsor: Sir Mike Penning

That this House recognises the benefits of prescribed medical cannabis by a specialist consultant for people suffering with chronic pain, epilepsy and a variety of other conditions; welcomes the legalisation around the use of prescribed medical cannabis on 1 November 2018; but regrets the difficulties that patients and their families continue to face in accessing prescribed medical cannabis that their consultants have prescribed through the NHS; further regrets the restrictive NHS guidelines that prevent most patients from accessing it and deter specialist consultants from prescribing it; condemns the two-tier system that this has created where only people who can afford to

pay for the prescription have easy and ready access to prescribed medical cannabis; and calls on the Government to use every means necessary to ensure that NHS patients have easy access to prescribed medical cannabis should their specialist consultant prescribe it for them

3

Press material

The following is a selection of news and media articles relevant to this debate.

Please note: the Library is not responsible for either the views or the accuracy of external content.

[The NHS can prescribe medical cannabis. So why are desperate patients being forced to go private? \[Opinion\]](#)

The Guardian

24 March 2023

[Celadon becomes first UK medical cannabis group to win right to sell in Britain](#)

Financial Times

14 March 2023

[Medical cannabis company Hilltop Leaf secures £2m investment](#)

BBC

19 January 2023

[UK group moves to Jersey after rules relaxed on cannabis-related products](#)

Financial Times

14 June 2022

[UK crackdown on CBD upends rapidly growing market](#)

Financial Times

23 April 2022

[The cannabis industry could give the UK economy the boost it needs after Brexit and Covid](#)

The Independent

18 January 2021

4 Further reading

[Sapphire Clinics Updated Research on Illegal Cannabis](#)

Doctor Simon Erridge

8 March 2023

[APPG Plan for a Legal and Regulated UK Hemp & Cannabis Sector](#)

APPG for CBD products

26 July 2022

[Medical use of cannabis](#)

House of Commons Library

8 December 2021

[Taskforce on Innovation, Growth and Regulatory Reform independent report, chapters 352-356](#)

Prime Minister's Office, 10 Downing Street

16 June 2021

[Medical cannabis under prescription](#)

House of Commons Library

17 May 2019

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