Briefing

How the horticulture sector growth plan can support health, security and the economy

August 2026

Summary

In the UK, production and consumption of healthy foods is moving in the wrong direction. To meet dietary guidelines for good health, the amount of fruit and vegetables in the average diet would need to increase by 86 per cent. Domestic fruit and vegetable production has fallen 16 per cent since 2015, with production costs exacerbated by spikes in fossil fuel energy and fertiliser prices, reducing profitability across the horticulture sector.

The UK now relies on imports for 44 per cent of its vegetables and 86 per cent of its fruit, leaving the country's food supply highly exposed to extreme weather and other disruptive events overseas. In recent years, climate extremes have left supermarket shelves empty at times of staple fresh produce, forcing up food bills and pushing a healthy diet further out of reach for more people.

Expanding domestic production of fruit and vegetables must be a key priority to make our food system more secure. Our new analysis found the entire UK food supply could return to levels of self sufficiency last seen in 2000 if half of imported fruit and vegetables were replaced by homegrown produce. This would see the UK growing 66 per cent of its fruit and vegetables, bolstering food security while adding at least £1.9 billion to the economy.

In this briefing, we present a blueprint to achieve this through the government's upcoming horticulture sector growth plan. The government must set out clear measures to scale the production and consumption of fruit, vegetables and pulses in tandem. To complete this package, the government must set out measures to make fruit and vegetables more affordable and accessible to all. We offer five priority recommendations:

Support homegrown production

- **Develop a national spatial strategy** for horticulture to unlock large scale investment in highly productive, sustainable glasshouses and balance horticultural production with competing demands on the UK's land.

- **Lower and stabilise energy costs** for producers by improving access to affordable clean power and supporting the sector to transition away from gas.
- **De-risk investments** in supply chain infrastructure that help producers receive fair prices and access new routes to market, through government backed loans.

Broaden access to healthy, nutritious diets

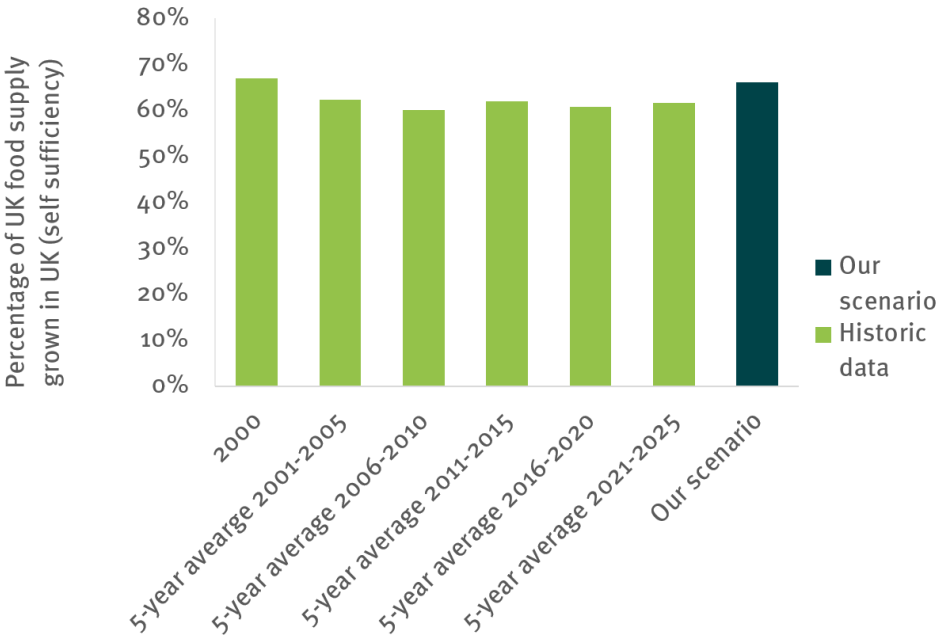
- **Support initiatives** to increase access to healthy, nutritious food in low income communities, to make it easier for people to access fruit, vegetables and pulses.
- **Introduce mandatory targets and public reporting** for UK retailers, beginning with targets to reduce sales of high fat salt sugar and fat (HFSS) foods that compete with healthier food choices.

What could an effective sector growth plan deliver?

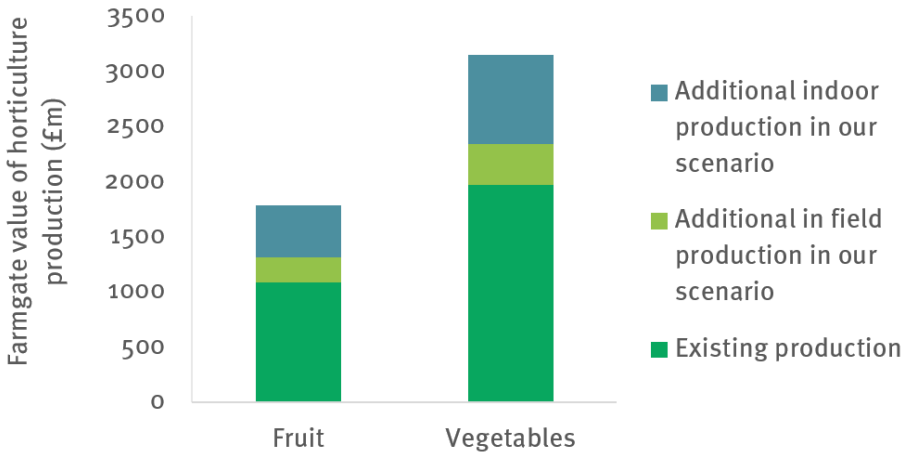
UK horticulture is diverse, spanning in-field production, orchards, glasshouses and vertical farms. Together, these systems contribute over £5 billion to the economy whilst using less than one per cent of agricultural land. Establishing a larger, more resilient horticultural production base is a major opportunity to drive economic growth and build much needed resilience in the UK food system.

In new analysis, we found that strategically expanding horticulture production by less than 50,000 hectares of land would allow the UK to grow half of what it currently imports in crops suited to the UK's climate (see the appendix for our methods). This expansion would return the UK to 66 per cent self sufficiency across all food eaten, a level last seen in 2000, and add £1.9 billion to the value of farmgate production.

Expanding horticulture could return the UK to a level of self sufficiency last seen in 2000



Indoor systems will be crucial to expanding fruit and vegetable production in the UK



Our analysis found that indoor production will be vital to this expansion. Of the additional farmgate value delivered, 68 per cent would be from new indoor production which enables a year round supply of fresh produce, irrespective of volatile supply chains and weather conditions.

Furthermore, per area of land, glasshouses produce ten to 20 times more food compared to traditional open field farming, while using up to 90 per cent less water, reducing pressure on land. It is also a substantial

opportunity to shift imports from climate vulnerable regions, and indoor production abroad, to the UK. However, profitable, sustainable production will depend on investment in efficiency and access to reliable, renewable and affordable energy sources.

Alongside indoor production, a comprehensive sector growth plan would encourage reliable and resilient domestic production of open field grown vegetables and pulses. If supported by supply chains that produce appealing, high fibre, plant-based protein products, production of peas, beans and lentils for human consumption could be worth over £500 million to British growers.

Because pulses fix nitrogen into the soil as they grow, scaling up their production would also reduce reliance on imported fossil fuel-based fertiliser, simultaneously lowering production costs and emissions.

Where in the UK different foods are produced is an important factor in the sustainable and resilient use of land. Approximately 22 per cent of vegetables are cultivated on lowland peat soils. However degraded peatlands are responsible for 3.5 per cent of the UK's annual greenhouse gas emissions.

An effective sector growth plan should work with England's Land Use Framework to expand horticulture without expanding production onto lowland peat. Reducing emissions in line with the legally binding climate targets will require a combination of relocation and wetter farming techniques. The plan should also set a clear expectation that all horticultural growing media will be peat-free by 2030, following UK-wide legislation to end peat sales.

Finally, the government should use the plan as an opportunity to support public health. In England, only one in three adults in England eat the recommended five or more portions of fruit and vegetables a day, and diet-related ill health costs the UK £126 billion each year.

People on low incomes are the least able to eat healthily, in part due to the higher price and more limited availability of healthy foods. Through initiatives that target improving access to fruits, vegetables and pulses at where it is needed most, the sector growth plan can address health inequalities.

Existing policies demonstrate that this can be done without restricting consumer choice or burdening businesses with significant added costs. The sugary drinks levy drove a 29 per cent reduction in the sugar content of soft drinks within two years, while measures to restrict the promotion of high fat, salt and sugar (HFSS) products are already helping to rebalance the healthiness of food on offer.

Why supply and demand aren't growing

Various factors are restricting greater demand and supply of domestically produced vegetables, fruits and pulses.

Barriers to greater production

The horticulture sector depends on upfront spending and long payback periods. A new glasshouse can cost £150 million and has a lifespan of 50 years, meanwhile traditional orchards will be tended for 30-50 years. In today's economic climate, producers are struggling to justify expanding, or even maintaining, current levels of production due to high and volatile input costs.

All segments of the sector have been impacted by fossil fuel price spikes. In 2026, producers paid 30 per cent more for fertiliser in May compared to April. Glasshouse businesses have been forced to delay and reduce planting due to higher energy prices. For indoor growers this has coincided with a 94 per cent increase in electricity network charges introduced in early 2026.

Static farmgate prices have further squeezed margins, with short term retailer contracts contributing to weaker confidence. Investment in alternative fertilisers, access to affordable, renewable energy and fairer contracts will be crucial for the future of the sector.

Looking ahead, uncertainty over labour availability and planning permissions are undermining the willingness to invest. Like dominant horticultural exporters such as The Netherlands, the UK urgently needs a unified national strategy to restore profitability and confidence in the sector.

Funding horticulture research will be vital for the longevity and adaptability of all forms of production, in the face of high input prices and increasingly volatile weather. Innovation in non-fossil fuel-based sources of CO_2, required by glasshouses to maximise yields, will be crucial for decarbonisation of the sector.

Barriers to consumption growth

Food prices significantly influence dietary choices and individuals on lower incomes are at greater risk of diet-related health conditions. Per calorie, healthier foods typically cost more than less healthy alternatives and need more time, cooking skills and equipment to prepare. These foods are also more prone to spoilage, making shelf stable, convenience options the safer choice for households on tight budgets. In January this year, 53 per cent of households classed as 'food insecure' reduced their fruit purchases and 40 per cent bought fewer vegetables.

Healthier options are far less available than unhealthy alternatives, especially in lower income areas. In England, a quarter of places selling food are fast food outlets, with this increasing to over a third in the most deprived areas. Convenience stores, often the only retailer available to people living in 'food deserts', are less likely to stock fresh produce because it offers a lower profit margin and carries the risk of lost sales due to waste. Even when healthier choices are available, they compete with cheaper, more visible and convenient HFSS foods. Across the UK, these products account for 40 per cent of food and non-alcoholic drink promotions.

Recommendations for the horticulture sector growth plan

Support homegrown production

1. Designate zones earmarked for horticulture expansion in a spatial plan

The government must be explicit about how it wants to scale up production, especially through state of the art glasshouses that produce large amounts of food using minimal land and water. We recommend the horticulture sector growth plan incorporates a sectoral spatial strategy that sets out where edible horticulture production will be located.

To turn a profit, glasshouses depend on reliable, affordable energy. A spatial strategy should identify priority 'horticulture zones' allowing on-site renewables, access to low cost renewable energy produced offsite or co-location alongside existing industries that generate waste heat and CO_2, such as factories, wastewater treatment facilities and data centres. This would provide certainty and reduce risks for businesses looking to invest. The spatial strategy could be further leveraged to accelerate planning applications, including through pre-vetting for glasshouses and polytunnels.

A comprehensive spatial strategy should also designate areas where open field production could be relocated to make space for peatland restoration. A combination of relocation, wetter farming practices and high yielding glasshouse production is essential to meet climate commitments without compromising food production. Ending the use of peat compost in commercial horticulture will also level the playing field for growers and avoid spatial planning being undermined by continued degradation of peatlands.

2. Lower and stabilise energy costs

The sector growth plan should help producers with high production costs. For existing producers and new entrants, reducing dependence on fossil fuels with reliable, clean energy will reduce volatility and increase resilience.

The government should:

- commit to recognise the glasshouse sector as a nationally important and energy intensive industry, to ensure its future eligibility for clean energy incentives and other support measures given to energy intensive industries;
- agree to underwrite purchase power agreements (PPAs) for glasshouses to help producers access affordable renewable power at a fixed price. Under PPAs, producers would be able to procure renewable energy at a set price for agreed multi-year periods;
- ensure producers can access capital funding to transition glasshouses away from natural gas and onto alternative energy sources; this could be through a reopened Industrial Energy Transition Fund (IETF) or a successor scheme with expanded eligibility, or by underwriting low

interest loans that enable growers to move away from volatile fossil fuels; it should include anaerobic digestion (AD), provided sufficient safeguards and best practices are in place covering all stages of production, from inputs through to plant management, storage and application. AD can be used to convert unavoidable agricultural wastes into biogas to heat glasshouses, as well as nutrient-rich digestate, which can be used as fertiliser or valuable soil improver when dried and composted, as is common in European countries like Italy.

3. De-risk supply chain infrastructure

The sector growth plan should address the 'missing middle' between UK growers and consumers by backing loans for infrastructure that strengthens domestic, end-to-end supply chains.

Lack of manufacturing capacity has been identified as limiting the volume of UK grown pulses that are eaten, likewise cold storage facilities will be key to increasing vegetable self sufficiency.

On-farm facilities, such as bean de-hulling and conditioning equipment, are especially important for making pulse production profitable. Sharing equipment, such as within farmer clusters, can minimise costs. The plan should also strategically support larger scale infrastructure, including canning, jarring and freezing facilities, alongside enterprises that use UK grown pulses as inputs, such as for plant-based protein extraction. This will be necessary for UK produce to compete with imported foods grown and processed in more established supply chains abroad.

Investment decisions should consider current gaps in regional processing capacity, and where horticultural production will take place in the future, considering the necessary relocation of production away from peatlands. Ideally, targeted support will align development with adjacent efforts to increase production and consumption, such as through regional strategies, to create the long term market conditions needed for commercially viable facilities.

Broaden access to healthy, nutritious diets

4. Take the initiative on healthy food deserts

The horticulture sector growth plan is a chance to open up access to healthy and nutritious diets. To tackle food deserts, located disproportionately in low income areas where healthy foods are hardest to come by, the government should commit to an initiative working with wholesalers, and the convenience stores they supply, to improve the healthiness of product offerings. As both Scotland's Healthy Living Programme, which has run for over 20 years, and trials in London have demonstrated, this could increase the availability and recognition of healthy foods, including fruit and vegetables, in areas most impacted by diet-related ill health.

5. Mandatory sales targets for large retailers

The government should introduce mandatory public reporting and healthy sales targets for retailers with over 250 employees in this parliament. By following through on this commitment made in the *10 Year Health Plan for England*, the government can encourage healthier, more nutritious diets. This could help millions more people to eat well and improve public health without significantly raising food prices or inflating business costs. Retailers have publicly supported this policy.

Minimum, timebound sales targets would be an incentive for retailers to change promotions, product positioning and store layouts towards healthier foods. Combined with product reformulation, this flexible approach would allow retailers to choose how they increase sales of healthy foods like fruits, vegetables and beans.

Any target should cover both own brand and branded products and be based on the newly proposed version of the nutrient profiling model (NPM), which is already used to regulate the advertisement of HFSS products. Based on NPM scores, retailers should be required to disclose their overall volume weighted nutrient profile score, and the percentage of their total sales volumes that comes from healthier vs less healthy (HFSS) products. Over time, reporting should broaden to a wider set of environmental and social metrics, including sales of fruits and vegetables, protein sources and scope three (supply chain) carbon emissions. The government should also consider expanding this policy to wholesalers as a route to improving the healthy food offerings of smaller retailers such as convenience stores.

Action beyond the sector growth plan

Expanding horticulture is ambitious but achievable. The plan will be most effective at improving population health if it is aligned with wider policy reform. To this end, the government should pursue a Good Food Bill that creates statutory targets for the domestic production and consumption of fruit and vegetables, forming the basis of co-ordinated, cross departmental action.

While an ambitious sector growth plan should make a substantial contribution to better diets by making healthy foods more available, poverty is a fundamental driver of food insecurity and unequal access to healthy diets. Progress on diet-related ill health will ultimately require co-ordinated action across government to improve both the food environment and the wider social and economic conditions that shape people's diets.

Appendix

Analysis method

We used government datasets to build a model that estimated the change in self sufficiency that would arise from expanding production of fruit and vegetables in the UK.

Self sufficiency is calculated as the value of domestic farmgate production as a proportion of the total value of farmgate production in the UK plus imports and minus exports. It is based on farmgate value, not tonnage. Defra reports self sufficiency each year. To account for annual fluctuation, our baseline scenario was based on an average of data from three separate years (2023, 2024 and 2025).

We began by extracting Defra's estimates of the value of domestic farmgate production each year which are reported in the form we needed. Defra does not report the farmgate value of the total UK food supply, but we were able to find this by dividing the value of domestic farmgate production in each year by the self sufficiency ratio in that year. These values for each year are given below.

	Farmgate value £m		
	Domestic production	Total UK food supply	Self sufficiency
2023	31,440	50,710	62%
2024	31,918	49,105	65%
2025	33,605	56,008	60%
Three year mean	**32,321**	**51,940.88**	**62%**

We then constructed a scenario to estimate the additional domestic farmgate value, and resulting self sufficiency, when half of the fruit and vegetables currently imported were grown in the UK. To begin, we extracted data on the current farmgate value of domestic production and imports from the horticulture dataset. We ensured our scenario only expanded crops that can be grown in the UK by assuming no expansion of types of fruit and vegetables currently worth less than £5 million in domestic farmgate value (such as aubergines, lemons and avocados). Of those worth more than £5 million, we assessed the feasibility of expanding to accommodate 50 per cent of what is currently imported on a case by case basis, factoring in growing season, storage potential, and whether it could be grown indoors (which lengthens the growing season).

We deemed it possible (with improvements in cold storage, increased indoor production and other means) to grow 50 per cent of what is currently imported in the UK for leeks, beans, carrots, turnips, parsnips, cauliflower, broccoli, cabbage, brassicas, cucumbers, lettuce, mushrooms, onions, peas,

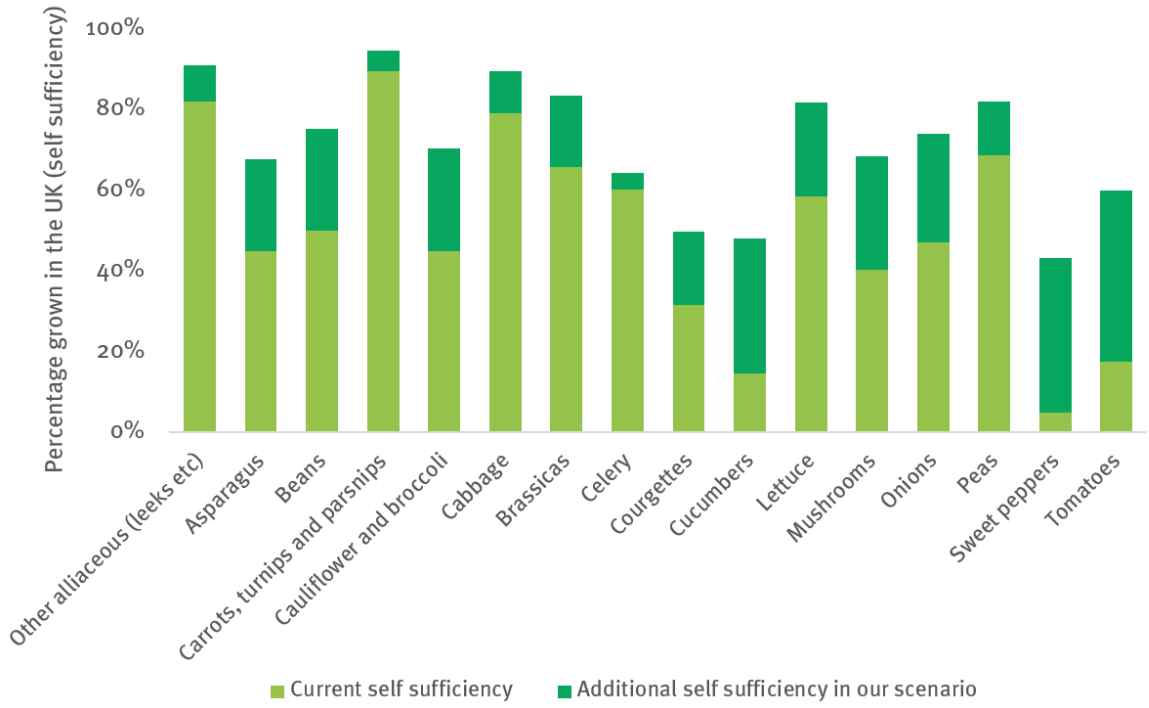
sweet peppers, tomatoes, strawberries, raspberries and other soft fruit. This level of expansion was not possible for asparagus, celery, courgettes, apples, pears, plums, cherries and other stone fruit, for which we determined what was a feasible expansion on a case by case basis. This formed our expansion scenario. We assumed no expansion of the generic 'other fruit not elsewhere classified' and 'all other fresh vegetables' categories listed in the Horticulture Dataset, as we could not assess expansion potential without more detail.

For our scenario, we estimated the additional tonnes of each type of fruit and vegetable that would be produced in the UK if 50 per cent of imports (or a lower level for the fruit and vegetable types mentioned above where this was not achievable) were instead grown in the UK. We converted this into financial value (which is the basis for self sufficiency calculations) by scaling current domestic farmgate value by the same factor by which tonnage increased. This means our estimates are based on likely farmgate value of produce grown in the UK, rather than overseas. Our scenario increased domestic farmgate value by £1.9 billion. The resulting self sufficiency in each type of fruit and vegetable is detailed in the graphs below.

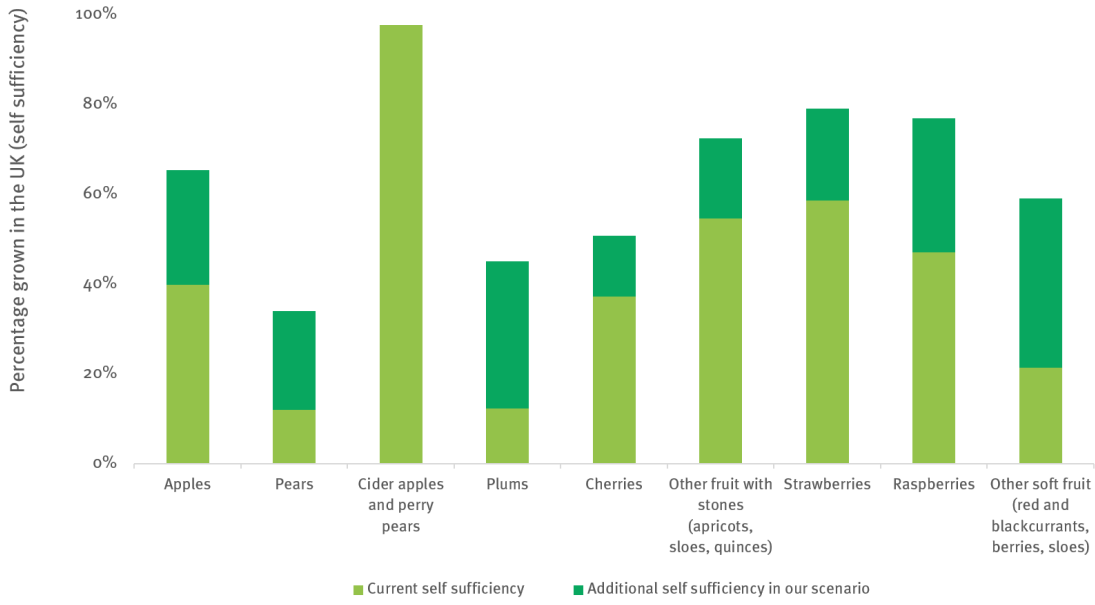
This increase in farmgate value of UK production increased the total value of domestic farmgate production to £34.2 billion each year. We estimated the area needed for this expansion by applying the factor of increase to existing areas used to grow each fruit and vegetable, finding 46,509 hectares of land would be needed for this expansion.

To estimate what this means for self sufficiency, we needed to estimate the forgone farmgate value of imported produced replaced by our increased domestic capacity. We estimated the volume of imports no longer needed to be worth £2.0 billion. This gave a total farmgate value of the UK food supply of £51.8 billion. We then found the new self sufficiency ratio by dividing the new total value of UK production at farmgate of £34.2 billion by this £51.8 billion, ie 66 per cent. According to government data, the last time the UK had this level of self sufficiency was in 2000.

Vegetables grown in the UK



Fruit grown in the UK



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