



## Air Filtering Plant

CSIR-NATIONAL BOTANICAL RESEARCH INSTITUTE, LUCKNOW

### 5 Best Air-Filtering Plants to Grow in Your House to Breathe Better

[The Epoch Times, 19 April 2019](#)

According to the World Health Organization, one-third of deaths from stroke, lung cancer, and heart disease are related to breathing pollutants. An estimated 7 million people a year die from pollution, and nine out of 10 people worldwide are breathing polluted air. There are plenty of ways to decrease your personal environmental impact in an effort to combat the long-term effects of pollution, but it can often feel like an uphill battle to actively clean the air around you. That makes it tough to stay healthy; between allergens and pollutants constantly permeating the atmosphere, air quality can cause everything from colds and allergies to lung disease and even skin problems. Luckily, plants are a great option for combating bad air.

It may seem counterproductive to recommend putting plants throughout your home, especially if you've been dealing with allergens. In reality, though, not all plants are grown the same—and while some will make you itch and sneeze, others will go to work saving your skin, lungs, and immune systems.

It's not just pollutants that you can combat with plants, though. If you're looking to improve your house's health using plants, here are five great ones to keep the doctor away!

1. Aloe Vera
2. Garden Mum
3. Dragon Plants
4. Bamboo Palm
5. Peace Lilies

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### Indoor plants that will purify the air in your home or office

[ABC Life, 12 April 2019](#)

Already known for absorbing carbon dioxide and releasing oxygen — nicely complementing humans, which do the opposite — a number of indoor plants also proved useful in removing toxic chemicals from the air, including known carcinogens benzene, formaldehyde and trichloroethylene.

You may ask why anyone would have those nasties indoors. Unfortunately, many of these chemicals can be found in tobacco smoke, car exhausts and other fumes that form urban smog, as well as compounds emitted from new carpets, furniture, paint, household cleaners, and also from cooking and gas heaters. The combined effect became known in the 1990s as sick building syndrome.

A CSIRO study into indoor air quality found that an attached garage with internal linking door posed a greater risk of pollution than living on a main road. As well as cleaning the air, a lot of research shows that plants actually make people feel better. Tests of hospital patients with plants in their room — or even a view overlooking gardens — found they had lower blood pressure and experienced a faster recovery. In offices, tests suggest having plants around keeps people more alert and productive. Again, even a view of gardens reduced the number of sick days.

You need one plant for every 10 square metres to achieve this, so think [Read More...](#)



NEWS BULLETIN

Plants and Pollution

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Vol. 04 April 2019

**Involvement of Youngster in Air Pollution**

CSIR-NATIONAL BOTANICAL RESEARCH INSTITUTE, LUCKNOW

### **School seeks help to install pioneering 'green' pollution barrier designed by University of Sheffield researchers**

*The Star, 24 April 2019*

Hunters Bar Infant School, situated at the busy intersection of Sharrow Vale and Junction Road, are looking for businesses who can help provide essential equipment, surveys and ground-works ahead of the installation of an innovative screen which will wrap around their playground.

The screen is being designed by academics from the University of Sheffield's BREATHE project and will see the planting of a 60m barrier – made from a custom mix of plants designed to reflect and absorb pollution – take place in the late summer following air quality monitoring tests.

The hope is that the work will raise awareness of the challenges faced by inner-city schools and that the BREATHE barrier could provide a solution for other schools looking to counter air pollution.

Catherine Carr, Head teacher of Hunters Bar Infant School, said: "Air quality around schools is still a relatively young topic, although increasingly we find it making headlines, particularly in London, as school communities are becoming more vocal about its effects.

"While air pollution levels at Hunter's Bar Infant School are not any worse than other schools in the city, we don't want to be complacent.

"We believe that by partnering with the University of Sheffield's BREATHE project in this research, we can help other schools find workable solutions and be part of real change for children locally, nationally and even [Read More...](#)

### **Earth Day: Maharashtra's youngsters are fighting climate change**

*The Times of India, 22 April 2019*

When Swedish schoolgirl Greta Thunberg started going on strike every Friday last August, little did she know, that she would be joining the list of Time magazine's 100 most influential persons, for drawing attention to the serious implications of climate change. The 15-year-old united students across the globe for this cause. Closer home, climate change warriors from Maharashtra are leaving no stone unturned and putting in a consistent effort towards a greener future.

Shashikant Dalvi, one of the National coordinators for Al Gore's Climate Reality Project, a group of global environmental activists, says it is welcoming to see youngsters do their bit to preserve different ecosystems like coastal, shrub forests, grasslands and wetlands in the country. "In 2015, during the international convention in Paris on climate change - Conference of Parties 21, India had committed to reduce their carbon footprint or the amount of greenhouse gasses which cause global warming, by 30 per cent, but the implementation is lacking. If we fail, it is difficult to contain the temperature rise below 1.5 degrees by end of the century – which can have alarming effects," he says.

Ashish Nerlekar, another youngster hailing from Pune, says that the need of the hour is to protect different types of ecosystems. Because of his exhaustive [Read More...](#)



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## New Finding of Scientist toward Air Pollution

CSIR-NATIONAL BOTANICAL RESEARCH INSTITUTE, LUCKNOW

### This scientist thinks she has the key to curb climate change: super plants

[The Guardian, 17 April 2019](#)

If this were a film about humanity's last hope before climate change wiped us out, Hollywood would be accused of flagrant typecasting. That's because Dr Joanne Chory is too perfect for the role to be believable. The esteemed scientist – who has long banged the climate drum and now leads a project that could lower the Earth's temperature – is perhaps the world's leading botanist and is on the cusp of something so big that it could truly change our planet.

She's also a woman in her 60s who is fighting a disease sapping her very life. In 2004, Chory was diagnosed with Parkinson's, which makes the timetable for success all the more tenuous. "We're trying to do something that's a huge, complicated thing even though it sounds so simple," Chory says. "Plants evolved to suck up CO<sub>2</sub> and they're really good at it. And they concentrate it, which no machine can do, and they make it into useful materials, like sugar. They suck up all the CO<sub>2</sub>, they fix it, then it goes back up into the atmosphere."

She is now working to design plants capable of storing even more carbon dioxide in their roots. Her Ideal Plant project uses gene editing – via traditional horticulture and Crispr – to do so. On a large scale, this could suck enough carbon out of the atmosphere to slow down climate change. This concept basically splices the genes of regular crops and everyday plants

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### Scientists use 'Bio Solar Leaf' to fight air pollution, produce food simultaneously

[Business Recorder, 30 April 2019](#)

British startup Arborea has launched a pilot project in London to test its new, first-of-its-kind 'BioSolar Leaf' technology that uses microscopic plants to remove pollution from the air.

The system involves microscopic plants like microalgae or phytoplankton, on solar panels-like structures that can be installed literally anywhere solar panels would go. With the help of photosynthesis, these plants remove carbon dioxide from the air while producing oxygen.

The microscopic plants not only remove the air pollution, but also simultaneously produce food ingredients. This means that this technology system could not only help battle carbon emissions, but also address hunger in the process, reported Futurism.

The microscopic plants also produce an organic protein that the firm extracts and uses in order to create plant-based food products. Arborea claimed that just one acre of their system does equal to cleaning the air as 100 acres of trees, as per CNBC.

"My goal is to tackle climate change and food security. This pilot plant will produce sustainable healthy food additives while purifying the air, producing oxygen, and removing carbon dioxide from the surrounding environment," said Arborea CEO Julian Melchiorri. "It will provide the opportunity to

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# Plants and Pollution

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### Climate Change: Plantation

CSIR-NATIONAL BOTANICAL RESEARCH INSTITUTE, LUCKNOW

#### The most effective way to tackle climate change? Plant 1 trillion trees

CNN, 17 April 2019

What's low-tech, sustainable and possibly the most effective thing we can do to fight climate change?

Planting trees. A trillion of them. Tom Crowther is a climate change ecologist at Swiss university ETH Zurich.

Four years ago he found there are about 3 trillion trees already on earth -- much higher than NASA's previous estimate of 400 billion.

Now, his team of researchers has calculated there is enough room on the planet for an additional 1.2 trillion -- and that planting them would have huge benefits in terms of absorbing atmospheric carbon dioxide, the main driver of climate change.

"The amount of carbon that we can restore if we plant 1.2 trillion trees, or at least allow those trees to grow, would be way higher than the next best climate change solution," Crowther told CNN.

Because his research is currently under review for publication in the journal *Science*, he says he can't share exact figures of how much extra CO<sub>2</sub> could be stored by those trees. But he points to numbers from Project Drawdown -- a non-profit that ranks climate solutions by the amount of CO<sub>2</sub> they could remove from the atmosphere.

Its number one ranked solution -- managing the release of HFC greenhouse gases from fridges and air conditioners -- could reduce atmospheric CO<sub>2</sub> by 90 billion tons.

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#### Connecticut's rapid loss of urban trees could have long-term consequences

The Hartford Courant, 11 April 2019

Connecticut's cities and towns are losing trees to disease, invasive pests, storm damage and old age at an alarming pace, and experts warn the loss of urban tree cover can impact everything from asthma rates to crime and property values.

In many financially hard-pressed municipalities, forestry funding is now going to taking down damaged and dying trees to protect public safety rather than planting trees to restore or maintain the "urban canopy."

While the loss of tens of thousands of trees is an issue across the state, experts say the problems are worse in cities like Hartford than in leafier suburbs that have more trees to lose, or rural areas where forests can regenerate themselves.

Connecticut has suffered an estimated 80,000-90,000 acres of "severe tree canopy loss" in the last few years, according to Tom Worthley, an associate professor with the UConn Extension Service. The causes include infestations of invasive insects like gypsy moths and the emerald ash borer, two years of drought, damage from multiple large storms, and trees that have reached the end of their natural life span.

Worthley said most of those dead or dying trees are in rural forests that will regenerate themselves over time, adding that the biggest concern he has is urban tree losses. Repeated studies have shown that it's the

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