



SCHOOL PLATES



**HOW SMALL
CHANGES CAN MAKE
A BIG DIFFERENCE
TO YOUR CHILDREN'S
HEALTH, THE PLANET
AND SAVE YOU
MONEY**



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EXECUTIVE SUMMARY

PROVEG IS AN INTERNATIONAL FOOD AWARENESS ORGANISATION DEDICATED TO PROMOTING PLANT-BASED FOODS THAT ARE POSITIVE FOR OUR HEALTH AND FOR THE ENVIRONMENT.

Plant-based foods are also cheaper and can ease the burden on the school budget. Meat and other animal products are among the most expensive products we buy but delicious, wholesome, balanced meals can easily be created without them.

Plant-based foods: can help reduce childhood obesity; do not include many common allergens; reduce the risk of foodborne illness and can help establish long term healthy eating patterns.

Eating more plants over the long term can reduce the risk of: heart disease; hypertension; obesity; type 2 diabetes and some cancers.

Because eating more plants is good for health in both the short and long term, is better for the planet and costs less, we call this a **win-win-win-win**.

5 SMALL CHANGES

We want schools to take advantage of these great benefits and that is why ProVeg is asking all UK schools to make five small changes that can have a big impact. They are:

- 1 Ensure there are meat-free meals offered daily
- 2 Make the meat-free meal different to the meat-based one
- 3 Have at least one meat-free day each week
- 4 Ensure the menu's wording and order does not suggest the meat-free meal is inferior
- 5 Take all processed red meat off the menu

Please read pages 16 & 17 for more information about why we think these five small changes can have such a big impact.

ProVeg can offer free chef training should your caterers require some help adapting meals.

ProVeg can offer the services of a nutritionist free of charge to ensure all plant-based meals are nutritious as well as tasty.

Whether you make one, two or all five of our recommendations, ProVeg is here to help, support and advise you every step of the way.

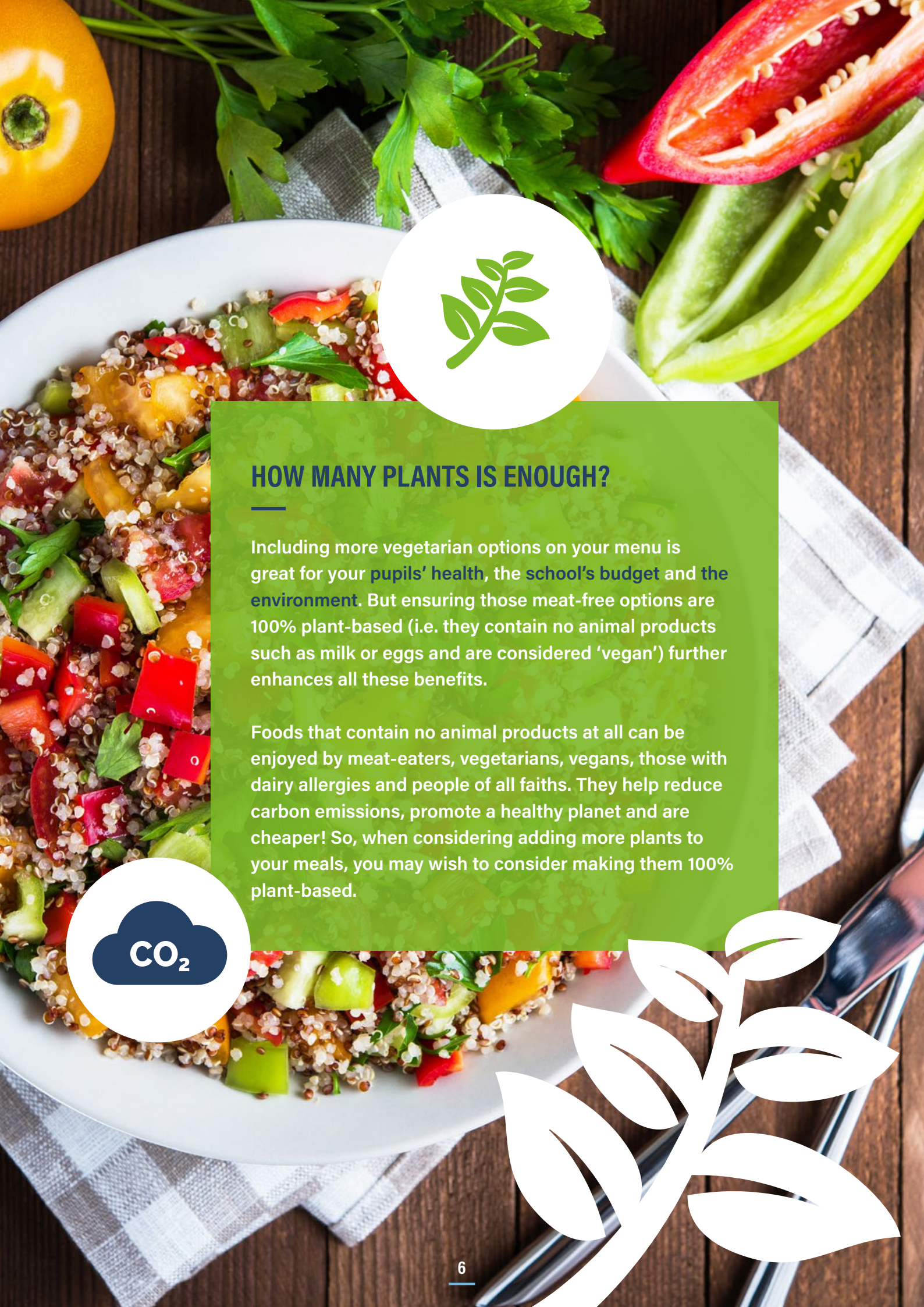
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If we could enhance pupils' health, help protect them from killer diseases in the long term, reduce our impact on the environment and save money all at the same time, why wouldn't we?

Dr Melanie Joy,
Co-Founder of
ProVeg International

”





HOW MANY PLANTS IS ENOUGH?

Including more vegetarian options on your menu is great for your pupils' health, the school's budget and the environment. But ensuring those meat-free options are 100% plant-based (i.e. they contain no animal products such as milk or eggs and are considered 'vegan') further enhances all these benefits.

Foods that contain no animal products at all can be enjoyed by meat-eaters, vegetarians, vegans, those with dairy allergies and people of all faiths. They help reduce carbon emissions, promote a healthy planet and are cheaper! So, when considering adding more plants to your meals, you may wish to consider making them 100% plant-based.

CO₂

FOREWORD

BY DEREK SARNO, CHEF AND DIRECTOR OF PLANT-BASED INNOVATION, TESCO PLC

I'm an unashamed plant-pusher now but that hasn't always been the case. There was a time not so long ago that I cooked and ate everything with not much of a care or second thought. The foods I served at my restaurants and catering businesses were heavily meat-centric and dairy-based, and as long as it tasted good and people loved it, what did I care about anything else? Over time, I came to care. A lot.

As both a chef and a person that creates food for customers and loved ones to consume and process in their bodies, I came to the realisation that true innovation comes with a responsibility from which I can no longer disconnect. It's much bigger than just how food tastes although it must taste good!

Food is powerful, empowering, and over time can promote or destroy good health in both our bodies and the environment. I serve compassion on a plate and that's quite a tall order for a plate of food.

I make plants the centre of every meal and am on a mission to influence an industry. It's a must for the planet and for bringing more compassion to the sustainability issues.

There's no need to abandon flavours when cooking with plants – in fact the choices available have increased massively since I started cooking. Making more choices available is a large part of my position at Tesco, as well as bringing awareness to the already-available plant-based items and the new ones we're bringing in.

I not only base my work on cooking foods plant-based, I am also a convert and eat only foods that are free from animals. This report does not seek to persuade you or anyone else to do the same as me. It simply asks that we work together to help get kids to eat more plants. And I think the five recommendations in this report are a great starting point. They yield wide-ranging benefits and are less expensive in both the short and long term.

What's not to love?

“

I make plants the centre of every meal and am on a mission to influence an industry.

”

Derek Sarno,
Chef and Director of Plant-based Innovation,
Tesco PLC and co-founder of Wicked Healthy



INTRODUCTION

BY JIMMY PIERSON, DIRECTOR, PROVEG UK

Throughout the following pages, we are openly seeking to encourage you to make small changes to school menus that can have a significant and positive impact on children's health, psychological wellbeing and the school budget.

We are enthusiastic cheerleaders for vegetables; not the over-boiled cabbage and the undercooked potato we have all suffered at some point but the wealth and richness of the edible plant world. Because eating more plants is good for us now, builds long-term healthy eating patterns which can spare us the nation's most common ailments, protects our planet and its resources and - crucially - is cheaper, too.

It's what we call a win-win-win-win.

We all want our children to be healthy and thrive, and contrary to some misconceptions around health, there are now countless examples of high-profile people on a plant-based diet, including champion sportspeople like Lewis Hamilton and Serena Williams, who can inspire children to think about their food. Similarly, chefs such as Derek Sarno, who is working with Tesco to significantly boost its plant-based offerings, show just how rich, layered and delicious meat-free foods can be.



Jimmy Pierson,
Director, ProVeg UK

Thankfully, times are changing, and schools all over the country are increasing the vegetable content in every meal served. Some have chosen to have one - or more - entirely meat-free day each week to boost the proportion of plants eaten while almost all ensure there is a vegetarian option available every day. So, to get to the crunch, there are five changes we are asking schools to make, which will also save you money.

- 1 **Ensure there are meat-free meals offered daily**
- 2 **Make the meat-free meal different to the meat-based one**
- 3 **Have at least one meat-free day each week**
- 4 **Ensure the menu's wording and order does not suggest the meat-free meal is inferior**
- 5 **Take all processed red meat off the menu**

Through this report, we will explain why we are asking for these changes, show you how they can be made, offer you expert resources free of charge to help you make them, and - we hope - show you that the benefits are overwhelming and that it will cost you less, too.

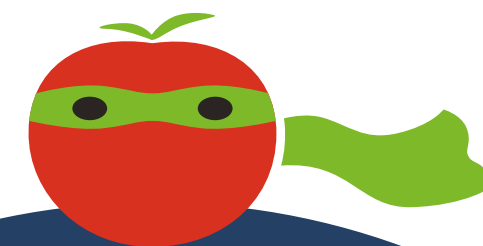
PLANTS ARE SUPERHEROES

BEFORE WE START EXPLAINING THE REASONS BEHIND OUR FIVE SPECIFIC RECOMMENDATIONS, WE NEED TO BLOW THE TRUMPET FOR PLANTS GENERALLY

Has anyone ever advised you to eat fewer fruits and vegetables? No?! There's a reason for that! Actually, there are lots of reasons and here are **6** from the NHS¹:

- 1 **Fruit and vegetables are a good source of vitamins and minerals, including folate, vitamin C and potassium.**
- 2 **They're an excellent source of dietary fibre, which can help to maintain a healthy gut and prevent constipation and other digestion problems. A diet high in fibre can also reduce your risk of bowel cancer.**
- 3 **They can help to reduce your risk of heart disease, stroke and some cancers.**
- 4 **They contribute to a healthy, balanced diet.**
- 5 **They taste delicious and there's so much variety to choose from.**
- 6 **They are also usually low in fat and calories.**

And while we all know about the 'five a day' recommendations, a recent study by Imperial College London found that this amount of fruit and vegetables a day is good for you but ten a day is better². So, in a nutshell, the more plants we can put on our plates, the more our bodies thank us for it.



“While research shows nine or ten servings of fruits and vegetables a day is optimal, dietary guidelines tend to recommend a minimum of five servings a day.... This is particularly troubling given the surge of new science suggesting that fruits and vegetables can not only help prevent nutrient deficiency disorders, but also reduce the risk of cardiovascular diseases — another leading cause of morbidity and mortality around the globe — and many cancers.”

United Nations Food & Agriculture Organisation³

FOUR REASONS WHY KIDS SHOULD EAT MORE PLANTS

1

TO REDUCE CHILDHOOD OBESITY

Childhood obesity is regarded by the World Health Organization (WHO) as one of the most serious global public health challenges of the 21st century⁴. It says that overweight children are 'likely to stay obese into adulthood'⁵ and are more likely to develop debilitating and life-threatening conditions as a result⁶.

It is a serious issue in the short term, too. Obese children are at higher risk of suffering other chronic conditions that are life limiting such as asthma and sleep apnea⁷. They are bullied more often than their peers who are of healthy weight, and are more likely as a result to suffer low self-esteem, depression and self-harm⁸.

The good news is that childhood obesity is largely preventable. WHO gives three pieces of advice to help beat childhood obesity:

- ↑ **increase the consumption of fruit and vegetables, as well as legumes, whole grains and nuts;**
- ✓ **limit the energy intake from total fats and shift fat consumption away from saturated fats to unsaturated fats;**
- ✓ **limit the intake of sugars⁹.**

2

TO ESTABLISH HEALTHY EATING PATTERNS

Children's eating patterns and food preferences are established early in life¹⁰, and have an impact on their food choices and preferences¹¹ - and therefore their health and quality of life, not just in childhood, but as they grow and throughout the rest of their lives. It's a challenge to get it right, of course, but schools can play a key part in setting their pupils on the road to a healthy future.

The 'ten a day' research led by Imperial College London found that this increased amount of veggie-intake significantly reduced risks of heart disease, stroke, cardiovascular disease, some cancers and premature deaths¹².

WE NEED TO EAT MORE PLANTS, AND TO GET INTO THAT HABIT EARLY ON.

3

TO REDUCE THE RISK OF ALLERGIC REACTIONS

According to the NHS, the foods that most commonly cause allergic reactions in children are:

- **MILK**
- **EGGS**
- **PEANUTS**
- **TREE NUTS**
- **FISH**
- **SHELLFISH¹³**

Admittedly, not many schools serve clam chowder or lobster thermidor but they do often serve foods containing milk or eggs, particularly in the meat-free options.

Cheese, which is high in both saturated fat and salt, is often relied upon as a key ingredient in vegetarian meals but there is no real reason why that should be the case. Examples of fully plant-based meals that are already served in many schools include: vegetable risotto; lentil dahl and rice; veggie chilli; spaghetti bolognese; fajita wraps; mixed bean cassoulet; vegetable curry; red dragon pie; and vegetable gumbo.

Meals like these boost our plant intake, taste delicious (when cooked right!) and are real crowd-pleasers.

4

TO REDUCE THE RISK OF FOODBORNE ILLNESSES

Food poisoning is a serious issue, and a major cause of illness in the UK population, according to the Food Standards Agency¹⁴. They point to meat, fish and poultry as the most likely culprits¹⁵ and warn that children and the elderly are often the most susceptible.

Thankfully, while serious incidents remain uncommon there have been some serious *E coli* outbreaks at schools in recent years, with children hospitalised, and even - on rare occasions - dying.

Since most foodborne illnesses are caused by eating animal products, offering more plant-based meals is one easy way to minimise that risk.

WHY SHOULD SCHOOLS OFFER MORE PLANT FOODS?

ASIDE FROM THE HEALTH BENEFITS BOTH IN THE HERE-AND-NOW AND IN THE FUTURE, THERE ARE MORE GOOD REASONS TO INCREASE THE NUMBER OF PLANT-BASED MEALS SERVED IN SCHOOLS.

1

COST: 'CHICKPEAS ARE CHEAPER THAN CHICKEN'

We know what you're thinking ... *what will this cost?* And with budgets tighter than ever, we recognise this is a legitimate concern. However, plant-based meals are on average cheaper than their meat-based counterparts. This is because animal products are among the most expensive food items we buy. Next time you're in a restaurant, take a look at the menu and you'll see that vegetarian meals are almost always the cheapest items on there.

Food writer and chef, **Jack Monroe**, who specialises in creating and sharing low-budget recipes, has in recent years made all her recipes fully plant-based, and in doing so, she has been able to reduce costs. Why? Because, she says, chickpeas are cheaper than chicken and because apple sauce is a fraction of the cost of the eggs it can replace in baking.

Among Jack's recipes are:

- **mixed bean goulash**, which costs **29p a serving**;
- **beetburgers**, which are **18p each**;
- **kidney bean and peanut butter burgers**, which cost **22p each**; and
- **blueberry banana muffins**, which cost **13p each** to make.

And she's right:

- **dried chickpeas** cost **£1.15/kg** (cooked weight) at Tesco;
- its frozen **Everyday Value Breaded Chicken Nuggets** cost **£2.47** a kilo.

On a global level, the world's poorer communities tend eat the most vegetables and the least amount of meat for the same reason. Animal products are expensive and are eaten sparingly, with pulses, vegetables, grains, nuts and legumes taking their place on the plate.



SHEPHERD'S PIE: A ONE-DISH CASE STUDY

Shepherd's pie is a popular dish at schools in the UK, and often a meat-free version is made available too because it is simply a matter of substituting the mince for soya mince or lentils. Again, these are Tesco prices (we took the cheapest available as a comparative guide; clearly when buying commercial quantities, the unit price decreases).

Dried red lentils - 0.4% fat	Dried 0.2% fat soya mince	Fresh 20% fat beef mince	Everyday Value 25% frozen beef and pork mince	Frozen 0.5% fat vegetarian mince	Fresh 12% fat beef mince	Fresh 20% fat lamb mince
£1.80/kg (£0.69/kg when cooked)	£5.34/kg (£1.67/kg when cooked)	£3.38/kg	£3.67/kg	£3.86/kg	£4.82/kg	£8.00/kg

The first thing you'll notice is that lentils and dried soya mince are significantly cheaper than all meats. Lentils are five times cheaper; soya mince half the price.

The second thing you may notice is that the more competitively-priced meats are up to one-quarter fat. As the quality of meat improves, so does the cost. Since saturated fat is a known bad guy in terms of obesity, cholesterol levels and heart disease, it's clear that the meat-free versions are kinder to bodies as well as budgets.

Shelf life and storage space

Dried pulses and beans have other commercial benefits, too - they don't require chilling or freezing, need little storage space, and have longer shelf lives, meaning there should be greater opportunities for bulk buying and less wastage.

Food costs post-Brexit

At the time of writing this report, Britain has not yet left the EU and no trade deals have been agreed, yet it is worth bearing in mind that the Institute of Fiscal Studies is warning of a potentially large impact on food prices through a weak pound, tariffs on imported goods and the cost of customs checks¹⁶. Budgets may yet be further stretched.



WE CAN HELP YOU ADAPT YOUR MENUS

ProVeg has fully trained plant-based chefs and nutritionists that we can supply free of charge to help school caterers adapt existing meals to make sure they are suitable for the those with allergies and vegetarian / vegan dietary preferences. We guarantee that flavour is never sacrificed!

2

PLANT-BASED MEALS ARE SUITABLE FOR ALL

Meals that are 100% plant-based are suitable for everyone, whatever faith and whatever their dietary requirements (excepting specific plant allergies, of course). Kosher certification allows that: 'All products that grow in the soil or on plants, bushes, or trees are kosher'¹⁷ while fruits and vegetables are also considered halal.

Plant-based meals are clearly suitable for vegetarians and vegans, as well as those with dairy allergies.

Just one meal can suit everyone, saving time and money, but also - importantly - lets no one feel left out or different. If the same meal is available to all, it reduces the likelihood of discrimination and bullying of minority groups around meal times.

3

PLANT-BASED MEALS ARE BETTER FOR THE ENVIRONMENT

Schools are encouraged to take environmental issues seriously, not just in what they teach but in how they are run.

'Sustainability' is the buzz word of our time but in practice it is simply about meeting the needs of the present without compromising the ability of future generations to meet their needs, too. This encompasses issues such as water usage, carbon emissions and food waste. Schools are encouraged to turn off unwanted lights, recycle wherever possible and promote environmentally-friendly methods of transport to school.

But what children are fed can have a far bigger impact than all of these. **The United Nations Food and Agriculture Organization has stated that animal agriculture is responsible for 14.5 per cent of human-induced emissions - which is more than the entire global transport network combined.**¹⁸ That's right! What we eat has a bigger impact than the car we drive!

In terms of water and land usage, pollution, deforestation and climate-changing carbon emissions, eating less meat and other animal products is great news.

THE SOYA MYTH

Soya has traditionally suffered from poor PR. It has been charged with decimating rainforests, interfering with male hormones and causing cancer, which is quite a charge sheet for a humble - and innocent - bean.

- 1 It's true that large expanses of land are needed to grow the amount of soya beans the world requires, but the vast majority of soya is fed to farmed animals.¹⁹ It's easy to blame vegetarians because they are the most visible consumers of these beans but they are not the main consumers of soya.²⁰ Most soya is eaten, albeit indirectly, when we eat meat.
- 2 Soya has no known effect on testosterone levels in men. The myth that it is a hormone disrupter came about because soya contains natural phytoestrogens, known as isoflavones, which resemble oestrogen chemically. Before thorough research was conducted, it was assumed by some people that isoflavones would affect testosterone in the same way that oestrogen does. But they don't. A meta-analysis of all the data was conducted in 2010, looking at 15 placebo-controlled studies and 32 reports on 36 treatment groups. It concluded: 'Clinical studies show no effects of soy protein or isoflavones on reproductive hormones in men.'²¹
- 3 The myth that soya causes cancer stems from the same error above i.e. that people assumed that phytoestrogens would act in the same way as oestrogens. A steady stream of research has not only debunked this myth, it has shown that the reverse is true. One study found that women who have one cup of soya milk a day have 30 per cent less risk of developing breast cancer;²² the Women's Healthy Eating and Living Study found that women who had previously been diagnosed with breast cancer would do well to include soya products in their diet as those who consumed the most soya products cut their risk of cancer recurrence or mortality in half;²³ and the lower risk of prostate cancer in Asia led researchers to study the role of soya there. They concluded that consumption of soya is associated with a 25-30 per cent reduced risk of prostate cancer.²⁴

SO, SOYA IS NOT THE BAD GUY.
GIVE A BEAN A BREAK!

OUR FIVE RECOMMENDATIONS: A CLOSER LOOK

1

ENSURE THERE ARE MEAT-FREE MEALS OFFERED DAILY

This is the obvious one. If there are tasty, veg-packed, meat-free meals available to all, more children will choose them. More kids eating more veg is good for everyone.

2

MAKE THE MEAT-FREE MEAL DIFFERENT TO THE MEAT-BASED ONE

This is about creating a meaningful choice. If faced with a choice of Shepherd's Pie or Vegetarian Shepherd's Pie, it is clear that all but the vegetarian pupils will choose the former, and this does nothing to promote the vegetable-rich options. However, should a school offer, say, **Chicken Curry** or **Shepherd's Pie (V)**, then many more children are likely to choose the meat-free option because this is a meaningful choice between two different meals. Those who prefer Shepherd's pie will choose it, irrespective of whether it contains meat.

3

HAVE AT LEAST ONE MEAT-FREE DAY A WEEK

You'll have heard of Paul McCartney's Meat-Free Monday initiative but it doesn't have to be a Monday - all days are equally good! Having one meat-free day per week helps the whole school reduce its carbon footprint, promotes health, and saves money. Some schools are proud to announce they have one meat-free day per week; others quietly offer delicious meat-free meals on one or more days and don't make a fuss over it. Either way, it's an easy way to boost the intake of vegetables for all.

4

ENSURE THE MENU'S WORDING AND ORDER DOES NOT SUGGEST THE MEAT-FREE MEAL IS INFERIOR

Food descriptions are important in enticing us to try a particular meal, and so too are the words used to describe the choice. If the menu lists **Main Meal** and **Vegetarian Option**, it suggests that one meal is normal and superior, the other niche and inferior. Listing the choices as **Option 1** and **Option 2**, while ensuring the meat-based meal is not always Option 1, can help promote the plant-based option. In fact, always putting the meat-free option first can have a significant impact. One restaurant chef found that by simply moving his best meat-free option to the top of the Specials Board, he increased sales of it by up to 30 per cent.²⁵

5

TAKE ALL PROCESSED RED MEAT OFF THE MENU

In 2015, the World Health Organization confirmed there is 'sufficient evidence from epidemiological studies that eating processed meat causes colorectal cancer',²⁶ while Cancer Research UK says that there is also growing evidence of a link to stomach and pancreatic cancers.²⁷ This means that sausages, bacon, ham, hot dogs, salami and pepperoni are classified as carcinogenic. Other substances in the same carcinogenic classification as processed meat include tobacco, arsenic and asbestos. To reduce the health risks, and to get children into positive lifelong habits, we recommend avoiding all processed red meats.



WHAT IS PROCESSED RED MEAT AND HOW BAD IS IT?

Any red meat that has been salted, cured, fermented or smoked, or in any other way 'processed', is officially classified as a carcinogen. This includes **sausages, bacon, ham, hot dogs, salami and pepperoni**.

A scientific analysis of data from 10 studies estimated that every 50-gram portion of processed meat eaten daily - about four strips of bacon or one hot dog - increases the risk of colorectal cancer by about 18%.²⁶



PROVEG CAN HELP

We believe that our five recommendations are simple yet effective ways to increase the intake of plant foods and are neither difficult nor time-consuming to adopt.

They can be discussed with your catering company immediately should you choose, and implemented when your next menu cycle begins. You might prefer to introduce these steps one at a time or jump straight in and make all five changes now. That's entirely your call.

Whatever you decide, ProVeg is here to help you should you need it. *We can offer:*



FREE CHEF TRAINING

If your caterer needs additional expertise, ProVeg can offer free chef training to help them create plant-based meals and adapt existing menus. Our expert plant-based chefs create nutritious meals that never compromise on taste. And it won't cost you a bean.



FREE NUTRITIONIST

ProVeg can also offer the services of a nutritionist free of charge to reassure you that the plant-based meals you offer are balanced, wholesome and healthy.

IF YOU WOULD LIKE TO MAKE USE OF OUR EXPERTS,
PLEASE CONTACT US AT SCHOOLS@PROVEG.COM



SUMMARY: WIN-WIN-WIN-WIN



When we tuck into a plate of food we tend to think only of the immediate impact - taste and feel, and quietening a rumbling tummy - rather than the wider ramifications, but small changes towards more plant-based foods reap huge, even worldwide, benefits.

Plant-based foods are cheaper, and that is great news for all! They're healthy, and help to keep our pupils in great shape in the long term. They help protect the environment, and therefore the future for everyone. And by creating delicious meals that everyone can eat, there is a greater sense of community, where no one gets singled out or marked as 'different'.

IT'S WHAT WE CALL A WIN-WIN-WIN-WIN SITUATION.

If schools can deliver all this simply by offering a bean burger over a beef burger, or a cassoulet over a casserole, that seems to us to be a fantastic outcome.



APPENDIX 1:

POPULAR PLANT-BASED FOODS ALREADY OFFERED IN SCHOOLS ACROSS THE COUNTRY

These are some of the most popular meat-free meals already served in primary schools across the country. This list is not exhaustive but it does indicate the number of options readily available.

- Roasted vegetable pizza
- BBQ Quorn balls
- Macaroni cheese
- Cauliflower and broccoli bake
- Vegetable risotto
- Veggie toad in the hole
- Lentil dahl and rice
- Cheese and bean plait
- Vegetable cobbler
- Veggie chilli
- Vegetable wellington
- Spaghetti bolognaise
- Roasted vegetable fajita wrap
- Vegetable lasagne
- Sweet and sour vegetables with noodles
- Mixed bean cassoulet
- Lentil and sweet potato curry
- Quorn and vegetable goulash
- Bean burger
- Vegetable enchilada
- Veggie mince pie
- Quorn roast
- Veggie sausages
- Neapolitan pasta bake
- Red dragon pie
- Vegetarian korma
- Vegetarian meatballs
- Sweet potato gumbo
- Veggie sausage roll
- Quorn dippers
- Veggie burrito
- All day vegetarian brunch
- Falafel wrap
- Vegetable samosas with mint and yoghurt dip
- Herby spaghetti with focaccia
- Shepherdess pie
- Country vegetable flan
- Lentil moussaka
- Veggie jambalaya
- Cowboy bean bake
- Mushroom tortellini
- Quorn and mushroom stroganoff

APPENDIX 2:

EASY TWEAKS THAT CAN TURN POPULAR MEAT-FREE DISHES INTO DELICIOUS 100% PLANT MEALS

These meat-free meals are already offered in primary schools and are popular items. For those who are interested in going beyond vegetarian and making all meat-free meals 100% plant-based, here are a few easy tweaks that will make these options suitable for vegan and lactose-intolerant children, as well as everyone else!



ROASTED VEGETABLE PIZZA

Instead of the dairy cheese, top with an herb dressing, a commercially available dairy-free cheese or we can show you how to make a simple but delicious dairy-free 'cheese' sauce using natural ingredients.

CHEESE AND BEAN PLAIT / COUNTRY VEGETABLE FLAN

Pastry can be made using vegan suet or margarine, both of which are readily available, and are probably already being used. The cheese can be substituted as for the macaroni cheese.

VEGGIE BURRITO / ENCHILADA

Burritos and enchiladas often include cheese but they don't need to as the flavours are rich enough without. If cheese is required, there are many dairy-free cheeses commercially available that can be grated and added to the meal. At least the dairy cheese can be held back and offered as optional.

BBQ QUORN BALLS OR QUORN ROAST

Quorn products are commonly found on school menus but many of their products currently contain egg. We may be able to suggest other brands or we can show you how to make these items from scratch.

QUORN AND VEGETABLE GOULASH

While most Quorn products still contain egg, 'Quorn pieces' are vegan, and may already be used in the recipe.

ALL DAY VEGETARIAN BRUNCH

Sourcing vegan sausages and 'bacon' is simple. Mushrooms, tomatoes, fried potatoes and baked beans are vegan. Ensure the spread for toast is dairy-free, as many already are. Either leave eggs off the plate or create a tofu scramble - a high-protein dish that looks and tastes like scrambled egg.

MUSHROOM STROGANOFF

Stroganoff usually contains cream but dairy-free cream or coconut milk can be used instead.

MACARONI CHEESE / CAULIFLOWER AND BROCCOLI BAKE / LASAGNE / LENTIL MOUSSAKA

A dairy-free cheese sauce is easy to make, either using commercially-bought plant milks and cheese or by making the same dairy-free cheese sauce as for the pizza. For the lasagne, simply switch minced meat for vegetarian mince, lentils or a mixture of the two.

VEGETARIAN KORMA

Korma curries normally contain cream. Dairy-free cream can be used instead or simply swap the cream for coconut cream.

VEGETABLE SAMOSAS WITH MINT AND YOGHURT DIP

Dairy-free yoghurts are readily available. The rest of this meal is already vegan.

MUSHROOM TORTELLINI

This is one pasta type that often contains egg, but it doesn't have to. Dairy-free cream cheese for the filling is also widely available.

APPENDIX 3:

FOUR HEALTH RISKS ASSOCIATED WITH EATING TOO FEW PLANTS

1

OBESITY

There is a reason why there is no limit on the amount of most fresh fruits and vegetables you can eat on the Weight Watchers plan! Studies have regularly shown that vegetarians are slimmer than meat-eaters, and vegans appear to have the lowest Body Mass Index of all.²⁹ A 2017 analysis of plant-based diets and obesity published in *The Journal of Geriatric Cardiology*, concluded: **'Based on the available evidence, PBDs [plant-based diets] should be considered a viable option for the treatment and prevention of overweight and obesity.'**³⁰

Childhood obesity is regarded by the World Health Organization (WHO) as one of the most serious global public health challenges of the 21st century. Its advice for tackling childhood obesity includes: **'increase the consumption of fruit and vegetables, as well as legumes, whole grains and nuts.'**³¹

Obesity is seriously detrimental to children. It impacts on their ability to be active, and can create a stigma that is related to depression, anxiety, low self-esteem and even suicide.³² Obesity also has long-term implications and is a risk factor for heart disease, stroke, cardiovascular disease, some cancers (endometrial, breast and colon)³³ and type 2 diabetes.

Almost one third of British children are overweight or obese with younger generations becoming obese at earlier ages and staying obese longer.³⁴ Obesity doubles the risk of dying prematurely.³⁵

“Plant-based foods, particularly fruit and vegetables, nuts, pulses and seeds, have been shown to help in the treatment of many chronic diseases and are often associated with lower rates of Type 2 diabetes, less hypertension, lower cholesterol levels and reduced cancer rates.³⁹”

Diabetes UK

2

DIABETES

Obesity is a key risk factor for developing type 2 diabetes. Complications arising from it include heart disease and stroke, nerve damage, kidney disease, sight loss and blindness, leg ulcers and peripheral vascular disease that can lead to foot or limb amputation. The fact that it is so common now does not detract from how serious it is.

People who eat a plant-based diet have just a small fraction of the occurrences of diabetes of those who regularly eat meat³⁶ and research suggests that every step away from consuming animal products brings benefit. Vegetarians reduce their rate by 61 per cent, and those who consume no animal products suffer the least of all. Their rate of diabetes is 78 per cent lower than meat-eaters.³⁷

The interesting thing is that it isn't just about weight. Even at the same weight as meat-eaters, vegans appear to have less than half the risk of diabetes.³⁸

“It's the position of the Academy of Nutrition and Dietetics that appropriately planned vegetarian, including vegan, diets are healthful, nutritionally adequate and may provide health benefits for the prevention and treatment of certain diseases. Vegetarians and vegans are at reduced risk of certain health conditions, including ischemic heart disease, type 2 diabetes, hypertension, certain types of cancer, and obesity.²⁸”

The Academy of Nutrition and Dietetics

3

CANCER

The World Cancer Research Fund says that maintaining a healthy weight reduces the risk of 11 common cancers⁴⁰ but diet's relation to cancer goes beyond weight. In 2015, the World Health Organization confirmed that processed red meat is actually a **cause** of bowel cancer.⁴¹

This means that bacon, sausages, hot dogs, ham, salami and pepperoni are now officially classified as carcinogens, just as tobacco is.⁴² It's not just processed red meat that is a concern, all red meat, according to WHO is a 'probable' cause.⁴³ And how it's cooked can cause still more trouble. Whenever meat – including beef, chicken and fish – is cooked at high temperatures, chemicals called heterocyclic amines (HCAs) form, and these are also carcinogenic.⁴⁴ The longer meat is cooked, the more HCAs form, and this may explain why eating well-done meat is associated with increased risk of breast, colon, oesophagus, lung, pancreas, prostate and stomach cancers.⁴⁵

The World Cancer Research Fund's Recommendations for Cancer Prevention:

- 1 Keep weight low, within the healthy range
- 2 Be physically active for at least 30 minutes every day and sit less
- 3 Avoid high-calories foods and sugary drinks
- 4 Eat more grains, fruit, veg and beans
- 5 Limit red meat and avoid processed meat

4

HEART DISEASE

Heart disease is the number one cause of death worldwide⁴⁶, and lifestyle factors play a big part in its development. It's long been known that eating a wide range of vegetables regularly helps protect the heart. The British Heart Foundation says: **'Vegetables will add fibre, vitamins and minerals to your meals, and eating a healthy diet can help reduce your risk of developing coronary heart disease by helping you to maintain healthy cholesterol and blood pressure levels.'**⁴⁷

A study published in November 2017 by the Icahn School of Medicine in New York found that people who eat a lot of fruit and vegetables are 42 per cent less likely to develop heart failure.⁴⁸

And research published in *The Journal of Geriatric Cardiology* in May 2017 suggests that when it comes to reducing blood pressure - a risk factor for heart disease - eating plant-based foods is a more important intervention than encouraging people to exercise and lose weight.⁴⁹



APPENDIX 4:

ATHLETES WHO THRIVE ON A PLANT-BASED DIET

David Haye announcing that he was vegan shows how healthy, strong and powerful you can be on a plant-based diet. He is just one of many professional athletes who have chosen a plant-based diet to help protect their health, speed their recovery, and prolong their careers. Here are just a few.



LEWIS HAMILTON, FORMULA ONE DRIVER

Lewis went vegan for health and environmental reasons. Two months after announcing he ate only plant foods, he won the world title and created history by becoming the first Briton to win four F1 titles. He said: *'I feel amazing. It's the best I have ever felt in my life.'*⁵⁰



NOVAK DJOKOVIC, TENNIS PLAYER

Novak has won 12 Grand Slam titles and has held the No 1 spot in the ATP rankings for a total of 223 weeks. His diet is predominantly plant-based, and he is such a believer in the power of plant foods that he opened a vegan restaurant in Monte Carlo. He says: *'I attribute a great deal of my professional success to my diet.'*⁵²



JERMAIN DEFOE, FOOTBALLER

Jermain switched to a plant-based diet in order to maintain his form and prolong his career. At 34, the Sunderland striker says it has helped to reduce fatigue at the end of matches and any sacrifice is worth it. 'I don't find anything hard,' he says, *'because I know the feeling I get scoring goals.'*⁵⁷



SERENA WILLIAMS, TENNIS PLAYER

One of the all-time greats of women's tennis, Serena has won seven Grand Slam titles and four Olympic gold medals. She follows a plant-based diet for health reasons. *'I was diagnosed with an autoimmune disease and I wanted to maintain my performance on the court. Once I started I fell in love with the concept of fueling your body in the best possible way. Not only does it help me on the court but I feel like I'm doing the right thing for me.'*⁵¹



ANTHONY MULLALLY, LEEDS RHINOS AND IRELAND INTERNATIONAL RUGBY LEAGUE PLAYER

Known as the Vegan Warrior, 6'5" Anthony became vegan for ethical reasons: he was concerned over the welfare of animals and the damage to the environment. Initially concerned that his strength might diminish, he soon realised he needn't worry. *'It's not affected anything at all. If anything, I am probably having the most consistent season of my career,'* he said.⁵³



HEATHER MILLS, SKIER

Heather set a world record when she became the fastest disabled skier at the age of 47, having lost her leg when hit by a motorbike, and says a vegan diet helped her recovery. She is such a stalwart supporter of plant-based foods that she has launched a vegan food company, VBites, that sells more than 100 different items in 24 countries.⁵⁵



KRISTINA RIHANOFF, DANCER

Known for her time on Strictly Come Dancing, Kristina continues to perform and says that adopting a vegan diet has changed her life and that of her partner. *'We feel amazing,'* she says. *'It's helped us a lot with our health, feeling good and feeling energised.'*⁵⁴



TIM SHIEFF, FREERUNNER AND WINNER OF NINJA WARRIORS

Tim is passionate about a plant-based diet to better protect the environment and for animals. He found that eliminating animal products from his diet reduced inflammation from training. *'Now I'm leaner, sharper, quicker and my mind's sharper, too.'*⁵⁶



PATRIK BABOUMIAN, STRENGTH ATHLETE

Patrik Baboumian is an Iranian-born German strongman – Germany’s Strongest Man, in fact – who has set four world records in various strength disciplines and can bench-press 463lbs and deadlift 794lbs. In 2011, he became fully vegan and says: *‘My strength needs no victims.’*



CARL LEWIS, SPRINTER

Carl won nine Olympic gold medals for sprinting and long jump. He chose to eat plant foods in order to get all the nutrients he needed without the excessive calories. He said *‘I’ve found that a person does not need protein from meat to be a successful athlete. In fact, my best year of track competition was the first year I ate a vegan diet.’*⁵⁸



NEIL ROBERTSON, SNOOKER PLAYER

Winner of both the world and UK titles, Neil says he got a *‘kick of energy’* as soon as he became vegan.⁶¹ He reports that he feels *‘fantastic’* and says that since making the switch *‘I’ve not looked back.’*⁶²



MEAGAN DUHAMEL, FIGURE SKATER

Two-time world champion pair skater, Meagan has been vegan since 2008. She says her weight has stabilised, her energy levels are better and her skin has cleared up.⁵⁹ *‘My diet alone allows me to train well and train a lot, because I rarely lack energy... when everyone’s dying at the gym, I usually seem to be the one that has a little bit more energy left at the end of the day.’*⁶⁰

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