Have we reached 'peak food'? Shortages loom as global production rates slow

Staples such as wheat, chicken and rice are slowing in growth – with dire consequences

The world has entered an era of “peak food” production with an array of staples from corn and rice to wheat and chicken slowing in growth – with potentially disastrous consequences for feeding the planet.

New research finds that the supply of 21 staples, such as eggs, meat, vegetables and soybeans is already beginning to run out of momentum, while the global population continues to soar.

Peak chicken was in 2006, while milk and wheat both peaked in 2004 and rice peaked way back in 1988, according to new research from Yale University, Michigan State University and the Helmholtz Centre for Environmental Research in Germany.
What makes the report particularly alarming is that so many crucial sources of food have peaked in a relatively short period of history, the researchers said.

“People often talk of substitution. If we run out of one substance we just substitute another. But if multiple resources are running out, we’ve got a problem. Mankind needs to accept that renewable raw materials are reaching their yield limits worldwide,” said Jianguo “Jack” Liu, of Michigan State University.

“This is a strong reason for integration ... rather than searching for a one-for-one substitution to offset shortages,” he added.

Peak production refers to the point at which the growth in a crop, animal or other food source begins to slow down, rather than the point at which production actually declines. However, it is regarded as a key signal that the momentum is being lost and it is typically only a matter of time before production plateaus and, in some cases, begins to fall – although it is unclear how long the process could take.

“Just nine or 10 plants species feed the world. But we found there’s a peak for all these resources. Even renewable resources won’t last forever,” said Ralf Seppelt, of the Helmholtz Centre.

The research, published in the journal Ecology and Society, finds that 16 of the 21 foods examined reached peak production between 1988 and 2008.

This synchronisation of peak years is all the more worrying because it suggests the whole food system is becoming...
overwhelmed, making it extremely difficult to resurrect the fortunes of any one foodstuff, let alone all of them, the report suggested.

Food peak production

Peak production refers to the point at which the growth in production of a crop, animal, or other foodstuff begins to slow down. From this time, production will continue to increase but at a decelerating rate. This is the first stage of a process that typically continues with a flattening of production and then a decrease. Peak production is the point at which things begin to go wrong, acting as a warning signal of what is to come.

The simultaneous peaking of the world’s basic foodstuffs is largely down to the competing demands of a mushrooming population, which is putting ever-greater strain on the land for housing, agriculture, business and infrastructure. At the same time, producing more of any one staple requires the use of extra land and water, which increases their scarcity and makes it harder to increase food production in the future.

Finally, increases in production tend to push up pollution, which exacerbates shortages of resources and slows the growth in output.

The simultaneous peaking of crops and livestock comes against a backdrop of a growing population, which is expected to reach nine billion by 2050, requiring the world to produce twice as much food by then as it does now, according to a separate study by the California Academy of Sciences. The problems caused by the growing population have been compounded by the growth of wealthy middle-class populations in countries such as China and India which are demanding a meatier diet. This is problematic because meat and dairy use up a lot more resources than if a comparable level of nutrition were provided by crops, grown direct for human consumption.
“That trajectory [of needing to double food production] is not a
given but more of a warning. It means we have to change how we
eat and use food,” said Jonathan Foley, the director of the
California Academy of Sciences.

While the peak production study suggests a doubling of food
output could well be impossible, Dr Foley points out that, since
30 to 40 per cent of the food grown globally for human
consumption never gets eaten, eliminating waste would go a long
way to feeding the growing population.

Among the basic foodstuffs examined, only the relatively
undeveloped farmed fish – or aquaculture – industry has yet to
reach peak production.
Have we reached 'peak food'? Shortages loom as global production rates slow - Environment - The Independent

http://www.independent.co.uk/environment/have-we-reached-peak-food-shortages-loom-as-global-production-rates-slow-10009185.html

A gentleman in Wisconsin uses compost to heat his greenhouse that is Aquaponics + HydroPonics, fish and plants. He grows 3 million pounds on 3 acres in 1 year, and if scaled to the size of West Virginia it would feed all of earth 2 pounds per day. Needless to say have the grow location near people, even rooftops in cities.

EX_MISLTECH 12 minutes ago

I do think we have reached peak, corporate thievery, peak bad management, peak lying, peak disinfo, peak fear, and peak manipulation.

EX_MISLTECH 10 minutes ago
Ditto on everyone saying this is a load of crap. For God's sake, Japan is in such dire straights with population decline they are implementing costly measures to ensure more births. Europe, Russia, and others are dying too.

JOHN 13 minutes ago

Sensationalism. "Food is slowing in growth while population continues to soar." Complete malarkey. Population growth is also slowing, and slowing quite rapidly. In fact, at current rates, population will peak at around 12 billion in 2050 and begin declining. The majority of people alive in the world today will witness global population decline.

PAUL 27 minutes ago

"Have we reached 'peak food'?"

The simple answer is "NO!!!" When everyone is growing their own gardens, THEN we will be near the peak. Just bought an aeroponic Tower Garden last year and it is producing great quantities of food for our family.

RAYSROCK2014 34 minutes ago

What a load of crappola. Between set asides, corporate farms and bad land management, it is no wonder there could be a shortage. However, chicken production is not down, it is actually up. The whole article is hype.

ROWWDY COLT 36 minutes ago

The REAL problem is not growing more food, but 3rd world people breeding like rats & expecting free food from other countries surplus food stockpiles...

Each country must limit its population to its sustainable food/water supply capabilities.

ROBERTO 53 minutes ago
TOMTOMM_2000 35 minutes ago

Good Point ROBERT, however maybe a better way explain it would be that the developed world (population that can pay for food) has all they need. The underdeveloped world (population growing the fastest) can’t pay for the food they need. I can attest being somewhat knowledgeable about farming technology (grain + livestock) that farmers can grow as much as their is demand (price) to buy. Cheers!

PAUL 25 minutes ago

Population growth is slowing in Bangladesh, Nigeria, Pakistan, India, and Indonesia, to name only the largest of the third world countries.

The growth rate of population is declining in over 90% of the world, with only a few African and Middle Eastern countries as exceptions.

LUCIFER 53 minutes ago

Chicken Little Lives!! ;)

RA44MR2 57 minutes ago

They independent. The 70s called they want their "crisis" back. I cant even believe they are bringing this up again. Did someone find an old news story on the floor somewhere in the basement and decide it would be a good idea to run it again? We wouldn’t be at peak food IF and thats a BIG if we are GMO will solve a great deal of that if the morons and psuedo scientists would stop trying to play chicken little about making food more abundant. Grow your own if you dont like GMO and shut up and let us eat it.

HAL 58 minutes ago

"Even renewable resources won’t last forever," said Ralf Seppelt" Stupid. Just stupid.

BRUCE FRYKMAN 1 hours ago

How could we be at peak food production when half of our food crop goes into our gas tanks as corn liqueur thanks to environmental extremists like Al Gore.

Have Crisis Will Travel
Have we reached 'peak food'? Shortages loom as global production rates slow - Environment - The Independent

Wire "eco-terrorist," San Francisco

RA44MRZ 56 minutes ago
AGreed stopping ethanol subsidies would go a LONG way to solving the supposed food crisis that isn't. However it does make getting corn a lot harder. I know i used to get corn all the time during the season and wont anymore due to price and quality.

LEOLAPORTE 1 hours ago
Noooooooo! Not Peak Food, I haven't even reached peak gluttony yet! There are at least another 250-500 pounds of weight that I can stash on my bulbous rotund body but...

Hey Hey Hey, it's Leo Laporte, ThEEEeee Tech Guy! Guru to the stars and advisor to senile old ladies and redneck truckers alike! Come visit me this weekend between 11am and 2pm, call me on 1-8888-ASK-LEO tell me what you think about peak food and about what I need to do to reach peak gluttony!

CARLETON 1 hours ago
I buy almost everything except food and clothing from online auctions most people aren’t aware of the almost unbelievable deals that they can get from online auction sites the site that has the best deals is >>>W W w. saveslam, Com

I checked with the BBB and was told that it is all legit. How they can sell gift cards, laptops, cameras, and all kinds of goodies that we all want for 50-90% off, I don’t know. I do know that I bought my son an ipad there for less than $100 and my husband a $250 Low gift cards for 48. Why would I even think about shopping anyplace else?

ADRIAN FOX 2 hours ago
One of the greatest dangers is the degrading and even loss of productive farming land due to modern farming methods, which continues to treat soil as if it is some inert medium to support roots rather than a living resource.

Such small changes can prevent soil erosion, increase yields by retaining soil moisture, and reduce the reliance on artificial oil based fertilisers and pesticides. The run off of excessive nitrogen and the poisoning of the natural environment also hits other forms of food production as well as natural species.

http://www.independent.co.uk/environment/have-we-reached-peak-food-shortages-loom-as-global-production-rates-slow-10009185.html
There is so much good work going on around the world and the evidence is mounting that mixed farming, permaculture, and small units can actually outproduce the industrial farming methods on which we have become dependent.

As food supplies are more and more centralised in the currently unsustainable way, we will see the return to sustainable practices and much more local food production. A community faced with starvation will find major new ways to feed itself successfully in a sustainable way, given that both the theory and practice is already there.

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LEOLAPORTE 1 hours ago

Hey Hey Hey, it's Leo Laporte here, I really need someone like you to appear through skype or in person on my Sunday afternoon This Week in Tech where we will be discussing Peak Food, Peak Gluttony and what we can do to resolve this issue and keep the supply of soup coming my way! Call me Saturday between 11am and 2pm 1-8888-ASK-LEO to let me know if you are able to appear. Would love to have your input into this crisis!

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BRUCE FRYKMAN 50 minutes ago

Nature despises the entire concept of "sustainability" Nothing in nature is sustainable.

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PNKEARNS 2 hours ago

Ah... we've moved onto the new world crisis, "peak food".

Remember only a few years ago... "peak oil" was coming. Then fracking kicked in and we're swimming in fossil fuels. Now that global cooling... global warming... climate change... is petering out, we need a new world crisis to give meaning to some people's lives.

Welcome to the new articles on "peak food", to be followed with multiple academic "survey's of existing studies" (no original work that could disprove peak food), with cries for a U.N. study panel, and the publishing of a U.N. study and call for a U.N. treaty!!!

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LEOLAPORTE 60 minutes ago

This is the master plan of those pesky germans. They need an excuse to resume extermination of hated minorities and make the world pure and what other way than to claim it is required due to a crisis caused by food shortages!

Call me 1-8888ASKLEO either direct or through skype 11-2pm Saturday and tell me what we need to do to rid ourselves of all those minorities. I know I won't let them in the studio. They are a danger to the purity of
my minions.

BROZ 2 hours ago
Let's burn corn in gas tanks while the world starves...

MIKE TIERNEY 2 hours ago
Corn used in the production of ethanol in the US took half of US production (2012). 96 million acres of corn to produce 13 billion gallons of a fuel no one likes and no one wants except for goofy environmentalists and corn farmers. It wastes millions of gallons of fresh water and since the US is swimming in oil, natural gas and coal making ethanol makes no sense. If Half of the US production of corn went back into the food supply I am thinking one large amount of beef, tortillas, chicken and pork can be added to our food supplies. That is just to start.

TIFF_JACK 2 hours ago
Stop wasting corn making on ethanol. As long as it is more profitable (due to government subsidies) to grow corn for fuel instead of for food the trend will continue. Big Government: If you think are problems are bad just wait until you see our solutions.

NEALWY 2 hours ago
Any story or headline that asks a question, the answer is always NO. Or rather opposite to the meaning. If it were true they wouldn't have put the headline up as a question. They would have said it has met it's peak and showed the data. But since we all know we could produce much more they try to scare people over to their way of thinking to gain more power for the argument of a one world gov.

AS_SALAAM 2 hours ago
As readers of this forum have frequently and scientifically pointed out, uncomfortable increases can be proven to not exist. There is no man-made population increase, population has hardly been increasing since 1900 and not at all since 1990. Populations have always been increasing, especially in the late Cambrian. That the year 2014 was the most population-rich year in history is a hoax created by the Church of Overpopulation, who out of sheer malice wishes to create
panic. There is food in abundance, so that in the near future, every single Human Psychopath will be able to eat rich, yummy, healthy, delicious red meat five times a day on a regular basis. Wonderful times are ahead, so don't worry - be happy, and buy yourself a present a day. It is arrogant to assume that the human being is mighty or even torpid enough to ruin it's food sources, when they Bible doesn't even mention such a possibility. On the opposite, population DECREASE is the danger. Be fruitful and multiply, and fill the earth, and subdue it. So, Subduing and polluting is not a problem as on Judgement Day, all the Trash will be turned into sweetest nectar.

REPLY

RAY SCHEEL 2 hours ago

How about production has slowed because production has reached a point of global oversupply.

Even those countries with chronic hunger issues could generally self-produce enough food if the roving warlords would quit stealing and destroying crops along with aid sent to try to feed the general population. Growing more food won't fix those sorts of problem.

REPLY

REDROSEANDY 3 hours ago

The use of Biochar looks likely to increase crop production.

Fish in the wild are being over exploited, and whole fish species face extinction. But there is an easy way of preventing these extinctions. An international law should be passed which ensures that the gonads of all fish caught are liquidized and put into water containers, the fish are usually gutted anyway so this would not be a great hardship for the fishermen. Once liquidized, artificial fertilization takes place, and after twenty four hours the fertilized fish eggs can be released into the sea. It does not matter where the eggs are put back because the fry of each species find their way back to the environment they originally come from.

In this way, the sea can be repopulated, and fishing can even become sustainable.

The Japanese were the first country to fish in this way, and had their Navy protect the massive shoal until the fish matured. I have only heard of it being done the once, though.

REPLY

ADRIAN FOX 1 hours ago

Not sure how tongue in cheek your proposals are, but biochar requires a lot of biomass to create it in the first place. In order to use it to increase the productivity of all agricultural land you would need several rain forests' worth of timber to create it.

More helpfully, you don't need to go down the 'gonad' route, just create a really large number of marine reserves of a decent size around the world. Make sure these are properly policed.
Unlike nature reserves on dry land, which fail in their purpose as they isolate and cut off natural populations and allow the biodiversity everywhere else to decline massively, marine reserves 'seed' millions of small fish and other 'fry' into the oceans which spread and help build stocks everywhere. There is plenty of evidence for this already, although the pig-headed fishermen want to think only of today and not the future, so oppose them being established anywhere.

As for the Japanese being at the forefront of marine conservation, I find that hard to believe of a country which wants to hunt every whale to extinction and is perfectly happy to fish out entire swathes of ocean with their factory ships, even in areas thousands of miles from their home country.

Oddly enough, during the early days of the Global Warming scare, data indicated that warmer temperatures would lead to increase growing cycles. That is, regions with one growing season could have two. Regions with two growing seasons could end up with three.

So, the cure for the new imaginary problem is actually the old imaginary problem.

Wow, a strawman argument to counter another strawman argument. Wonderful use of logical fallacies.

Check this out:
http://www.giss.nasa.gov/research/news/20150116/

And this:

I've heard time and again that the bread basket would shift from midwest to Siberia if /when the world warms. Seeing as how the Siberian area is at least 5 times bigger and unpopulated, there appears to be plenty of space once the "certainty" of global warming comes. I don't need your references either. I could put up references that point out their flaws. Seeing as how neither will look at the others and not believe them anyway, so why bother? You and your ilk have your global warming and mother Earth, as your church, and I'm not bound to believe in it.
What a pity then that vegetative growth slows above a certain level of CO2 and we are already seeing declines in the health of crops and trees.

This article is a scare tactic from start to finish.

The Premise: Because food production is down . . . The world must be running out of food.

In reality, the US, largest food producing country on earth, is actually subsidizing farmers NOT to grow. This article is merely an effort to lay one more stone in the road to a one world utopian scenario where the elitists keep strict controls on commerce, population control, natural resources etc. How does the elite few control the masses? Fear. By making the public irrationally afraid of problems that don’t exist.

I suggest that you look at what is currently happening in the Central Valley of California, the fruit and vegetable basket for most of America. The record drought is set to continue, water supplies are almost at nil, and those Americans will be buying in their food from the rest of the world pushing up prices to levels unaffordable to the poor.

What silly nonsense. Another scare tactic by the utopian one-worlders. The first thing we can do is stop using huge amounts of corn to make ethanol. After that, many other obvious answers will appear.

Rather than using the corn to feed people you mean. OK.
the USA has been a terrible mistake. First, it has a
barely positive energy balance (it takes almost a gallon
of diesel fuel (or equivalent) to produce a gallon of
ethanol...). Second, it has destroyed countless small
engines with its water absorbing properties. Third, it
has massively increased the cost of all beef, dairy, pork
and chicken products that rely on corn feed.
I am no expert, so I am sure there are many more ill
affects of ethanol that can be identified.
It is time to start eating our corn instead of burning it
for you silly people worried about peak food now.

REPLY

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ORACLE2WORLD  5 hours ago

The peak production data is interesting. Otherwise, I have a bit
of fatigue for "ominous nebulous future predictions". The text
to these particular predictions always include world population
being too large, and we eat meat. No species limits its
reproduction - any group that actually believes its own b* and
stops making children, leaves the gene pool. That is just Theory
of Evolution 101. I mean people do believe in this theory
regardless of its politically incorrect revelations, don't they?

My nine local supermarkets within 5 miles are always stocked
chock full of my comfort foods, and if people in Zimbabwe are
starving, it was a political decision for Mugabe to destroy his
food supply. Nothing to do with peak production.

(I have two food lions, two walmarts, a krogers, target, lowe's,
and 2 harris teeters in my foraging radius - and this is not a
densely populated area.)

REPLY

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HAODE  5 hours ago

people choosing to live and reproduce bambinos in
deserts with little or poor agriculture will go hungry.

even animals migrate to food sources. and animals
only come "into season" when there is ample food to
sustain offspring.

REPLY

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STEPHEN WATSON  4 hours ago

"No species limits its reproduction - any group that
actually believes its own b* and stops making children,
leaves the gene pool. That is just Theory of Evolution
101."

Oh dear. Imagine you are driving a car and limit your
speed. Are you still moving? Yes. Now, stop your car -
are you moving? No. This is physics 101.

Every species limits its populations. It's the
combination of population size, available land and
amount of food you can grow on it.

Imagine if you lived on the Isle of Wight and there
were no boats or planes to bring in food or anything
else (Earth in miniature). Let's say that there is enough
land to comfortably support 2,000 people, for
argument's sake. What if the population grows to 2,500? Well, people will clearly have to eat less. What about 3,000? Less still. And so on and so on.

The other thing you could do is to grow more food. How? Well, use more land. Eventually though there would be nowhere for the people to live if we still want to eat the same amount as before. Try growing more on the same land then - how? Add more pesticides and fertiliser? Where from - they need fossil fuels and you have no access to them remember?

Something has to give. Every species limits its population voluntarily (even if not consciously) or else nature will do it instead. Fossil fuels and global transport have allowed far too many people to forget or ignore the basics.

REPLY

NKBOZ 2 hours ago

For one thing, your analogy is flawed- if you stop your car, you’re still in motion on a planet rotating at 1,000 miles an hour and revolving at 10,000 miles an hour, you’re just not aware of it.

Just as you’re apparently unaware of the arable land needs to support a single human being. Huge swaths of arable lands in the U.S. are currently out of production for no other reason to protect the importation of foods from other countries as well as to prop up prices. There also vast areas of arable and semi-arable land that are banned from any kind of production, no matter how limited or “green”, due to the chicken little nature of so many “environmental activists” who have a better understanding of social media campaigning than they do of the facts underlying the causes they campaign for. The logical extrapolation of the goals and beliefs of many of these people is a planet devoid of technology, if not human life altogether. They are the latest version of Luddite extremism.

There is no such thing as a species that “voluntarily (even if not consciously)” limits its population. Nature does it for them, and man, despite those, mostly on the far left, who believe Man overwhelms Nature.

When Man can ACTUALLY stop things altogether, or accelerate them, then I’d be pretty concerned, but, we’re a very, very, very, very long way from slowing changing the length of a day or skipping part of a year. No matter what Man accomplishes, for good or bad, it is only because Nature allows it, and when Nature has had enough of Man, It will let us know.

REPLY

DAVE M. 5 hours ago

"Have we reached 'peak food'?" No, we have not.
Have we reached 'peak food'? Shortages loom as global production rates slow - Environment - The Independent

http://www.independent.co.uk/environment/have-we-reached-peak-food-shortages-loom-as-global-production-rates-slow-10009185.html
70% of productive agricultural land is in river Delta's prone to flooding if the current trend in rising sea level continues. More people in the world today are underfed rather than overfed. There is no overproduction just differing availability. Lack of water limits production in most areas of the world. This is getting more critical. There is a shortage of available phosphates & potash, and could be a shortage of Nitrates for fertilisers if energy becomes expensive again.

GM crops have yet to demonstrate a sustained increase in yields.

Food is a global commodity, but that could change if transport, economics or politics limit trade. Countries in the West will be affected. Shortages are becoming real, they are inevitable given current technology, they will have a significant impact on the economy and they should be a high priority for policymakers.

SHADOX 6 hours ago

Simple solution to peak food. Eat government bureau wienie's, and stupid journalist tools. The world will never run out of either of those.

HAROLDS 6 hours ago

What we NEED desperately is an increase of the heating of the earth’s atmosphere so we can begin to use the WASTED potentials of such areas as Siberia, Greenland, and The Great North of Canada!

Course we would probably lose in a hundred years or so a few needless cities like NYC, LA, New Orleans, Miami, Boston. But those could be replaced and certainly losing San Francisco would be no great loss for REAL HUMAN BEINGS!

Unfortunately, that type of global heating is not occurring!

MR SHIVER 5 hours ago

Global warming is occurring and as it does the permafrost in those regions you mention melts and releases methane. You wont have land to farm because the air will be hazardous if not lethal.

TOTAL MASS RETAIN 3 hours ago

In that scenario much currently arable land in low lying and low latitude regions will disappear from production due to flooding or desertification. But we definitely know that this type of warming IS happening: http://www.giss.nasa.gov/research/news/20150116/
Malthus lives! And he's still wrong!

Policy in the EU is reducing production. Smart. The UK is only just 60% self sufficient in food. The future is bleak. More like agent orange than soylent green. It is all about the money. Maybe Jessie J should formulate policy

Soylent green, anyone?

I read once that if the Sudan sorted out its political problems and introduced more modern farming methods it could feed the rest of Africa. There are huge areas of the world that could provide food which would bring prosperity to poor areas. What does it take?

Dor 35, If your so very clever perhaps you could have a go and show everyone how it is done.

Perhaps if you were better educated you would know that before Mugabe took over Rhodesia it was the bread basket of southern Africa. It exported grain and food stuffs to the rest of Africa. Now it can hardly feed itself, all due to its political system. So perhaps dor35 is right and you sir are the uneducated fool. By the way, South Africa is a net exporter of foodstuffs to Europe and the rest of Africa.

Pretty sure they were ASKING, not telling. But, since you profess to be smarter than the room; what is your solution? Yeah. Thought so.

So the rate of increase of production has peaked, not the actual
production.

If the world population has also "peaked" then I see no problem at all. But this article was written by a humanities graduate to whom this all-important comparison did not occur.

MOUTON 8 hours ago

As I looked out over my 1 acre lawn this morning to see if the bulbs were coming out I pondered "how on earth could we grow more food to prolong our current obesity crisis?" I think I'll go for a stroll through the green belt to think about it - perhaps stop off at a pub for a 4000 calorie lunch.

PAMELA HICKEY 6 hours ago

My entire front yard is now a raised bed garden. Problem solved.

RIPLEYNU 8 hours ago

It's overpopulated, stupid! How many surveys and quangos does it take? See David Attenborough yesterday - empower women and the population growth slows. Where are women empowered least? In Africa, India and the Muslim world. It's double indemnity - we'll either starve or be overtaken by Islam - or both!

HAROLDS 6 hours ago

Balderdash!

The earth was probably DESIGNED to hold billions more. When we end the depravity of human beings and live as we were designed to properly be, the planet will support many, many, billions more!

DAVIDY 6 hours ago

The more humans you get, the more they will overcrowd and fight. And farming does not go well with bullets flying about. Farming crops needs a lot more than land.

RIPLEYNU 2 hours ago

What a lovely word 'Balderdash' is! You speak it well.
Every country with starvation issues where "overpopulation to blame has no central government to speak of to protect its citizens from competing warlords who steal or destroy the home production along with any aid that makes it to the villages in question.

CLEMY 8 hours ago

Unless we start controlling the worlds population, nature will do it for us.

PAUL SMITH 8 hours ago

A thought provoking article. I feel that some discussion of development of food technologies may be relevant. We have only been able to hit these food peaks because of food technology. Ingenuity creates more technology and more people create more chance of ingenuity. I firmly believe that our ingenuity will win out; we will be fine and that our technological advancements will create new higher future peaks.

IAINH 7 hours ago

I wish I shared your hope. Bus as I see no such technology on the horizon, I can't.

PAUL SMITH 7 hours ago

That's kind of the point. I don't know about any technologies but one of the 7,000,000,000 people on the planet will. It's not so much hope as looking back on history. If you had said to someone 200 years ago that there would be 7 billion people on the planet today they would have called you crazy but our ingenuity and technology has made it happen.

DAVYDV 7 hours ago

P SMITH---With temperate crops you run up against limited hours of sunshine, and the last ten years of weather in the uk, have been nothing like so good as were the 'eighties' --big crops and great harvest weather. We are up against the law of --diminishing returns.
Utter nonsense
We eat meat - and worst red meat
Which displaces up to 30 times its value in vegetable protein
With a change in diet the UK could be self sufficient in food
The world could feed twice it's current population

DAVID 7 hours ago
So how much are you growing then?

REPLY

DUNCAN CAIRNCROSS 7 hours ago
eight sheep, ten chickens
And a fine crop of thistles!

+ 1

GARDINER 8 hours ago
You've all just FAILED CSE (even though you all put your name at the top of the page) Biology!
All species - plant and animal - experience "peak food". It is the point of population saturation. Living space is always finite! All the others STOP POPULATION GROWTH when this point is reached.

REPLY

EDZUIDERWIJK 8 hours ago
They don't "stop population growth", it's done for them: by starvation.

REPLY

GARDINER 8 hours ago
Sorry, forgot to mention Global warming. We must have more Wind Farms in order to cool the Earth down a bit.

REPLY

POSH TIM 8 hours ago
Never mind the amount of grains used for fuel; in the developed world, up to 70% of it goes to animal feed so we can continue being the fattest people in human history. Go paleo! Forward to oblivion!

REPLY

EDZUIDERWIJK 8 hours ago
Never mind the inefficiencies inherit in the hippy agricultural methods aka "organic farming".
POSH TIM 7 hours ago

Who said anything about hippies or organic farming? It's just maths.

Would you describe the massive and successful effort in Britain during the war to get everyone to grow their food “inefficient”? Or call those same industrious people “hippies” for sorting themselves out while U-boats were sinking millions of tonnes of shipping to the UK?

Whilst the world population is certainly too big to sustain in finite resources such as fossil fuels, any solution needs to look at what we consume as well. Now there's a challenge - stop moaning and start taking personal responsibility - but that requires more than blaming politicians, poor people, stupid people from the comfort of your computer... it means changing something you don’t want to do, which I know is much harder.

Zzarzax 8 hours ago

Start taxing anyone who has more that 2 children, end all benefits for those who have more than w in the UK and that includes access to the free NHS and education. As long as politicians allow people to reproduce irresponsibly without a thought to the effects this has on the environment there is only going to be one outcome and that is war and it wont just be between countries, it will be civil war within countries as various groups compete for resources. Meanwhile other species will be driven to extinction as humans either kill them for their land or eat them as food or both.

Gullyfoyle 8 hours ago

@TOTAL MASS RETAIN

Not all controlled immigration voters (not anti-immigrant lobby) are climate change deniers. Please read my post on '10 things you need to know about fracking' 2nd one down.

It is disingenuous of you to imply that immigration has no bearing on this issue for the UK, it most certainly does. We currently import about 38% of our food, 88% and 48% for fruit and veg. Our meat and dairy industry imports huge amounts of Soya for animal feed. A few extreme weather events or the BRIC countries bidding heavily into food markets and we, especially our big cities, could have problems. Against that background, we can say; Immigration should be sensibly limited,
Building on the greenbelt is a very bad idea, (and unnecessary as we have so much quality brownfield land)
Our farmers need more support and we need to develop our agricultural industry, including the latest hi-tech applications. We need to re-assess our food supply chains, including our relationship with the EU and the corporate influence of our supermarkets.
But we’ve been a net importer of food for nearly 200 years with or without immigration. Indeed, without immigrants many farmers in the UK couldn’t cultivate and harvest their crops at a price competitive with imports so we would import more food if we wanted to kick out such immigrants. In doing so more demand is placed on global supplies increasing prices.

However, the article is about the totality of food production to feed the totality of the human population. It is much less about local variations in food production versus the local population density. To that extent immigration is peripheral at best to the article. If they weren’t here they’d be competing with us for access to global food production from somewhere else.