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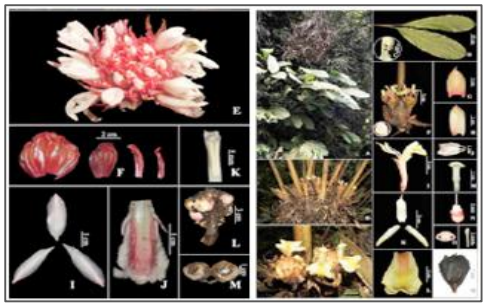
March 2018

AGRITitbits

Monthly Bulletin of Agricultural News



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Agri Titbits is an effort to collect and preserve agricultural news, especially spices, appearing in newspapers and online media.

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SPICES

Two ginger species discovered

The Arunachal Times-14-Mar-2018

ITANAGAR, Mar 14: Two new ginger species were discovered in the Mishmi hills in eastern Arunachal Pradesh by two researchers from the University of Calicut, Dr Mamiyil Sabu and V S Hareesh.

The ginger species discovered in Anjaw district was named "Amomum nimkeyense" (Zingiberaceae) as a tribute to the Mishmi culture. Nimkey is a revered spiritual place for the Taraon and Kaman Mishmis of Lohit and Anjaw districts. The second species "Amomum riwatchii" (Zingiberaceae), discovered in Dibang Valley district, has been named after the Research Institute of World's Ancient Traditions, Cultures and Heritage (RIWATCH), Roing for its contribution towards biodiversity conservation. The discovery of the new species was published in the international journal Botany Letters. "It is a result of extensive survey and vigorous research conducted by Dr Sabu and Hareesh," the article said.

Dr Sabu and Hareesh were in Arunachal during June last year on a research programme. RIWATCH Executive Director Vijay Swami said that this discovery would surely revive the interest of the botanists to take further research on identifying and documenting the rich flora diversity of Arunachal Pradesh.

"Credit needs to be given to Dr Haridasan, a renowned scientist, who had served in the Forest department of Arunachal Pradesh for many decades, for guiding many dedicated researchers to Arunachal Pradesh," said Swami.

Arunachal Pradesh is home to varieties of plant species that needs to be documented scientifically, he added.

Nepali ginger traders eye Italy as potential market

KATHMANDUPOST MAR 7, 2018

Nepal will be sending a shipment of ginger to Italy for the first time in a move to diversify the export market for the spice which is currently limited to India.

A consignment of 10-12 tonnes is slated to be dispatched within two weeks, according to the Nepal Ginger Producers and Traders Association (NGPTA).

Currently, almost all of Nepal's ginger harvest is shipped to the southern neighbour. Traders have been repeatedly encountering non-tariff barriers in India, prompting them to look for alternative markets.

"Recently, we have started focusing on Italy and Bangladesh to promote exports of fresh ginger," said NGPTA President Narendra Kumar Khadka. He added that a team of ginger exporters had recently made a visit to Italy to explore the market. "We have conducted a business deal with a buyer to export the spice."

Khadka said that Ilam Ginger Export would be sending the first lot of Nepali fresh ginger to the European country in 12-15 days. "After assessing the quality of the product in the first batch, the Italian buyer has pledged to place further orders."

Ginger is grown on more than 23,826 hectares across the country. As per the Ministry of Agriculture, Nepal produced 242,546 tonnes of ginger in 2016, and 60 percent of the output was exported.

Globally, Nepal is the third largest ginger producer after China and India. India is the main export market for Nepali ginger. Almost 94 percent of the shipments to India consist of fresh ginger and the rest are processed ginger.

According to the Nepal Ginger Profile 2016, which was produced jointly by UK Aid-funded Samarth-Nepal Market Development Programme and the NGPTA, the ginger grown in Nepal is high in oil and oleoresin, and it can be sold to large industrial buyers in India and other countries if output is increased and quality is ensured.

Nepali ginger meets the requirements of a number of European countries including Italy, Khadka said. "As most of the ginger produced in Nepal is grown through organic farming practices and there are no strict rules requiring organic certification in these markets, we expect Nepali ginger will find many buyers there."

Although dried ginger has high export potential in a number of foreign markets such as Europe, South Korea and Japan, Nepali traders are reluctant to install the equipment necessary to produce dried ginger due to its high cost.

According to Khadka, an average investment of Rs6-7 million is needed to build a dryer plant to produce dried ginger in notable quantities for export.

In addition to Italy, Nepali ginger exporters have also started exploring the market in Bangladeshi. As per the NGPTA, three to four containers of the spice are currently being shipped to Bangladesh weekly. "We exported 40 tonnes of fresh ginger to Bangladesh in the first seven months of the current fiscal year," Khadka said.

Spices exporters upset over curbs on pepper MIP

BUSINESS LINE-23-MAR-2018

Move will impact shipment of value-added black pepper and other spices, fear exporters

Resentment is brewing among spices exporters over the recent amendments in the import policy that puts black pepper on the restricted list of items and prohibiting its import below the MIP.

Expressing disappointment over the notification, the All India Spice Exporters Forum said the move would affect export of value-added black pepper products from India.

Exporters will now have no option but to shift their base outside India, which will affect the prices of other spice items and pave the way to source from the cheapest landed cost. "This is happening at a time when the Prime Minister is aggressively promoting Make in India", Prakash Namboodiri, Chairman of AISEF, said citing the $2.5-billion forex revenue earned by the industry from value-added spices exports last year.

The global pepper market is now way below ₹200/kg and the industry was barely able to meet its obligation by importing and paying fine as it has to be re-exported against ALA/EOU/SEZ. With the latest notification, the customer contracts cannot be further fulfilled as the raw material prices globally are at ₹175/kg and to import at ₹500/kg and then re-export is totally un-viable.

Gulshan John, past President of India Pepper and Spice Trade Association, said that there are about 20 exporting units operational in the country and with the recent amendments in the pepper import policy, they are now exploring options to set up units in countries like Vietnam, Sri Lanka, Indonesia, etc.

He said the quantum of pepper exports stood at 20,000 tonnes valued at ₹1,000 crore on the basis of an average price of $5,500/tonne in 2017. Of this, exports of value-added pepper was Rs ₹950 crore (95 per cent value-added products is in the form of oleoresin oils, cracked and ground pepper steam, sterilised).

The emerging situation will have a cascading impact on other spice exports from India. Pepper is always exported in combination of other spices and rarely in isolation, he said.

Farmers worried over dip in pepper price

THE HINDU-10-MAR-2018

Pepper production fell during the fiscal in Tamil Nadu, Kerala and Karnataka, fell owing to erratic weather.

'Cheaper commodity from Vietnam flooding Indian market via Lanka aided by a low-duty structure'

A drastic fall in the price of black pepper price, coupled with low production owing to climate vagaries, has put farmers in Kerala and Karnataka – the two major pepper producing States in the country – in distress.

The spot prices of pepper in Kerala's Wayanad and Karnataka's Coorg markets on Friday was ₹360 a kg and ₹350 a kg respectively as against ₹570 and ₹580 a kg respectively last year. The price in Kerala was ₹490 a few weeks ago.

"The influx of imported pepper from Vietnam via Sri Lanka was the major reason for the fall in prices in the Indian market," M.C. Abdu of Ideal Spices, a pepper dealer in Wayanad, told The Hindu.

The cheaper pepper from Vietnam continues to flood the market through Sri Lanka, aided by a low-duty structure under the ASEAN (Association of South-East Nations) trade agreement, SAFTA (South Asian Free Trade Area) and ISFTA (Indo-Sri Lanka Free Trade Agreement). Under SAFTA, India could import 2,500 tonnes of pepper a year from Sri Lanka without duty, and above the quota, a duty of 8% would be imposed as per the ISFTA, Mr. Abdu said. But direct pepper import from Vietnam attracts a duty of 52% under the ASEAN trade agreement.

Close to 20,000 tonnes of Vietnam pepper was imported to India in a few months via Sri Lanka, and this was the major reason for the decline in price, he said. Since most of the pepper-producing countries are in the ASEAN region, there have been apprehensions of pepper from these countries being routed through Sri Lanka, taking advantage of the lower duty under SAFTA and ISFTA, he alleged.

MIP impact

The Union Ministry of Commerce and Industry had fixed the minimum import price (MIP) for pepper at ₹500 a kg last December, following which prices improved in local markets.

But when the landed cost of a kg of Vietnamese pepper through Sri Lanka came to ₹300, including an import duty of 8%, the prices started to decline, trading sources said.

Hence the MIP was yet to make any positive results now, the sources added. Moreover, the pepper imported from Sri Lanka to Nepal and Bhutan through Kolkata sea port also flows in to the Indian market, the sources added. The total production of pepper expected in the country during the current fiscal was about 63,000 to 64,000 tonnes, including 24,000 tonnes from Kerala, 6,000 tonnes from Tamil Nadu, and the remaining from Karnataka.

But the production fell in those States, especially in Kerala, owing to erratic weather conditions during the flowering season in Wayanad and Idukki districts. The Indian Pepper and Spice Traders, Farmers, Producers and Planters Consortium (IPSTPC) had urged the Commerce Ministry to remove black pepper from SAFTA and ISFTA import list in order to save domestic growers, but it was yet to be considered, said Kishor Shamji Kuruwa, the Cochin Chapter head of the IPSTPC.

Mr. Kishore said free trade in pepper was implemented in 2006 when Sri Lankan production was about 8,000-10,000 tonnes and pepper production in India was 1,00,000 tonnes.

Sri Lankan pepper had lost eligibility for any concession from India ever since its production rose to more than 28,000 tonnes, and Sri Lankan authorities were allegedly issuing a wrong Certificate of Origin to Vietnampepper imported into India via Sri Lanka, he added.

Apart from the declining price of pepper and increasing inputs, Quick Wilt disease, affecting the pepper vines, also posed a serious threat to the pepper farmers, said Chandrasekharan, a pepper planter in Wayanad.

If the Centre failed to impose a duty of 55% on import, farmers would be forced to abandon pepper cultivation, said A. Muthanna, a farmer in Coorg district of Karnataka.

Govt prohibits pepper imports below Minimum Import Price

BUSINESS LINE-21-MAR-2018

The Centre on Wednesday prohibited the import of pepper below the minimum import price of ₹500/kg, heeding to a demand by domestic pepper growers.

According to a notification issued by the Directorate General of Foreign Trade, under the Commerce Ministry, moved import of pepper and its derivatives from "Free" to "Prohibited" if the import price is ₹500 or less per kg.

The decision comes on the heels of the complaint by pepper growers that importers have been exploiting a loophole in an earlier notification. As pepper was defined as "free" in the December 6 notification, importers were able to get their consignments cleared by paying a small fine on invoiced value, they had said.

Now that it has now been moved to the "prohibited" list, the Customs will be able to take a stricter action.

US Fears for Its Spices Industry, Says India May be in Position to 'Retaliate' on Tariffs

NEWS18-22-MAR-2018

The US Trade Representative (USTR), Robert Lighthizer, told lawmakers during a Congressional hearing that India's system is not open and has a lot of "vulnerabilities".

The American spice industry depends largely on countries such as India on the import of spices and are now fearing a retaliatory action.

Washington: India may be in a position where it would want to retaliate, a top Trump administration official said on Friday, even as the US continues to be on the cusp of triggering a global trade war by unveiling high import tariffs on a number of items.

The US Trade Representative (USTR), Robert Lighthizer, told lawmakers during a Congressional hearing that India's system is not open and has a lot of "vulnerabilities".

"My guess is that India may be in a position where they want to retaliate. I think there's some vulnerability there. India has a substantial trade surplus with the US and they have a system which is not particularly open," Lighthizer said.

"They have a system that has a number of vulnerabilities. So to the extent, there are individuals who have this problem, all I can say is we'll try to work with them. It's a serious problem and one that we have considered," the USTR said.

He was responding to a question from Senator Ben Cardin from Maryland, who shared concerns of the American spice industry who depend largely on countries such as India on the import of spices and are now fearing a retaliatory action from them.

"I have another set of problems in regards to potential retaliatory actions. And I'll use McCormick spices as an example. It's a good American company, they source as much as they possibly can in our country, but you can't move the equator and they products from other countries in order to have their spices (sic)," Cardin said.

Baltimore-based McCormick is one of the top spice companies in the US. "That's exactly the type of concern we have that they could be targeted for retaliatory actions that they have no choice. What do I tell McCormick?" Cardin asked.

"I don't know enough about where they buy spice from. A lot of places — presumably where they buy spices from are not going to be on the list where they're going to be significantly affected by (Section) 232 in aluminum or steel," Lighthizer said.

"One that probably does come to mind, what they probably do is from India. I would presume India. I don't know. Once again, I'm not an expert in the spice industry. At least I remember from the old days, the whole spice trade, the whole opium trade was basically started with Europeans getting spice out of India and selling it to China. So that's kind of my frame of reference," he said.

The USTR said that the companies ought to draw their attention towards any specific retaliation.

Rajakumari pepper losing its premium due to deteriorating soil quality

TIMES OF INDIA MAR 11, 2018

KOCHI: Rajakumari pepper, the high-quality black pepper from Rajakumari and surrounding highrange villages, is losing its premium price in the market, said exporters. Due to its relatively high density, size and quality, this variety of pepper had been

commanding a premium of Rs 25-30/kg as it had been demanded by snacks and seasonings manufacturers.

"Usually, Rajakumari pepper is in great demand among buyers, but this year it has fallen drastically with almost no takers for it," said Jojan Malayil, CEO of Bafna Enterprises, a leading exporter of spices. Compared to pepper from other regions, Rajakumari pepper has a higher density of 610-620g/litre in comparison with the produce from Adimali or Kumily that have a density of 560-570g/litre. Also, this variety is bigger in size (described as 'extra-bold' in trader parlance) with dried, wrinkled berries having a minimum size of 4.25mm and above.

"Though density remains the same, the percentage of bolder berries has reduced drastically over the past three to four years," Malayil said, adding that deterioration in soil quality and changes in weather pattern were the reasons for this decline.

Siby Kollarackal, a pepper merchant of Rajakumari, said that he was confronting the issue of low-demand for his stock this year. "Usually, intermediaries who collect the product from us and sell it in Kochi could dispose the product in a day. However, now they say that it takes up to one week to find buyers," he said.

"Earlier, you were able to get 35-40 kg of extra-bold berries during the grading of 100kg of ungarbled pepper. This has come down to 25kg now," said Joy Olickal, a wholesale dealer who supplies to trading firms in Kochi, the terminal market for black pepper in India. Olickal observed that the density of berries declined as there was a rain shortfall. "Three years ago, the average density was 650g/litre, which declined to 560-570g/litre last year due to drought. With timely rain during the current crop year, it has grown to 600–610g/litre," he said.

Principal scientist at Indian Institute of Spices Research in Kozhikode P Rajeev said that there were solutions. "We can restore the quality of soil by amelioration process. The deficiency of micronutrients could be cleared by foliar spraying of micronutrients. Another reason for deterioration in quality of pepper is soil acidity which was caused by erratic rainfall. This can be rectified by irrigation," he said.

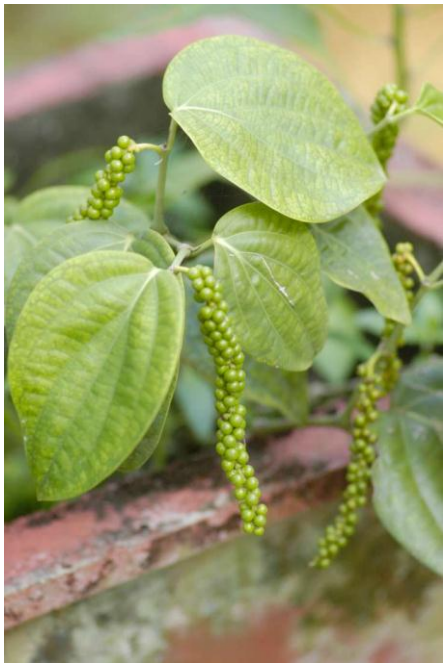
This Man's Efforts Fetched an Amazing Find – a Rare, Immunity Boosting Pepper!

THE BETTER INDIA-30-MAR-2018

Today only a few indigenous varieties of pepper grows on Kerala soil, out of which many are believed to have either become extinct or severely endangered.

It was the aromatic fables of pepper that brought the Portuguese from the other end of the world to the Malabar coast and establish themselves as the dominant traders of the 'black gold'.

However, today only a few indigenous varieties of pepper grows on Kerala soil, out of which many are believed to have either become extinct or severely endangered.



Kuthiravaali.

It is quite possible that even most Malayalis might have never heard of 'Kuthiravaali', a subspecies renowned for its high immunity and productivity, which had been documented as extinct. Well, until now.

The discovery of the rare pepper species was made by botanist K. M. Biju during a field survey, as part of a yearlong project to preserve native varieties of the plant under Wayanad Social Service Society.

While one sapling was found at Edamunda Kurichiya Tharavadu, Biju managed to trace four other plants at Valadu Edathana Tharavadu near Kalpetta.

What makes this discovery extraordinary is the nature of Kuthiravaali itself, which like every other indigenous pepper varieties, is equipped with long life, resistance to climate change and high immunity features.

"Indigenous pepper varieties contain olio ricino and piperine in high amount, and these are found in highest quantity in 'Kuthiravaali' pepper which makes it a special one," Biju added to Mathrubhumi, a local Malayalam daily.

Interestingly, many rare, native varieties of pepper were being protected in Edathana Tharavadu that had been found in fields and orchards near the forested regions but weren't identified yet.

According to Chanthu, who is the head of the family of Edathana Tharavadu, the Kuthiravaali plant has been around for long, but none of them knew its name.

Arrival of hybrid turmeric rises

BUSINESS LINE-09-MAR-2018

The arrival of hybrid turmeric to the Erode markets increased on Friday. The buyers were keen on buying the new turmeric and hybrid turmeric for their upcountry orders. Around 4,500 bags arrived for sale. Of this, 2,500 bags were new turmeric and 600 bags hybrid turmeric. The hybrid turmeric fetched ₹8,000 a quintal and the new turmeric ₹7,800 . The old turmeric is selling below ₹7,500 .

Turmeric or Curcumin: Plants vs. Pills

CARE2.COM-07-MAR-2018

Supplement manufacturers often fall into the same reductionist trap as the drug companies. Herbs are assumed to have only one main active ingredient, so, as the thinking goes, if you can isolate and purify it into a pill, you can boost its effects. Curcumin is described as the active ingredient in turmeric, but is it the active ingredient or just an active ingredient? It is just one of many different components—more than 300 in fact—of the whole food spice.

"Only limited studies have compared the potential of turmeric with curcumin." Some, however, suggest turmeric, the whole food, may work even better—and not just against colon cancer cells. As I discuss in my video Turmeric or Curcumin: Plants vs. Pills, researchers at the Anderson Cancer Center in Texas pitted both curcumin and turmeric against seven different types of human cancer cells in vitro.

The study found that curcumin kicks butt against breast cancer cells, but turmeric, the whole food, kicks even more. In addition to breast cancer, the researchers found that turmeric was more potent compared to curcumin against pancreatic cancer, colon cancer, multiple myeloma, myelogenous leukemia, and colorectal cancer cells, "suggesting that components other than curcumin can also contribute to anti-cancer activities."

Most clinical studies treating diseases in people have used curcumin supplements, as opposed to turmeric, but none has tried using turmeric components other than curcumin, even though curcumin-free turmeric exhibits anti-inflammatory and anticancer activities.

"Although curcumin is believed to account for most activities of turmeric, research over the past decade has indicated that curcumin-free turmeric"—that is, turmeric with the so-called active ingredient removed—"is as effective as or even more effective than curcumin-containing turmeric." There are turmerones, for example, in turmeric, which may exhibit both anticancer activities, as well as anti-inflammatory activities, but these turmerones are processed out of curcumin supplements. So, I assumed this review would conclude by stating we should stop giving people curcumin supplements and instead just give them the whole food spice turmeric, but instead the researchers proposed that we make all sorts of different turmeric-derived supplements!

Curcumin in turmeric used in University of Newcastle and HMRI study

NEWCASTLE HERALD-26-MAR-2018

A powerful medicinal compound in the ancient spice turmeric is being examined in the Hunter for its health benefits to humans.

To conduct the study, researcher Jessica Ferguson needs 25 more adults with high cholesterol, who aren't on medication for this condition, to reach her target sample of 80 participants.

"The trial is for four weeks," said Ms Ferguson, who is conducting the research through the University of Newcastle and Hunter Medical Research Institute.

It requires participants to consume two slices of a bread fortified with curcumin (found in turmeric) and/or plant sterols each day, without changing their regular eating and lifestyle patterns.

Good Health: Jessica Ferguson is looking for volunteers for a trial about the health benefits of curcumin, found in turmeric. Picture: Simone De Peak

This research aims to tackle two major risk factors for heart disease – high cholesterol and chronic inflammation in the body.

"Plant sterols are known to reduce blood cholesterol by 8 to 10 per cent in only four weeks," she said.

However, plant sterols do not significantly improve inflammation.

"Curcumin, on the other hand, is not only a powerful anti-inflammatory agent but it also possesses mild cholesterol-lowering properties," she said.

A combination of these two substances has been found to reduce blood cholesterol and heart disease risk to a greater extent than if used individually.

"We have now developed a novel food which is fortified with plant sterols and curcumin," she said.

The research is funded by the Newtrition Asia Research Grant, "with no direct funding or input from any industries".

Turmeric has been used for centuries by traditional Indian and Chinese culture as a medicine for treating certain conditions, a topical applicant for wound healing and as a key agent in food, textiles and cosmetics.

The health benefits of turmeric are due to the curcumin it contains.

Modern research into this medicinal compound is investigating its capacity to help combat chronic conditions, including arthritis, type 2 diabetes, Alzheimer's, dementia and heart disease.

"Curcumin is what gives turmeric its vibrant colour and it is a powerful antioxidant and anti-inflammatory agent," she said.

The spice is being used in the diet-fad industry to make products like "golden lattes" and "turmeric tea".

"These trendy lattes or other turmeric products are completely misleading, as they do not contain a high enough dose of curcumin to influence health in any significant way," Ms Ferguson said.

"Most of the curcumin in a turmeric latte is likely to be lost when we visit the toilet.

"This is because natural forms of curcumin from turmeric are not bioavailable, meaning our body breaks it down very quickly before it gets a chance to affect our health."

She said this also applied to the use of turmeric in cooking.

"It is impractical to consume enough turmeric even in cooked foods to deliver the required dose of curcumin for health benefits," she said.

As for supplements, she said they were a "great option when looking to receive the health benefits of curcumin".

"This is because they are designed to make sure curcumin is readily absorbed and not rapidly broken down by the body.

"It is important to note that concentrated curcumin in supplement-form can be dangerous for individuals taking blood-thinning medications such as warfarin or aspirin, as it can enhance bleeding by reducing clotting time."

Otherwise, it is safe.To be part of the research, email jessica.ferguson@uon.edu.au or phone 4921 5636.

Turmeric's Benefits Are Plentiful, but What About the Negative Side

POPSUGAR HEALTH AND FITNESS AUSTRALIA-31-MAR-2018

Turmeric is touted as something of a miracle spice with loads of benefits. It contains antioxidants and anti-inflammatory properties, and thanks to a primary compound found in turmeric — curcumin — it's also known to be a pain-reliever.

Turmeric was most commonly used in curries and golden milk in places like India for centuries before it made its way into kitchens around the world. Being Indian, we grew up with this spice and ate it on a daily basis. Becoming a certified holistic nutritionist only allowed my love, understanding, and downright admiration of turmeric to grow.

Quick tip we've utilised for years: if you want to reap the most benefits from turmeric, be sure to heat it with black pepper and some sort of healthy fat (think coconut oil or ghee) for maximum potency and absorption.

There are several ways to use this spice, though. With turmeric's ever-growing popularity, it can now be found in its natural root source or in spice and supplement form — meaning there are a lot of ways to sneak it into your diet. But is it possible to have too much of a good thing?

Does Consuming Turmeric Have Any Side Effects?

There is a growing body of evidence of the many benefits of turmeric, such as anti-aging properties, blood purification, improved digestion, and improved brain health, to name a few. However, there may also be negative side effects to consuming turmeric.

While negative side effects are rather rare, they are possible. For example, Amanda Barnes, RD, warns that "if someone is taking blood thinners or painkillers such as aspirin as well as turmeric in a concentrated form, such as a supplement capsule, you could overdo it. This could lead to increased bleeding when cut, during a menstrual period, or if you are susceptible to bloody noses."

High doses of turmeric may cause gastrointestinal problems, bloating, "nausea, vomiting, stomachaches, and diarrhea. Turmeric may also exacerbate symptoms of GERD," Dr. Amita Kundra told POPSUGAR. In some cases, a highly elevated consumption of turmeric may also cause anemia and slow blood clotting.

How Much Turmeric Is Safe to Consume?

There is varying evidence regarding how much turmeric is safe to consume daily. If you believe you might be allergic to turmeric, are pregnant, are prone to bloody noses, or are on medication, then it would be best to consult with your physician to understand how much is best to consume. Generally, it would be best to consume less than 1,000 mg of turmeric a day.

What Is the Best Way to Get Your Daily Dose of Turmeric?

Sneaking it into your morning smoothie, baked or stir-fried veggies, tea, or any variety of ways is pretty easy these days. Most health stores carry turmeric in its root form, but you can also purchase it as a supplement or grab it from your grocery store's spice section. While there's technically no best way to add turmeric to your diet, "adding fresh or powder form of turmeric into recipes is a great way to consume smaller amounts," while "taking supplements will have higher doses [and] can have more of [the] anti-inflammatory effects," Barnes said. It's also important to buy powder or supplement forms of turmeric from a reputable source with no other additives to decrease your chances of negative side effects.

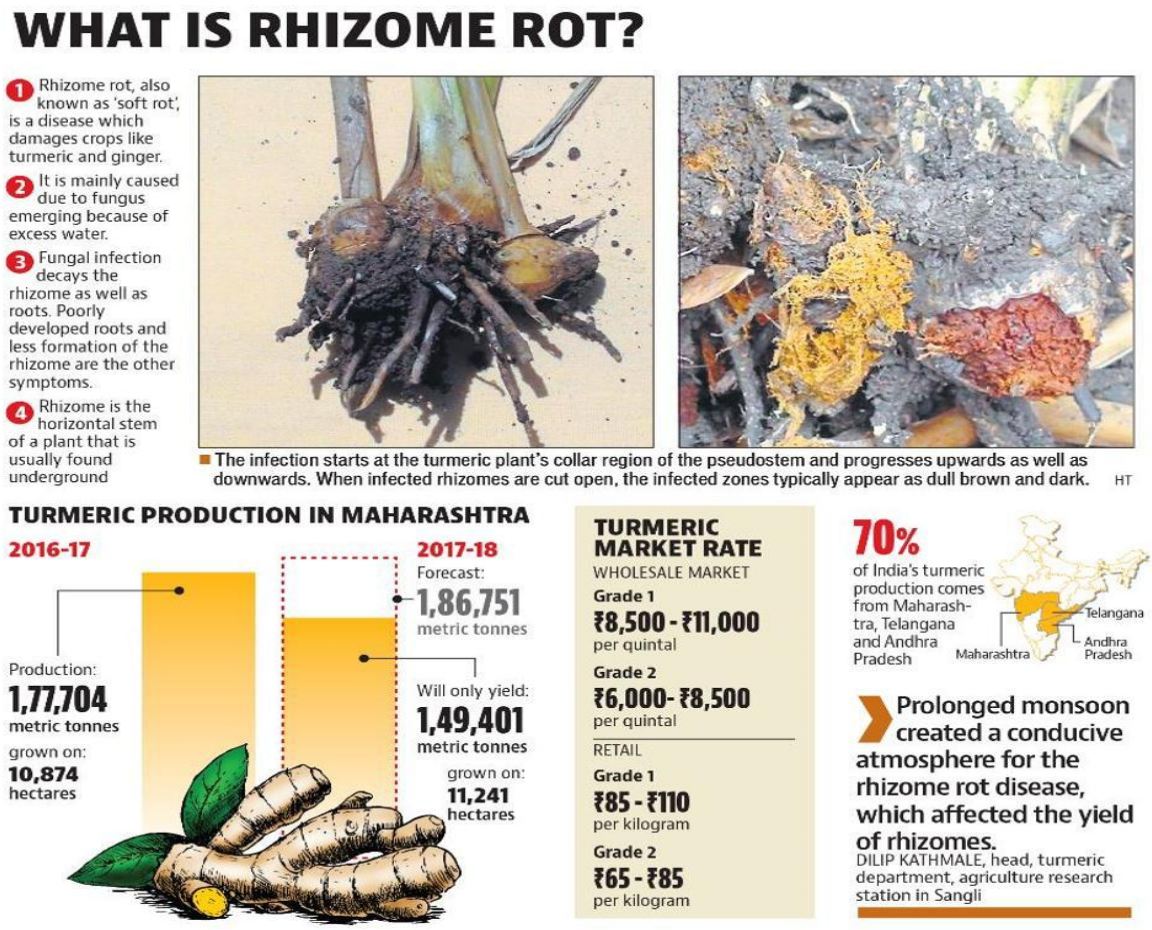
Rhizome rot effect: Yield of turmeric crop in Maharashtra likely to be reduced by 20 per cent

HINDUSTAN TIMES-06-MAR-2018

Agricultural scientists cite last year's prolonged monsoon as the main reason

As per the government of Maharashtra statistics,turmeric was grown on around 10,874 hectares in 2016-17, producing 1,77,704 metric tonnes in the same year.

The cost of turmeric is expected to rise this year, according to senior agricultural scientists. The yield of the turmeric crop in Maharashtra,Telangana and Andhra Pradesh is expected to drastically reduce this year due to the effect of the rhizome rot disease, caused by last year's prolonged monsoon.



Turmeric, which has great medicinal value, from these three states accounts for nearly 70 per cent of country's total production. Within Maharashtra, Sangli and Parbhani are major turmeric growing districts. This year, experts expect the yield to be lower by at least 20 per cent due to rhizome rot disease, caused by fungal infection.

Dilip Kathmale, head, turmeric department at the agriculture research station in Sangli, said, "Prolonged monsoon created a conducive atmosphere for the rhizome rot disease, which affected the yield of rhizomes. Extended monsoons created waterlogged conditions in the fields, resulting in a reduction in the yield by 20 per cent."

As per the government of Maharashtra statistics,turmeric was grown on around 10,874 hectares in 2016-17, producing 1,77,704 metric tonnes in the same year. However, for 2017-18 ,the state government's agriculture department has registered a total sowing area in Maharashtra of 11,241 hectares, which is higher than last year and was expected to produce 1,86,751 metric tonnes of turmeric. However, agricultural scientists only expect a total yield of 149,401 metric tonnes.

Jitendra Kadam, a scientist at the Post Graduate Institute of Post Harvest Management, Roha, said,"Yes, we are expecting reduction in yield of turmeric crop. As far as Sangli is concerned, 1,002 hectares of total area was under cultivation of turmeric, but because of infestation of rhizome rot disease, the yield may not be as expected."

According to Kadam, most of the late sown crops get heavily infested with the disease. "Also, there is the diversion of the photosynthetic material flow of matured leaves toward rhizomes damaged by hailstorms and hail in some parts of Maharashtra. This reduction in yield may push the price of turmeric higher in the near future," he said.

According to scientists, many farmers in western Maharashtra switched to turmeric because of not getting the desired prices for cane.

It takes nine months to harvest a crop of turmeric and harvesting of the late sown varieties will be completed by March.

Vietnam warned it may lose market share in pepper

VIETNAMNET BRIDGE-11-MAR-2018

Vietnam warned it may lose market share in pepper

VietNamNet Bridge - Vietnam is in the peak harvest season for the 2018 pepper crop, but sharp price falls and market problems all signal a challenging year for the pepper industry.

Vietnam is a big pepper exporter

Experts say the oversupply has been a problem for the pepper industry over the last two years.

Meanwhile, importing countries are setting higher requirements, thus raising pessimism about the future of the industry.

International media reported that the US Food & Drug Administration (FDA) is considering raising the permitted MRLs (maximum residue level) of some active elements, including Arcrimnathril, Tricyclazole and Metalaxyl, on pepper imports from Vietnam.

In late 2016, the EC planned to raise the MRL of Metalaxyl on imported pepper from 0.1 ppm to 0.05 ppm.

In 2017, Vietnam exported 38,861 tons, worth $221.2 million, to the US, a decrease of 1.9 percent in quantity and 35.4 percent in value compared with 2016. The country also imports pepper from other markets, including Brazil, Indonesia and Ecuador.

However, in the face of opposition from Vietnam and India, the EC finally decided to maintain the Metalaxyl MRL at 0.1 ppm until the end of 2018 after negotiations with Vietnam's Ministries of Agriculture & Rural Development (MARD) and Industry & Trade (MOIT).

What will happen after 2018? A report from ESA (European Spice Association) found that only 17 percent of 799 black pepper samples imported into the EU had an MRL below 0.05 ppm.

If the EC applies the new MRL, more than 80 percent of Vietnam's pepper exports to the EU will meet difficulty.

Meanwhile, the US, India and UAE are the three biggest export markets for Vietnam's pepper. If Vietnam cannot control the quality of exports, it may lose its biggest markets.

In 2017, Vietnam exported 38,861 tons, worth $221.2 million, to the US, a decrease of 1.9 percent in quantity and 35.4 percent in value compared with 2016. The country also

imports pepper from other markets, including Brazil, Indonesia and Ecuador.

Similarly, pepper exports to the EU have decreased by 0.3 percent in quantity and 39.9 percent in value.

Agricultural experts said pepper growers need to change their cultivation practices and apply high tech farming to produce safe, quality products for sustainable development.

An analyst said that farmers had expanded the pepper growing area too quickly, which did more harm than good, leading to overproduction.

MARD plans to develop 50,000 hectares of pepper growing area by 2020. However, the actual total growing area had already reached 130,000 hectares by 2017.

A senior executive of Phuc Thinh Production said it would be better for Vietnamese enterprises to focus on making and exporting safe products and to diversify its export markets.

Vietnam glut to pull down black pepper prices

BUSINESS LINE-21-MAR-2018

The recent drop in black pepper prices in Vietnam is likely to have an impact on global black pepper rates including India, following high production in almost all of the pepper growing regions.

Prakash Namboodiri, Chairman, All India Spice Exporters Forum, told BusinessLine that Vietnam — where harvesting is at its peak — has seen prices dropping on Tuesday to 50,000 VND/kg (Vietnamese Dong) from 2,05,000 VND/kg registered in December 2014.

Higher area in Vietnam

Vietnam's acreage has gone as high as 1,30,000 hectares which will yield 3,00,000 tonnes in the next few years, which could bring the prices further down due to glut in pepper supply globally.

Black pepper asta grade, which is similar to Indian MG-1, was traded on Tuesday at $2,700 (₹175/kg) fob Ho Chi Minh city for April shipment with further sellers at close. Brazil is also offering similar prices for last quarter of the year 2018, he said.

Lower domestic crop

Vishwanath Keshavamurthy, Co-ordinator, Consortium of Pepper Growers Organisation in Bengaluru, said that the Vietnam price drop would have an impact on domestic prices which is ruling at ₹390/kg in Kochi.

Even as the harvest is in progress, Indian growers are anticipating a lower crop by the end of March which is around 55,000 tonnes.

However, he expressed hope that the government intervention to curb malpractices connected with pepper imports will help farmers in realising better prices for the spice.

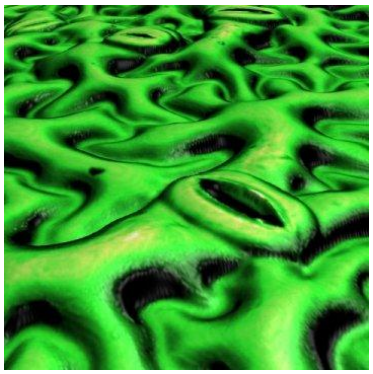
RESEARCH NEWS

Scientists engineer crops to conserve water, resist drought

SCIENCE DAILY-07-MAR-2018

Crops with higher levels of a protein require 25 percent less water

For the first time, scientists have improved how a crop uses water by 25 percent, without compromising yield, by altering the expression of one gene that is found in all plants.



Engineered plants conserve 25 percent more water by only partially opening their mouth-like stomata, allowing less water to escape through transpiration while carbon dioxide enters the plant to fuel photosynthesis.

Credit: Jiayang Xie, Katarzyna G?owacka, Andrew D. B. Leakey

Agriculture already monopolizes 90 percent of global freshwater -- yet production still needs to dramatically increase to feed and fuel this century's growing population. For the first time, scientists have improved how a crop uses water by 25 percent without compromising yield by altering the expression of one gene that is found in all plants, as reported in Nature Communications.

The research is part of the international research project Realizing Increased Photosynthetic Efficiency (RIPE) that is supported by Bill & Melinda Gates Foundation, the Foundation for Food and Agriculture Research, and the U.K. Department for International Development.

"This is a major breakthrough," said RIPE Director Stephen Long, Ikenberry Endowed Chair of Plant Biology and Crop Sciences. "Crop yields have steadily improved over the past 60 years, but the amount of water required to produce one ton of grain remains unchanged -- which led most to assume that this factor could not change. Proving that our theory works in practice should open the door to much more research and development to achieve this all-important goal for the future."

The international team increased the levels of a photosynthetic protein (PsbS) to conserve water by tricking plants into partially closing their stomata, the microscopic pores in the leaf that allow water to escape. Stomata are the gatekeepers to plants: When open, carbon dioxide enters the plant to fuel photosynthesis, but water is allowed to escape through the process of transpiration.

"These plants had more water than they needed, but that won't always be the case," said co-first author Katarzyna Glowacka, a postdoctoral researcher who led this research at the Carl R. Woese Institute for Genomic Biology (IGB). "When water is limited, these

modified plants will grow faster and yield more -- they will pay less of a penalty than their non-modified counterparts."

The team improved the plant's water-use-efficiency -- the ratio of carbon dioxide entering the plant to water escaping -- by 25 percent without significantly sacrificing photosynthesis or yield in real-world field trials. The carbon dioxide concentration in our atmosphere has increased by 25 percent in just the past 70 years, allowing the plant to amass enough carbon dioxide without fully opening its stomata. "Evolution has not kept pace with this rapid change, so scientists have given it a helping hand," said Long, who is also a professor of crop sciences at Lancaster University.

Four factors can trigger stomata to open and close: humidity, carbon dioxide levels in the plant, the quality of light, and the quantity of light. This study is the first report of hacking stomatal responses to the quantity of light.

PsbS is a key part of a signaling pathway in the plant that relays information about the quantity of light. By increasing PsbS, the signal says there is not enough light energy for the plant to photosynthesize, which triggers the stomata to close since carbon dioxide is not needed to fuel photosynthesis.

This research complements previous work, published in Science, which showed that increasing PsbS and two other proteins can improve photosynthesis and increase productivity by as much as 20 percent. Now the team plans to combine the gains from these two studies to improve production and water-use by balancing the expression of these three proteins.

For this study, the team tested their hypothesis using tobacco, a model crop that is easier to modify and faster to test than other crops. Now they will apply their discoveries to improve the water-use-efficiency of food crops and test their efficacy in water-limited conditions.

"Making crop plants more water-use efficient is arguably the greatest challenge for current and future plant scientists," said co-first author Johannes Kromdijk, a postdoctoral researcher at the IGB. "Our results show that increased PsbS expression allows crop plants to be more conservative with water use, which we think will help to better distribute available water resources over the duration of the growing season and keep the crop more productive during dry spells."

A promising capsule to get over drought

TIMES OF INDIA-28-MAR-2018

TRICHY: If necessity is the mother of invention, S Venkateswaran will vouch for it. The businessman-turned-innovative farmer who devised the technique of capsule-seeded cultivation has opened an alternative way of sowing seeds to thousands of his ilk who had been going through tough times battling crop loss and unpaid loans. Hailing from Sirugamani village of Andhanallur block in Trichy, Venkateswaran picked up ideas from three methods — rice intensification, single seeding and direct sowing — to develop the cultivation technology. “Each capsule contains two paddy seeds and neem

seed powder, humic acid and micronutrients. Thus, we can directly plant the seed on the field after encasing them in a capsule", says he. "In this method, seeds can be planted even before the water release. Whenever water is released or it rains, the seeds will start germinating once the capsule dissolves," says he.

Acknowledging his efforts to take the traditional system of agriculture to the next level, the engineering graduate recently received the "Innovative Farmer Award" of Indian Agriculture Research Institute at the Krishi Unnati Mela held in Delhi. The innovative seed capsule method was touted as a step to overcome drought in paddy cultivation.

Since each capsule had two seeds, it also brought down the requirement of seeds for an acre from 30 kilograms to just 2.40 kg. "There is no need to delay the cultivation for want of water and the soil can also be protected by reducing the quality of fertilizer", he said.

Explaining how he went about developing the technique, Venkateswaran says water scarcity was at the root of it. When he approached Krishi Vigyan Kendra at Sirugamani in Trichy, the scientists also encouraged him and gave their expertise to develop the technique. "Though direct sowing method was already being employed, birds and heavy rain may cause a threat to the seeds. So, I decided to use capsule usually used in the medical field made of gelatine and sterilized fat,"he added.

The capsule method would cut the cropping period from 120 to 100 days. Usually, the nursery required 25 to 30 days to mature, he said adding that the yield would also go up from 45 to 60 bags per acre. Sesame, tomato and brinjal seeds could also be sown using capsule technique, he added.

"I have been adopting this method since 2015 on my eight-acre agricultural land. Initially, my fellow farmers were confused and raised doubts about the technique. However, after I succeeded, they have also started showing interest in the method", Venkareswaran said. The only constraint in this technique is the cost of the capsule as each costs 65 paise. A total of 60,000 capsules are required per acre to sow. He felt that if the state government helped the farmers to produce the capsules in an alternative way cheaply, a number of farmers would come forward to adopt the technique.

"Sowing 60,000 capsules manually is a laborious process. The nursery transplanting machine can be utilised for this purpose, if it could be modified in a certain way to suit capsule seeding. For this too, the government should come forward to do the needful", he added.

BIODIVERSITY

How trees coexist—new findings from biodiversity research

PHYS.ORG-21-MAR-2018

Tree diversity experiment BEF-China, September 2016. Credit: Goddert von Oheimb

For a decade, researchers explore how tree species diversity affects the coexistence of trees and their growth performance in the largest biodiversity experiment with trees worldwide, the so-called "BEF-China' experiment. One of the main interests of the BEF-China team is to explore the relationship between tree diversity and multiple ecosystem functions, specifically those benefitting society, such as wood production or the mitigation of soil erosion.

For this purpose, an experimental site of c. 50 hectare in subtropical China was planted with more than 400,000 trees and shrubs. Trees have achieved a height of 10 to 15 m and their crowns have formed a dense canopy by that time.

The findings now shed new light on tree-tree interactions: The local environment of a tree strongly determine its productivity, meaning that tree individuals growing in a species-rich neighbourhood produce more wood than those surrounded by neighbours of the same species. "Particularly impressive is the finding that the interrelations of a tree with its immediate neighbours induce higher productivity of the entire tree community (i.e. the forest stand), and that such local neighbourhood interactions explain more than 50% of the total forest stand productivity," says forest ecologist Dr. Andreas Fichtner. The importance of local neighbourhood interactions in regulating forest stand productivity increases as forest stands were richer in tree species. These findings show that the coexistence of neighbouring trees and their small-scale interactions are substantial in explaining the productivity of species-rich mixed forests.

The scientists were also able to identify mechanisms explaining why species-rich neighbourhoods promote tree productivity. Their findings show that competition is less prevalent in species-rich neighbourhoods and that species-rich neighbourhoods can even lead to facilitation by e.g. an improvement of the microclimatic conditions or by positive interactions with soil fungi.

"These findings contribute to a deeper understanding of tree interactions and the functioning of forest ecosystems, and are particularly relevant for nature conservation and forestry," says Prof. Dr. Goddert von Oheimb from the Department of Forest Sciences at the TU Dresden. For instance, afforestation programs in countries that have experienced dramatic deforestation in the past, may benefit from planting multiple native tree species at the smallest spatial scale (i.e., the local neighbourhoodlevel) instead of planting monocultures or mixing monospecific patches at larger spatial scales. Furthermore, the study emphasizes the importance of long-term measures preserving global biodiversity. This in turn will benefit the multifunctionality of forest ecosystems and their associated ecosystem services benefitting the society. "This shows that biodiversity conservation is not exclusively an ecological or ethical issue, but rather a necessity ensuring socio-economic welfare," says Dr. Andreas Fichtner.

CLIMATE CHANGE

Climate Change Is Becoming a Top Threat to Biodiversity

SCIENTIFIC AMERICAN-28-MAR-2018

Climate change will be the fastest-growing cause of species loss in the Americas by midcentury, according to a new set of reports from the leading global organization on ecosystems and biodiversity.

Climate change, alongside factors like land degradation and habitat loss, is emerging as a top threat to wildlife around the globe, the reports suggest. In Africa, it could cause some animals to decline by as much as 50 percent by the end of the century, and up to 90 percent of coral reefs in the Pacific Ocean may bleach or degrade by the year 2050.

The reports, released last week by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), included a sweeping set of biodiversity assessments for four major regions around the world, with contributions from more than 500 experts. A separate report on global land degradation, which was launched yesterday, included more than 100 authors. Both were approved by IPBES's 129 member states at an ongoing plenary session in Medellín, Colombia.

Numerous other threats still challenge the world's biodiversity, from pollution and overexploitation to land-use change and habitat loss, and in many places these are still greater immediate dangers to the world's wildlife than climate change. But the new series of reports emphasize that action on global warming is also action in favor of wild plants and animals. And in turn, protecting the world's remaining natural places is also a step toward safeguarding the climate.

"Land degradation, biodiversity loss and climate change are three different faces of the same central challenge: the increasingly dangerous impact of our choices on the health of our natural environment," IPBES Chairman Robert Watson said in a statement. "We cannot afford to tackle any one of these three threats in isolation—they each deserve the highest policy priority and must be addressed together."

According to yesterday's report, the degradation of land—either by human activities or by natural disasters—may be adversely affecting more than 3 billion people around the globe. And the resulting losses in biodiversity and ecosystem services may be costing 10 percent of the world's annual global gross product.

Land degradation is also a significant contributor to climate change, the report warns. Deforestation, the destruction of wetlands and other forms of land conversion can release massive amounts of carbon into the atmosphere, which may worsen global warming. Climate change can continue the cycle by thawing out frozen ecosystems, creating harsher conditions for vegetation to survive, and increasing the severity of storms and other natural disasters, which can also damage natural landscapes.

The upside of linked stressors is that addressing one can help the other. Working to protect natural landscapes can play a significant role in the fight against climate change, the report suggests. Restoring natural lands or preventing them from being destroyed in the first place could deliver more than a third of the action needed by 2030 to keep keep global warming to below 2 degrees Celsius, the authors note.

And that's a big step in preserving the world's biodiversity, as well, according to the four reports released last week. While each report focused on a different region of the world—Africa, Europe, the Asia-Pacific region and the Americas—each one highlighted the growing threat of climate change, among a variety of other human-caused threats to global wildlife.

Africa is particularly vulnerable, the reports suggest, with some bird and mammal species facing declines of up to 50 percent if serious action isn't taken. Africa's lakes could also see declines in productivity of up to 30 percent by the end of the century.

Other global regions are facing major risks, as well. In the Americas, about 31 percent of all indigenous species are believed to have been lost since European settlers first arrived. Under a "business-as-usual" trajectory, and accounting for other threats, such as habitat loss, the report suggests that this number could climb as high as 40 percent by 2050.

From Almonds To Rice, Climate Change Could Slash California Crop Yields By 2050

NPR-02-MAR-2018

Climate change could decrease the yield of some crops in California by up to 40 percent by 2050. That's a big deal for farmers in the state, which provides about two-thirds of the nation's produce.

California farmers grow more than 400 commodity crops. Tapan Pathak, a University of California Cooperative Extension specialist based in California's Central Valley, and his research team analyzed 89 studies on climate change and discovered that warming temperatures may alter where crops grow across the state. Their findings were published in the journal Agronomy.

"In order to make California agriculture more sustainable, we have to act now," Pathak says.

As the climate continues to change and drought and heat waves become more frequent, Pathak says the challenges agriculture will face are going to intensify. He's referring to things like how the lack of cold temperatures will impact trees that need a certain number of chill-hours, or sleep each year, as well as increased impacts from pests and diseases.

"That could adversely impact yields and production for some highly valued crops in California," Pathak says. The study reports "several fruit and nut crops are losing yield and decreasing in acreage . . . as a direct consequence of increased winter and nighttime temperatures."

The study also points out that climatic conditions — warming temperatures and a shrinking snowpack — by the end of the 21st century may make it difficult for the state to even support some of its main tree crops. The study suggests that by the middle of the century, California's Central Valley won't be able to support crops like peaches, walnuts and apricots. That number jumps to 90 percent by the end of the century. Almonds, avocados, cherries, table grapes, corn, tomatoes, rice, strawberries and others are expected to suffer crop yields as well.

Walnuts would be the hardest-hit crop because they "require the highest number of chill hours, implying a future decline in walnut acreage within the valley," the authors report. Nearly 99 percent of the nation's supply of the crop originate from California and support around three-quarters of the global supply of the nut.

Walnut trees at a farm in Byron, Calif. An analysis of nearly 90 studies finds warming temperatures may alter where key crops grow across the state, which provides around two-thirds of America's produce.

David Paul Morris/Bloomberg/Getty Images

But Pathak says crops planted yearly, like alfalfa, could yield more as temperatures increase. The study also says wine grapes will see small declines in yield.

What can be done now to mitigate this?

The study's authors say the California agricultural industry needs to take breeding research seriously by testing for heat-tolerant varieties. The report also urges the industry to figure out regional "management practices that can extend crops' winter dormancy periods. Since different crops react to temperature changes differently, research efforts on climate adaptation should be crop-specific," the study reports.

While California farmers and ranchers have long experienced fluctuations in weather, the authors say that "the increased rate and scale of climate change is beyond the realm of experience for the agricultural community." And that may translate into food security issues at the state and national level.

Peter Gleick, an expert in climate and water for the Oakland-based Pacific Institute, read the study and says, "it is critical that we start making decisions now to reduce the threats later."

Gleick says even though some crops will fare better than others, "impacts will be deeply negative, especially if we are not more aggressive about both reducing emissions and putting in place more climate resilient agriculture."

He says farmers must take an active role in addressing climate change and the state is going to need to help by expanding "efforts to help communities that will be negatively affected by changes we won't be able to avoid."

The Sahara is growing, thanks in part to climate change

WASHINGTON POST-29-MAR-2018

Earth's largest hot desert, the Sahara, is getting bigger, a new study finds. It is advancing south into more tropical terrain in Sudan and Chad, turning green vegetation dry and soil once used for farming into barren ground in areas that can least afford to lose it.

Yet it is not just the spread of the Sahara that is frightening, the researchers say. It's the timing: It is happening during the African summer, when there is usually more rain. But the precipitation has dried up, allowing the boundaries of the desert to expand.

Camels walk on the sand during the "Gallops of Morocco" equestrian race in March in the southern Moroccan Sahara desert.

"If you have a hurricane come suddenly, it gets all the attention from the government and communities galvanize," said Sumant Nigam, a professor of atmospheric and oceanic science at the University of Maryland and the senior author of the study. "The desert advance over a long period might capture many countries unawares. It's not announced like a hurricane. It's sort of creeping up on you."

The study was published Thursday in the Journal of Climate. The authors said that although their research focused only on the Sahara, it suggests that climate changes also could be causing other hot deserts to expand — with potentially harsh economic and human consequences.

Deserts form in subtropical regions because of a global weather circulation called the Hadley cell. Warm air rises in the tropics near the equator, producing rain and thunderstorms. When the air hits the top of the atmosphere, it spreads north and south toward the poles. It does not sink back down until it is over the subtropics, but as it does, the air warms and dries out, creating deserts and other areas that are nearly devoid of rain.

"Climate change is likely to widen the Hadley circulation, causing northward advance of the subtropical deserts," Nigam said in a statement that announced the study.

At the same time, he said, the Sahara's southward creep suggests that additional mechanisms are at work. One is probably the natural climate cycle called the Atlantic Multidecadal Oscillation, or AMO, in which temperatures over a large swath of the northern Atlantic Ocean fluctuate between warm and cold phases for 50 years to 70 years. The warm cycles deliver precipitation to subtropical areas, and the cold cycles keep it away. Human-caused climate change can increase the intensity and length of the drier cycle.

Nigam and the study's lead researcher, Natalie Thomas, a doctoral candidate at the University of Maryland, used data from the Global Precipitation Climatology Center to

arrive at their finding. They studied grids and patterns from 1920 to 2013, mixing in satellite data compiled "over the last three decades," Nigam said.

They determined that the AMO was in a positive phase that delivered more rain to areas near the Sahara from the 1930s to the early 1960s. It then switched to a negative cycle that lasted 40 years. A 1980s drought — "the most intense ... of the 20th century" — was attributed to the latter phase and linked to "higher levels of greenhouse gases in the atmosphere."

Over the second phase, the Sahara crawled south mostly, encroaching on a more tropical area known as the Sahel. Its effect could be seen on a water basin that drains into Lake Chad. "The water level has been falling precipitously," Nigam said. "It's very depleted. We can't attribute it all to rainfall. There may be human draws from the lake. But it's telling, a visible element, and it clearly lies in the area where the Sahara is encroaching southward."

Africa is the continent least responsible for human-caused climate change, but it's the most vulnerable to its effect because of unique features. It is, for example, a land mass almost evenly divided between the Southern and Northern hemispheres, creating a wide variety of climate zones.

Thomas said she started the research as a way to characterize century-long trends but focused on Africa's Northern Hemisphere when she noticed "really strong trends over the proximity of the Sahara."

As the researchers went about their work, downloading satellite data and information from the global climatology center, the evidence became more concerning. "The finding was impressive because it was happening in the summer season, the growing season where Africa receives most of its rainfall, a really important season for agriculture," Nigam said.

Railway tracks are covered by sand as a result of desert encroachment in 2013 at Ogrein Railway Station in Sudan. (Mohamed Nureldin Abdallah/Reuters)

Yet that is when the greatest southward advance of the Sahara occurred, he said. A season of rain was being replaced by the expansion of a desert, without the affected governments, Chad and Sudan mostly, noticing.

The future implications for countries already affected by lack of rain and drought could be dire, Nigam said. "Water resource planning, water use and long-term planning is important."

India most vulnerable country to climate change - HSBC report

REUTERS-19-MAR-2018

LONDON (Reuters) - India is the most vulnerable country to climate change, followed by Pakistan, the Philippines and Bangladesh, a ranking by HSBC showed on Monday.

FILE PHOTO-A man walks through a dried-up Sarkhej lake on a hot summer day in Ahmedabad, India, April 21, 2016. REUTERS/Amit Dave/File Photo

The bank assessed 67 developed, emerging and frontier markets on vulnerability to the physical impacts of climate change, sensitivity to extreme weather events, exposure to energy transition risks and ability to respond to climate change.

The 67 nations represent almost a third of the world's nation states, 80 percent of the global population and 94 percent of global gross domestic product.

HSBC averaged the scores in each area for the countries in order to reach the overall ranking. Some countries were highly vulnerable in some areas but less so in others.

Of the four nations assessed by HSBC to be most vulnerable, India has said climate change could cut agricultural incomes, particularly unirrigated areas that would be hit hardest by rising temperatures and declines in rainfall.

Pakistan, Bangladesh and the Philippines are susceptible to extreme weather events, such as storms and flooding.

Pakistan was ranked by HSBC among nations least well-equipped to respond to climate risks.

South and southeast Asian countries accounted for half of the 10 most vulnerable countries. Oman, Sri Lanka, Colombia, Mexico, Kenya and South Africa are also in this group.

The five countries least vulnerable to climate change risk are Finland, Sweden, Norway, Estonia and New Zealand.

In its last ranking in 2016, HSBC only assessed G20 countries for vulnerability to climate risk.

How vulnerable is Indian agriculture to climate change?

LIVEMINT-28-MAR-2018

Most Indian farmers are not covered by insurance and all do not receive relief for crop damage, yet on an average these payouts averaged about Rs24,000 crore per year between 2014-15 and 2016-17

Bottom of Form

Climate change has hit farmers and governments hard as drought, hailstorms and floods become more frequent. Most Indian farmers are not covered by insurance and all do not

receive relief for crop damage. Yet on an average these payouts averaged about Rs24,000 crore per year between 2014-15 and 2016-17.

The total economic loss to agriculture could be many times higher— last year's Economic Survey noted that India incurs losses of about $9-10 billion annually (Rs62,000 crore) due to extreme weather events.

Rs71,124 crores

What farmers received as insurance payouts and relief for crop loss due to climate events like drought, floods and hailstorms in just three years between 2014-15 and 2016-17.

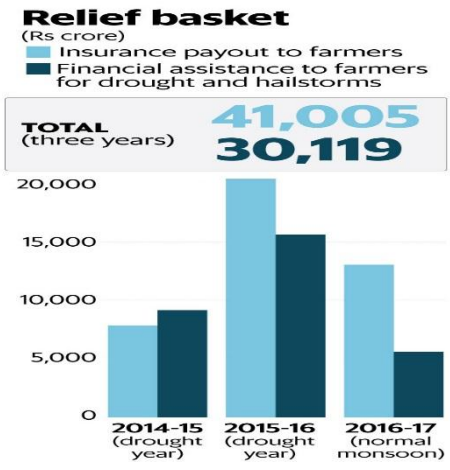
Maharashtra

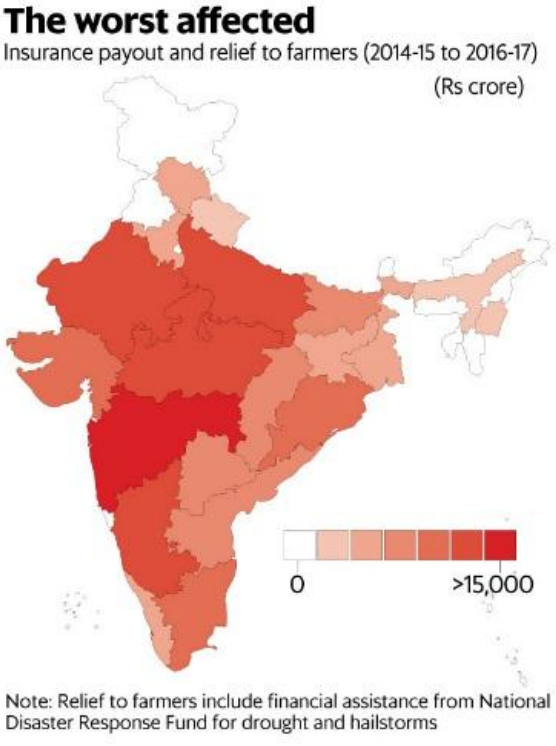
The most vulnerable state in India where farmers received Rs16,330 crore in relief and insurance payouts

2016-17

An overall normal monsoon year when farmers received a staggering Rs18,512 crore in payouts and relief due to erratic rainfall distribution

The total economic loss to agriculture could be many times higher— last year's Economic Survey noted that India incurs losses of about Rs62,000 crore due to extreme weather events. Photo: Ramesh Pathania/Mint





ORGANIC FARMING

Organic, tribal-grown spice goes to Germany

THE NEW INDIAN EXPRESS-02-MAR-2018

IDUKKI: For the 14th consecutive year, the Periyar Tiger Reserve (PTR) is all set to collect organic pepper from tribal farmers living in the sanctuary to be exported to Germany. The pepper was produced in the tribal settlements of Mannakudi, Puliakudy and Mannan and in the tribal hamlet of Vanchivayal. It was cultivated in 40.2 hectares under the Vallakkadavu Forest Range of PTR.

The project, envisaged by PTR and implemented through the eco-development societies, ensures nearly 40 per cent higher price for the produce compared to the market rate. "The collection of pepper has already begun and we expect to finish it within 10 days," said PTR deputy director Shilpa V Kumar.

Organic pepper cultivated by the tribes of vanchivayal tribal community under the Vallakkadavu forest range

She said PTR has planned to collect around 30 tonnes of pepper procured directly from the tribal farmers in the Vanchivayal area. "The pepper will be collected from farmers who have obtained organic certification. After conducting tests for quality and moisture content at the Spices Board lab, samples of the green pepper will be sent to Germany. The export will be done after ensuring foolproof quality in terms of non-chemical content and moisture," she said. The pepper is given to Ecoland Herbs and Spices, a consortium of organic farmers in Germany. Last year, 23.46 tonnes of pepper was exported from Vanchivayal.

Vallakkadavu Range Officer I S Suresh Babu said, Vanchivayal contributes the major share of pepper exported from the state and Germany is its main market. "The spices grown here without using manure or pesticides under the conducive atmosphere of the forests and with indigenous knowledge, were taken to the markets by middlemen after fleecing the tribal people," he said.

"To counter this, the Periyar Foundation, the participatory forest management programme in Thekkady and PTR joined hands to get the tribal communities out of the debt traps they have landed in by eliminating middlemen and fetching good prices for their produce," he said. Steps were taken under the auspices of the Department of Forests to get organic certification from Germany for the pepper grown by the Vanchivayal Oorali tribal colony. Even as the tribal community has a total of 73 families, only 59 have registered in the Vachivayayal Integrated Control System as 59 families possess the

ownership of land. “EDC is planning to bring the remaining 14 families into the system,” said Sebastian, an EDC facilitator.

He said the collected pepper will be exported by March end and the quantity and the yield are much higher than that of the corresponding years. “But efforts to export dry pepper has not fully succeeded as the PTR met with some tax issues. However green pepper export has reduced the risk of physical labour of tribes as it needs a lot more time and effort to dry it and this gives a decent income for tribes as well,” he said.

Pre-1900 organic farming can't cure Green Revolution excesses

FINANCIAL EXPRESS-06-MAR-2018

Genetic modification (GM) is best for making mustard hybrids of any two parents.

Geneticist and the former vice-chancellor of Delhi University, Deepak Pental, 67, was conferred with lifetime achievement award by Mahindra Samriddhi Foundation on March 6. Pental and his team have developed the transgenic mustard hybrid, DMH-11, which was recommended for mass cultivation by the regulator, but environment minister Harsh Vardhan has sought a review of that decision. Pental has a PhD in botany from Rutgers University, New Jersey. He was research fellow at the University of Nottingham in England and returned to India in 1983 to work on mustard because of its high relevance to the country. He began with The Energy and Resources Institute (TERI) and moved to Delhi University, where Verghese Kurien of the National Dairy Development Board funded his research on mustard hybrids using both conventional and transgenic technologies. Pental is CSIR distinguished scientist and continues research in mustard. Here are excerpts from his interview with Vivian Fernandes of www.smartindianagriculture.com.

It must be disappointing that the work for which you have been awarded cannot be acknowledged by farmers because they are denied the transgenic mustard hybrid you have developed…

There is no doubt about it. The very fact that we picked a crop and kept on working on it for 20-30 years was to make an impact in farmers’ fields. Breeding has been an important component of our work. Yes, there is huge disappointment that the country is not benefiting from our work. But the work has been published, the stocks have been developed. Any time, any government feels like utilising it, the material will be there.

What other aspects of mustard has engaged your research attention?

Genetic modification (GM) is best for making mustard hybrids of any two parents. More recently, we have turned to disease resistance. We have developed Indian germplasm lines with white rust resistance. The gene came from East European mustards. That will surely go to farmers’ fields because it is non-GM. A lot of work is happening on stem rot, a major problem. Alternaria blight affects mustard in hilly areas and cooler climates, so it is not grown as extensively in those regions. We may need GM technologies to tackle these.

You are also improving the quality of mustard oil…

Yes. Mustard has Omega-3 fraction in it (which is good for the heart). But it is pungent. The pungency comes from glucosinolates, which are antifeedants in meal produced after crushing the seed. We need zero or low-glucosinolate lines like canola rapeseed to feed swine, poultry and cattle. The other thing wrong with mustard is it's 50% erucic fraction. This is a long-chain fatty acid that is not absorbed in the gut so well. Oils with high oleic fraction are better. We have made high oleic lines, partly through GM and party through conventional breeding. Hopefully, GM will get accepted one day. Then we can give high oleic mustard to central, southern and western India, and pungent mustard to eastern India. We have also produced recombinant lines between Indian and East European germplasm and Indian and Chinese germplasm. That has given us huge variability to make hybrids.

GEAC, the regulator, recommended GM mustard for cultivation last May. Environment minister Harsh Vardhan wants a review. But GEAC has not met in 10 months. Now, shouldn't ministers be accountable? Shouldn't they be bound to take decisions within a reasonable time and cite reasons for approval or disapproval?

When you don't like a government committee's decision, it sends a wrong message. There should be ownership. These bodies should meet regularly. People may not like mustard, but there may be some other GM issues.

Agriculture minister Radha Mohan Singh wants organic farming to be pursued with as much vigour as Green Revolution—whose technologies are seen as damaging to environment because of overuse of ground water, excessive application of fertilisers and air pollution caused by burning paddy stubble…

I completely disagree with this thinking. You can't go back to pre-1900 agriculture, which was all organic. Green Revolution saved us from political turmoil. It fed people. It was badly required. The ecological balance has been upset by population increase and overconsumption of resources. We need good agricultural practices to cure excesses. Why is Punjab farmer growing only wheat and rice? It's because there is no other crop that will bring them so much money. It is lack of new technologies and productivity in legume crops and oilseeds which are making farmers grow wheat and rice in northern plains; this is absurd.

The solution to overuse of groundwater will come from new technologies. For example, why can't we grow rice aerobically (i.e. direct seeded rice without transplantation and flooding)? It will give the same yield with half the amount of water. We forget that a lot of breeding and technologically-oriented work has gone into crops after the Green Revolution to protect yield gains through disease resistance. You stop doing R&D in agriculture at the international level and you will have famines and deaths and instability in South Asia.

Is it possible for western industrial-scale scientific agriculture to be gentle on nature?

What is required is precision agriculture. Israel, Germany and the US practise it. It is not organic. Only 1% of the arable land is under organic crops. It is not sustainable. Agricultural research has saved humankind from distress and famines. It is high time science and technology people spoke up for precision agriculture. Why don't we practise low-till agriculture? In Punjab, Haryana and Uttar Pradesh, rather than burning, we should put crop residue back into the soil, which will improve organic matter. That is technology. The solutions will not come from idealistic thinking.

The West, NGOs and donor agencies supported Green Revolution because they feared persistent hunger would drive countries like India to communism. According to the paper "The Political Economy of Biotechnology," there was 82% increase in crop area planted with modern varieties in Asia between 1966 and 1998. Research is being done increasingly by private firms. Is there a fear of corporate control on agriculture?

Either we do it ourselves, which I think we are capable of, if we organise ourselves better and have mission mode approach to some major problems like aerobic rice or finding our own genes for disease and insect resistance, and allowing GM technologies indigenously developed which are going to give more income to farmers. You can't keep on increasing minimum support prices (MSPs). If we want to double farmers' incomes, 50% should come from better economic management and 50% from productivity enhancement.

Why are we not getting breakthroughs, even though we have more than a hundred ICAR institutes and new ones have been inaugurated in Hazaribagh, Varanasi and Port Blair?

Setting up institutions does not guarantee quality work. The Indian Agricultural Research Institute (IARI) in Delhi was a premier wheat-breeding place in the country. Then we set up a centre in Karnal. Why? How does it help? If it had stayed at IARI, probably better research would have been done because there are PhD students, there is teaching, so the atmosphere is much more vibrant. The maize directorate was at IARI and then was moved to Ludhiana, not to the university but as a separate entity. We keep on creating these entities.

In isolation, you cannot do great science. It is very collaborative. ICAR should have premier institutes which do pre-breeding and great R&D work, and then pass it on to state universities for local adaptation. Instead, we do not know who is doing what. There is a lot of redundancy in the system.

Some of our eminent scientists like MS Swaminathan have been ambivalent about GM technology. Norman Borlaug, the father of Green Revolution, was a champion. But the father of India's Green Revolution, Swaminathan, has said 99% of GM initiatives are not justifiable…

There is a great urban bias against these technologies because the urban population does not understand agricultural technologies. There has to be better awareness. Some of our senior scientists have not been vociferous probably because environmentalists and the so-called champions of organic agriculture come very hard at you. They make personal attacks. They portray you as doing evil. Scientists not taking a strong stand are not doing a good service to agricultural productivity and the country's long-run sustainability of agriculture.

The best sustainability is if we consume less agrochemicals and build resistance in the crops itself. If we do it in the public sector, it will reach farmers at a much lower cost.

'New FSSAI norms will curb organic farming growth'

BUSINESS LINE-19-MAR-2018

A pan-India advocacy organisation that promotes ecological agriculture has said the recent notification on organic farming by Indian food safety regulator would be detrimental to the growth of organic farming in the country.

The Alliance for Sustainable and Holistic Agriculture (ASHA), in a letter to the Food Safety and Standards Authority of India (FSSAI), said the notification on organic foods issued on December 29 last year, which makes certification mandatory for all barring a small set of farmers, would serve as a major impediment that deter farmers from shifting to organic farming. "As the Food Safety regulator, you are aware of the all-pervasive contamination by agro-chemicals, including of groundwater. We believe that organic farming has to be supported in all ways possible for it to spread to larger areas in a short span, given the need of the hour, the ASHA letter said.

The regulation could deter farmers to shift to, and pursue safer food production systems, because it will involve higher burden on farmers, beyond their financial and other capabilities, it said. "This, in a way, self-defeating to the very mandate of FSSAI," it added.

This is missing the present notification and in the absence of that, FSSAI rushing in with its unreasonable regulation is an impediment. "FSSAI should have waited out the implementation of its new regulations until something like this is put into place by State agriculture departments and Union Agriculture Ministry, it said.

It further said that there was no justification for giving the exemption to only "small" producers – this exemption should be extended to all organic farmers of the country, and their collectives.

ASHA also proposed that the regulator should exempt all those organic producers whose stocks are getting marketed through retail outlets that have directly sourced the produce from such organic farmers, without any intermediaries and are directly selling to end consumers (B2C).

"It appears that the situation of small illiterate farmers who desperately need organic farming as a way out of their agrarian distress is not considered when regulations are made," ASHA said.

ICAR IN PRINT

Agriculture minister launches ICAR's education portal

RURALMARKETING (PRESS RELEASE) (BLOG)-08-MAR-2018

Union Minister of Agriculture and Farmer Welfare, Radha Mohan Singh launched the Education portal of Indian Council of Agricultural Research (ICAR) at the Conference of Vice Chancellors of Agriculture Universities and Directors of ICAR Institutes in New Delhi, on Thursday.

Union Agriculture Minister Radha Mohan Singh released ICAR's education portal at the Conference of Vice Chancellors of agriculture universities and Directors of ICAR institutes

The (https://education.icar.gov.in) will act as a single window platform for providing vital education information, announcements, event schedules, e-learning resources from agricultural universities across the country to the rural youth in an easy and fast way on their doorsteps. The portal will also help in management, monitoring and promoting activities and schemes of Education Division, ICAR. It has been designed and developed by the Division of Computer Application, Indian Agricultural Statistics Research Institute (IASRI) under the guidance of Agricultural Education Division, ICAR. The portal has been developed for agriculture universities coming on the single platform to disseminate the information for benefits of students and farming community.

Addressing the gathering, Singh said, the State Agriculture Universities (SAUs) and ICAR have been working to make agriculture sustainable and beneficial for the farmers. In a coordinated effort, agriculture universities and ICAR institutes along with various state and central agencies have developed "Strategy Document on Doubling Farmers' Income by 2022 for different States. ICAR has developed 45 Integrated Farming System (IFS) models to help small and marginal farmers to tide over the problems associated with climate change. This model is being replicated and taken forward through KVKs spread across the country. Besides this, ICAR has developed 623 certified District Level contingency schemes and organised skill development programmes for 40.9 lakh farmers. ICAR through its KVKs spread across the country have displayed climate friendly techniques in 29 States. ICAR has also developed 42 organic farming techniques, which were tested and are being further improved.

Gajendra Singh Shekhawat, Union Minister of State for Agriculture & Farmers Welfare, in his address, said the country has made quantitative progress in the field of agriculture, but now there is a need to make qualitative progress in this field. He urged that in the field of agricultural education, skill based courses should be introduced to develop entrepreneurial skills amongst youth. He appealed that mushrooming of private colleges should be stopped.

Professor Dr. Ramesh Chandra, Member, NITI Aayog appreciated ICAR for developing state specific road map for doubling farmer's income. He said increase in productivity and reduction in cost of production will help to achieve this goal. Dr. Chandra added that there is a need to improve food and nutritional security, food safety and sustainability. He said, Zero budget farming needs scientific scrutiny and if it is feasible, should be encouraged.

ICAR developed 748 high yielding varieties in 3 years: Minister

RURALMARKETING (PRESS RELEASE) (BLOG)-27-MAR-2018

With 102 research institutes, 11 ATARIs, 81 AICRPs and 690 KVKs, ICAR is focusing on development, promotion and propagation of new agriculture technologies in India

The research efforts of the research institutes, Centres and All India Coordinated Research Projects (AICRPs) of Indian Council of Agricultural Research (ICAR) have led to the development and release of 748 high yielding, stresses (biotic & abiotic) tolerant varieties/ hybrids in different field crops for cultivation under different agro-climatic conditions during 2014-2017, this was informed by the Minister of State for Agriculture Gajendra Singh Shekhawat in a written reply to the question on development of new farm technologies in Lok Sabha today.

Besides, 130 improved varieties of 54 important horticultural crops and 105 improved crop management technologies and package of practices for horticultural crops were also developed. More than 3.50 lakh quintals of breeder seeds of improved varieties of field crops and 18.5 lakh grafted plants, 12 lakh rooted cuttings and tuber crops, 90 tonnes of breeder seeds of vegetable crops, 5500 tonnes of breeders seed of potato and tropical tuber crops were produced and distributed during the period for sustaining the effective seed chain in the states, the Minister said.

In order to increase productivity, reduce cost of cultivation, reduce drudgery, improve value addition, conserve resources and provide alternate means for energy generation through improve farm mechanisation during the last 3 years, ICAR developed 72 new farm equipments, machines, gadgets with 34 new products and supplied over 16,500 prototypes of agricultural machinery to farmers and entrepreneurs, the Minister said in the lower house of the Parliament.

On the question of whether the Government has developed any mechanism to disseminate information about such innovation, technologies to the farmers, Shekhawat informed that for delivering such benefits, ICAR has established a network of 690 Krishi Vigyan Kendras (KVKs) in the country, mandated for conducting front line demonstration at the farmer's field, technology refinement, training and capacity building. The technologies duly tested and refined are thereafter passed on to line departments for large scale demonstration and transfer among farmers.

ICAR has overall 102 institutions comprising of 67 Research Institutes, 6 Bureaux, 14 Directorates and 15 National Research Centres mandated for conducting research in

agriculture and allied areas besides 11 Agricultural Technology Application and Research Institutes (ATARIs) and 81 AICRPs mandated for coordinating, refining and demonstrating agricultural technologies and innovation in the country.

ICAR is giving focused attention towards development, promotion and propagation of new technologies i.e. high yielding and multi-stress resistant/tolerant varieties/hybrids using conventional and genomic tools in major crops; multi-nutrients rich varieties of rice, wheat, maize, lentil and pearl millet and improved quality of mustard and soybean; blast resistant wheat varieties; transgenic varieties in cotton, pigeonpea and chickpea; exploitation of gene editing technology for improving desired traits in rice and wheat and development of early maturing varieties of pulses especially mungbean and pigeonpea.

IISR IN PRINT

Soil losing its micronutrients, farmers face plant malnutrition threat

TIMES OF INDIA-10-MAR-2018

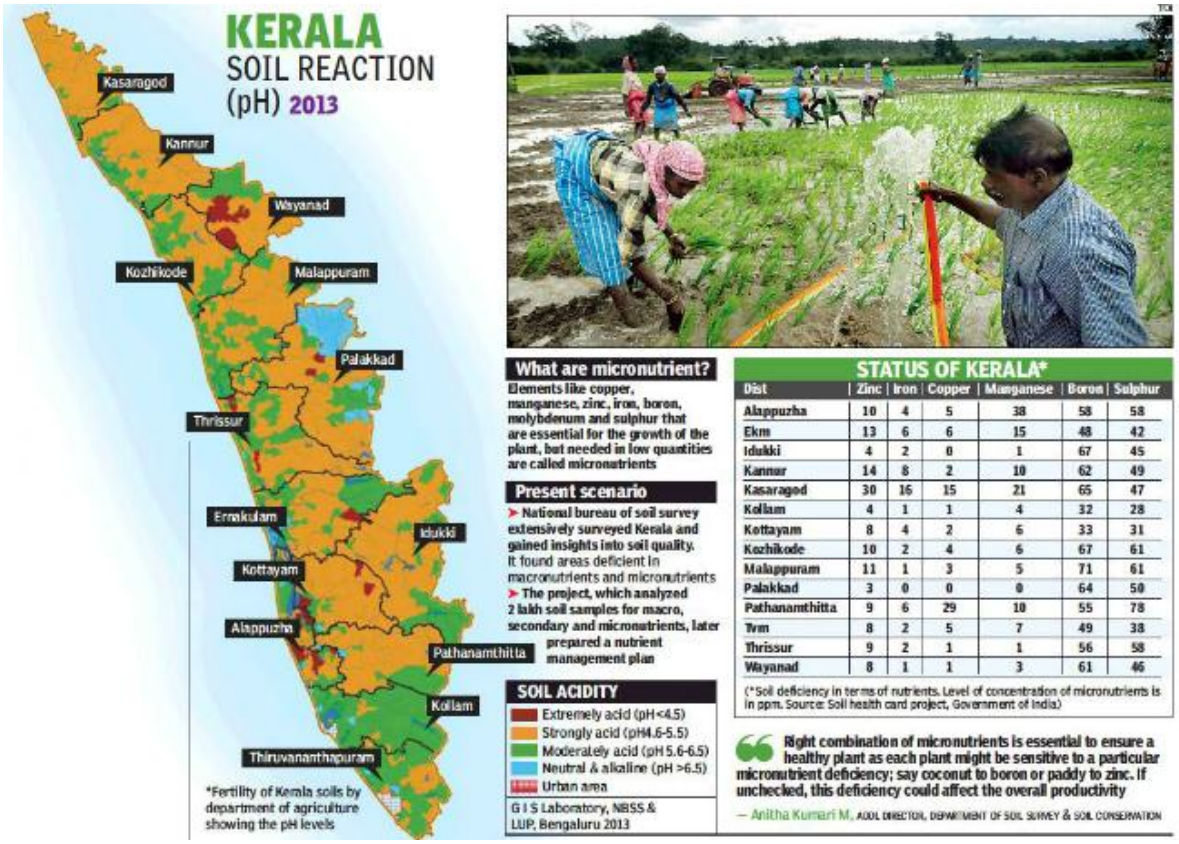
KOCHI: When you see a necrotic coconut or relatively-smaller black peppercorns, you can infer that this could have been caused by micronutrient deficiency in the soil. Elements like copper, manganese, zinc, iron, boron, molybdenum and sulphur that are essential for plant growth but required in relatively-low quantities are called micronutrients. For farmers, malnutrition in plants due to deficiency of these elements, is a concern as it drags down productivity and profits.
The first signs of this problem became visible in Idukki recently when Rajakumari pepper, the finest grade of black pepper, fell victim to this deficiency, bringing down the quantity of 'garbled, extra-bold' berries that could be yielded from a 100kg of dried pepper corns to 25kg. The usual output was 40kg. And this problem is not restricted to pepper alone; almost all agri products in Kerala are affected.

"The right combination of micronutrients is essential to ensure a healthy plant as each plant might be sensitive to a particular micronutrient deficiency; say coconut to boron or paddy to zinc. If unchecked, this deficiency could affect the overall productivity at farms," said additional director, department of soil survey and soil conservation Anitha Kumari M. Now, help is at hand in the form of soil health card (SHC) – promoted by department of agriculture & cooperation. The central scheme looks at various aspects of the soil and helps farmer manage its health.

During the first cycle of the project, 2.53 crore samples were collected from different areas of the country. During the second cycle another 1.14 crore samples were, collected.

As part of this work (during 2010-14) national bureau of soil survey (NBSS) extensively surveyed Kerala and gained insights into soil quality. It found areas deficient in macronutrients and micronutrients.

For example, the deficiency of macronutrient calcium was pronounced in Onattukara sands and Wayanad plateau, while its deficiency was negligible in Kumily and Marayur hills, Attapadi, central and eastern Palakkad. On the other hand, extensive deficiency of micronutrient sulphur was recorded for Onattukara sands, Kumily hills and Wayanad



plateau.

The project, which analyzed 2 lakh soil samples for macro, secondary and micronutrients, later prepared a nutrient management plan (NMP). However, principal investigator of the project K M Nair said that deeper issues were causing this deficiency.

He said the indiscriminate use of NPK fertilizers led to the low yield of black pepper in highranges. “To counter acidity in soil, farmers in Malabar have traditionally used lime. During Green Revolution in 70s, scientists ignored it. Uncontrolled use of NPK fertilizers resulted in soil acidity,” said Nair, a principal scientist with NBSS during the project.

“Acidity in the subsoil inhibits the penetration of roots (of black pepper, banana or cardamom plants) from soil to subsoil. So, the plant will be unable to absorb nutrients from subsoil. It will be unable to absorb water from subsoil during summer, when the soil is dry,” Nair said. To bring down this acidity, he suggested the use of gypsum with agricultural lime.

Indian Institute of Spices Research (IISR), Kozhikode, has developed micronutrients customised for black pepper, ginger and turmeric. “These are foliar sprays which have

immediate effect on plants. Farmers who used the sprays said that flowering became uniform the very next year," said P Rajeev, principal scientist, IISR.

Meanwhile, the state agri department is getting soil sampled in each panchayat to address the deficiencies and imbalances of nitrogen, phosphorus and potassium. Officials said that Kudumbashree workers are being trained to take samples. It will take at least three years for recharging the soils.

Climate change another factor

KOCHI: Variations in temperature, maximum and minimum rainfall and relative humidity are impacting different plantation crops, especially cardamom. These variations have led to changes in soil temperatures with the destruction of tree cover. Studies conducted by scientists of Indian Cardamom Research Institute (ICRI) showed that temperature variations were evident across stations and that the mean air temperature increased significantly over the past 30 years.

The rainfall during monsoon (June-September) showed a downward trend. Relative humidity showed increasing and decreasing trends, respectively at small cardamom and tea growing tracts. "The warming trend, coupled with frequent wet and dry spells during summer, had a favourable effect on insect pests and disease-causing organisms. So, pesticide consumption went up both during excess rainfall and drought years. The incidence of many minor pests, insects and disease pathogens has increased in the recent years along with warming," said director of ICRI in Idukki A K Vijayan.

These detrimental environmental impacts on large cardamom agriculture can be minimized only if micronutrient issue is redressed and by adapting organic cultivation.

Decks cleared for Campco's entry into cashew, coconut marketing

THE HINDU-17-MAR-2018

The black pepper 'Kala Sona' being sold by Campco inNorth Indian markets.H.S. MANJUNATH

Business plan to be chalked out after a marketing study

Decks have been cleared for the entry of the Central Arecanut and Cocoa Marketing and Processing Cooperative Ltd (Campco), Mangaluru, into the procurement and marketing of cashewnut and coconut.

The Central Registrar of Cooperatives under the Union Department of Agriculture, Cooperation and Farmers' Welfare, has approved the by-laws of the Campco, amended to enable the cooperative to enter the the business of cashewnut and coconut.

S.R. Satishchandra, president, Campco, told The Hindu that the cooperative is yet to chalk out the business plan as the amended by-laws were approved on February 9, 2018. It would be done after a marketing study.

M. Suresh Bhandary, Managing Director, Campco, said the cooperative would not get into procurement immediately, since the marketing network has to be built first.

It will at first outsource the manufacturing of products from cashewnut and coconut, before setting up its own manufacturing unit.

Mr. Bhandary said about two months ago, the cooperative began marketing black pepper under its own brand name Kala Sona in North India. Now, it's being sold Jaipur and Ahmedabad as premium garbled black pepper.

The cooperative began procuring black pepper about eight months ago.

The pepper procured from farmers in Kerala is processed and packaged at the Indian Institute of Spices Research of Indian Council for Agriculture Research at Kozhikode. The cooperative has signed an MoU with the IISR to use the latter's pepper-processing facility at Kozhikode.

The pepper procured in the State is being processed in the cooperative's facility at Baikampady in the city.

GENERAL

THE HINDU-01-MAR-2018

These ingenious farmers show not all hope is lost

Times of India-28-Mar-2018

BENGALURU: Farmers in Karnataka, the second most arid state in India after Rajasthan, don't have it easy. But using some best practices, efficient water-management techniques and finding access to the marketplace, the community has time and again displayed how not all hope is lost. TOI caught up with four such farmers, whose innovations have made them successful financially. They were in Bengaluru as part of a project by the Indian Institute of Human Settlements (IIHS).

Harvesting water and crops

Shivalingappa Choragasti, 57, from Bhimahalli village in Kalaburagi, practises dryland agriculture using organic farming and afforestation. "When I finished SSLC in 1978, I had to choose between continuing agriculture in a place that saw no rain or look for a job. I chose agriculture because I cared for it. There are challenges, but there are also solutions," he said.

His efforts to practise dryland agriculture, organic farming and afforestation earned him the Krishi Prashasti Pandit award in 2009. With multiple borewells having failed, he was at the brink of giving up farming, when he heard of rainwater harvesting. Not only did he try it, he even mastered it with check dams, sunken pits, farm ponds and harvesting tanks, which eventually increased the groundwater levels in his fields. Then,

about 12 years ago, he took up organic farming, which he says has helped him reduce input cost tremendously, while also resulting in quality yield and healthier soil.

"I took up afforestation and planted more than 600 teak trees around my farm. Last year, I sold 300 of them for Rs 21 lakh," he said.

Low-cost innovations

Sharanabasappa Patil, 44, from Hal Sultanpur in Kalaburagi, has a similar story of water harvesting and organic farming. In fact, he has conducted over 20 different research projects, including low-cost solar fencing, to keep animals away and low-cost bud-nipping machine for tur dal, which has benefited other farmers too. He has distributed nearly 6,000 units of his low-cost timer, that helps farmers use water more efficiently. Among other innovations are solar pest trap and foxtail millet mixer and cutter.

The moolah matrix

Once a lecturer drawing a monthly salary, Ashok Kumar, 48, from Srinivasapura in Kolar, switched to full-time farming over a decade-and-a-half ago. "When I can feed people and also lead a rich life, why should I work for someone else," he asks. From Japan's Fukuoka technique to multiple ways of saving and using water, Kumar today earns Rs 1 crore a year on an average and is the owner of 100 acres, most of which are used for horticulture.

Woman power

As a farmer, Papamma, 61, from D Kurubarahalli in Kolar, not only made a difference to her family but also to her village. Having realised the huge input costs involved in farming, she lead her household and, eventually, her entire village to organic farming. "My husband and son help take the produce to the market. Otherwise, they let me make all the decisions, and that's how we got into organic farming," she said.

'Examples of better future'

Greeshma Hegde of IIHS, the lead author of the book — Adaptation as innovation lessons from smallholder farmers in rainfed Karnataka — said: "At a time when more and more people are quitting agriculture, farmers like these become examples of a better future that not only helps them lead a good life, but also helps feed the state and the country."

Is India turning the corner on usage of fertilizers?

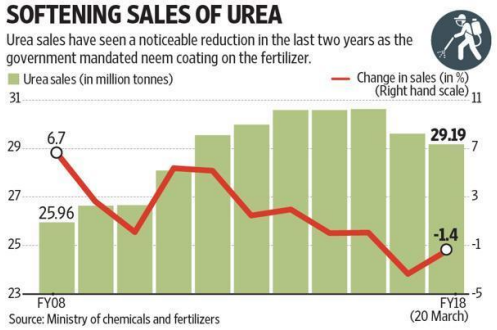
LIVEMINT-28-MAR-2018

If indeed the curtailment of illegal diversion of urea and better efficiencies is weighing on current fertilizer sales, the industry has nothing to worry

With the government linking the sale of fertilizers to Aadhaar, thereby tightening the sale process, urea sales may continue to trend lower in the coming crop season, says analyst.

The government may have shied away from urea pricing reforms. But its decision to give urea a coating of neem oil may have triggered a transformation in the sector.

Responding to a question in Parliament, the government said urea sales till 20 March stood at just over 29 million tonnes, implying a 1.4% drop from the previous fiscal year. If sales trends hold for the next couple of days, then the current fiscal year will mark the second consecutive year of reduction in urea sales, a first in at least a decade.



In the decade to 2015-16, sales of urea—the widely used crop nutrient— on an average expanded 3.2% per annum and sales did not fall in a single year.

With the government linking the sale of fertilizers to Aadhaar, thereby tightening the sale process, urea sales may continue to trend lower in the coming crop season, says Aditya Jhawar, analyst at Investec Capital Services (India) Pvt. Ltd.

The mandatory coating of urea with neem oil triggered the current downtrend in sales. It curtailed the diversion of urea to non-farm uses and prompted efficient use of the crop nutrient, says S.K. Mishra, chief executive officer at GSFC Agrotech Ltd, a subsidiary of Gujarat State Fertilizers and Chemical Ltd. According to Mishra, the same plot of land now roughly requires 10% less urea thanks to neem coating and its benefits.

If indeed the curtailment of the illegal diversion of urea and better efficiencies are weighing on current sales, the industry has nothing to worry about. Sales will stabilize soon. But larger trends are at work.

G.V. Ramanjaneyulu, executive director at Centre for Sustainable Agriculture, agrees that neem coating has increased urea usage efficiency. But he also attributes the downtrend in urea sales to organic farming and its growing prevalence in high fertilizer usage states of Andhra Pradesh and Telangana. With other states such as Odisha also encouraging organic farming and growing realization among farmers about its benefits, it will not be a surprise if DAP (diammonium phosphate), another widely used fertilizer, also tracks the urea sales trends, says Ramanjaneyulu.

The transformation, if it is indeed taking place, will benefit the government first. Subsidy outflow will fall, a positive from the fiscal perspective, says K. Ravichandran, senior vice president and group head (corporate ratings) at Icra Ltd.

However, the trends pose a tricky future for fertilizer producers. Jhawar of Investec Capital says the share of organic farming in India is quite low at present. Even the most developed countries have less than 10% of their total agriculture land under organic farming. In fact, increased awareness among farmers should bode well for NPK (nitrogen, phosphorus, potassium) fertilizers, which provide balanced nutrients. Also with India still dependent on imports, there is a likelihood that imports could come down. This means there will not be a dramatic change in the fortunes of the domestic fertilizer companies in the near term.

But the culmination of the earlier mentioned factors—neem coating and the resultant reduction in sales, and shift to organic farming—raises questions about the incremental demand growth and the long-term growth trajectory of the sector, says Jhawar.

Spices Board told to open cell for State

THE HINDU-02-MAR-2018

The Central government has directed the Spices Board to open a special cell for Telangana in its office to cover the spices from the State, especially turmeric. The Centre has also asked the State to consider Trade Infrastructure for Export Scheme (TIES) being implemented by the Union Commerce Department for its proposal to establish a Spices Park for turmeric. This was mentioned in Union Commerce Minister Suresh Prabhu's letter in response to a request made by Industries Minister K.T. Rama Rao for setting up of Turmeric Board for the welfare of turmeric farmers across the country.

Value-added spice exporters slam move to impose MIP on pepper

FINANCIAL EXPRESS-01-MAR-2018

Value-added spice exporters have been facing a crisis and are likely to shift to other countries with the Union government fixing a minimum import price (MIP) for pepper from December, 2017, the All India Spices Exporters Forum (AISEF) said here on Wednesday.

Pepper is always exported in combination with other processed spices out of India and rarely in isolation.

Value-added spice exporters have been facing a crisis and are likely to shift to other countries with the Union government fixing a minimum import price (MIP) for pepper from December, 2017, the All India Spices Exporters Forum (AISEF) said here on Wednesday. Members of AISEF said that exporters have lost nearly Rs 50-75 crore in the past three months due to the new development, and this would eventually lead to exporters, engaged in shipping value-added spice products, relocating their base. Pepper exports from India is also likely to decline by 50 % in the current fiscal as India has been largely re-exporting pepper after value addition . The Union government approved the proposal of the state-run Spices Board to impose a minimum import price of Rs 500 per kg (CIF value) on the basis of reports that cheaper imports of pepper were seen putting pressure on the domestic market.

India is the largest consumer of pepper in the world and the second largest producer after Vietnam. Indian pepper prices are mostly seen at a premium over the global prices. "MIP imposed in the name of protecting local farmer interests has practically resulted in a ban on the entry of pepper in all forms. This has been done with no discussion with the export industry, that are the major importers of pepper for 100% exports with value addition. In

order to compete with global prices, the government has provided the exporters various options of operating through SEZ, EOU and advance licence agreement (ALA) . The EOU and SEZ work under customs bond with complete supervision of customs or central excise," Prakash Namboodiri, chairman of AISEF, told FE.

The notification neither classifies the different types of pepper nor does it confine the restriction on imports meant for domestic consumption or for trading in the local market. "India is no longer an exporter of raw pepper and exports value added pepper while Vietnam remains a commodity exporter. Being the global processing hub, competing origins depend on India for selling their raw material that adds to our advantage," he added. "Our industry has become incompetitive in the international markets. It goes without saying that if we import pepper at a high price of Rs 500/kg, our export obligation would neither be achievable, nor will the global customers buy from India at over 40% the international market prices.

Pepper is always exported in combination with other processed spices out of India and rarely in isolation. Customers will prefer to buy the entire basket of spices from a single source. Already we have seen pepper exporters in Vietnam trying to source chilies from China to create a basket," Namboodiri said. Regarding claims that imported pepper is sold in the domestic market, Namboodiri said that the processed products out of the imported pepper are fully exported as a value-added item which earns valuable foreign exchange.

"Imports of pepper are done with the condition that it has to be re-exported in 120 days. This is tightly controlled and monitored by customs. Ideally, they should have simply curbed the 2,500 tonne imported through the FTA and restricted any import of pepper by unregistered traders ," he suggested. AISEF members also added that the MIP has not resulted in the strengthening of the domestic pepper prices but has led to a decline of nearly Rs 40 per kg with more pepper being smuggled by unregistered traders.

Spice exporters suffer Rs 75 crore loss due to MIP on black pepper

ECONOMIC TIMES-01-MAR-2018

As MIP has been made applicable to value added exporters in SEZs, EOUs and those operating under the advance licence agreement.

KOCHI: Having made a loss of Rs 75 crore in the last three months following the levy of minimum import price of Rs 500 per kg on black pepper from last December, the spice industry predicts around 50% drop in pepper exports from the country in the current fiscal if it is not withdrawn immediately.

The All India Spices Exporters Forum said the MIP had a cascading effect on the other spices as value added pepper is mostly exported in combination with the other processed spices. Indian business has become unviable which could result in closure of business and loss of employment and forex earnings, it said.

``Exporters with contracts to export pepper would have to default because they cannot import pepper at a high price of Rs 500 per kg as the global customers will not buy it at over 40% of the international prices,'' forum chairman Prakash Namboodiri said.

The forum has asked for exempting the value added exporters from the purview of the notification, restricting pepper imports through FTA and by unregistered traders and control smuggling of pepper from the neighbouring countries.

As MIP has been made applicable to value added exporters in SEZs, EOUs and those operating under the advance licence agreement, India could lose its position as the global spices processing hub, it is pointed out. `` Already pepper exporters in Vietnam (the largest producer) are trying to source chillies from China to create a basket of spices for export,'' he said.

Though the MIP was imposed to protect domestic farmers, it has been counter-productive according to the exporters. The pepper prices after rising for a few days have dropped. `` The Indian pepper price fell from Rs 428 per kg at the time of MIP levy to Rs 390 at present,'' Namboodiri said adding that pepper price is based on global demand and supply. Vietnam pepper which is usually imported for value addition has become cheaper during the time moving down from Rs 225 to Rs 210 per kg.

``The pepper imported for value addition and export is tightly monitored by customs and hardly leaks into the domestic market and the government should clamp on the activities of unscrupulous traders who indulge in the activity,'' said Philip Kuruvila former chairman of the forum.

India exported 17600 tonnes of pepper last year . As per the indication given by the exporters it could fall below 10,000 tonnes if the MIP remains.

Nizamabad market yard sets new record with turmeric crop

THE HANS INDIA-19-MAR-2018

In the highest feat of 85 years' history, 10.60 lakh quintals turmeric crop reached the Nizamabad market yard this year.

Launched in 1933, it is the second largest market yard in Telangana, well known for turmeric crop all over India. While a major part of turmeric crop reached the market yard from Nizamabad, Nirmal, Jagityal districts various food grains such as paddy, maize, turmeric, pulses, soya bean, sunflower, aamchur, onions and other crops are also sold from here.

Earlier this market yard was situated at Gandhi gunj near the clock tower and later was shifted to spacious 67 acres and named as Sharddanand Gunj.

In 2012-13, the Nizamabad Market yard set a record with 9.6 lakh quintal of turmeric crop arriving, however, this year's 10.6 lakh quintal of turmeric has beaten the previous

record. Officials are expecting another 2.5 lakh to 3 lakh quintals crop in the coming two to three weeks.

The turmeric produce was being sold by the Nizamabad and surrounding district farmers at Sangli market yard in Maharashtra as the price offered at this market was somewhat higher compared to Nizamabad. But with the GST implementation, this year, the difference in price at Sangli and Nizamabad was minimal due to which the market yard was receiving a high quantity of turmeric.

MALAYALAM NEWS

30 ഗ്രാം ഇഞ്ചി വിത്തിൽ നിന്നും 2 കി.ഗ്രാം ഇഞ്ചി വിളവെടുക്കാം

വിശ്വസിക്കാതെ തരമില്ല. കാരണം സ്വന്തം അനുഭവമാണ്. മികച്ചയിനം ഇഞ്ചിവിത്തും കൃത്യമായ പരിചരണവും നൽകിയാൽ ആർക്കും ലഭിക്കും ഈ വിളവ്. പക്ഷെ വിത്ത് വരദയോ മഹിമയോ ആയിരിക്കണം. കോഴിക്കോട് ദേശീയ സുഗന്ധവിളഗവേഷണ കേന്ദ്രത്തിൽ നിന്നുള്ള സംഭാവനയാണ് വരദയും രജതയും മഹിമയുമൊക്കെ .

മഴയെ ആശ്രയിച്ച് ഇഞ്ചി നടേണ്ട സമയം അടുത്തുകൊണ്ടിരിക്കുന്നു. വിഷുവിനോട് അടുപ്പിച്ച് ഇഞ്ചിക്കൃഷി തുടങ്ങാം. നന്നായി കിളച്ച് സെന്റിന് 2 കിലോ രണ്ടാഴ്ചയിടുക. ശേഷം ആവശ്യത്തിന് നീളവും ഒരു മീറ്റർ വീതിയും ഒരടി പൊക്കവുമുള്ള പണകോരുക. രണ്ട് പണകൾ തമ്മിൽ 40 സെന്റീമീറ്റർ അകലം നൽകാം.

10 മീറ്റർ നീളവും ഒരു മീറ്റർ വീതിയുമുള്ള ഒരു പണയിൽ 20 കിലോ കാലിവളവും 2 കിലോ വേപ്പിൻ പിണ്ണാക്കും 1 കിലോ ചാമ്പലും 4 കിലോ മണ്ണിരക്കമ്പോസ്്റ്റും ചേർക്കണം. മേമ്പൊടിയായി 75 ഗ്രാം ഫോസ്ഫോ ബാക്ടീരിയയും ചേർത്താൽ കൂടുതൽ ഫലം.

ട്രൈക്കോഡർമയാൽ സമ്പുഷ്ടീകരിച്ച ചാണകപ്പൊടിയാണെങ്കിൽ ഇഞ്ചി അഴുകാതെ നോക്കാം. അടിവളം ചേർത്ത ഇഞ്ചിപ്പണയിൽ 25 സെന്റീമീറ്റർ അകലത്തിൽ എടുത്ത ചെറുകുഴികളിൽ രണ്ടിഞ്ച് ആഴത്തിൽ ഇഞ്ചി വിത്ത് നടാം.

25-30 ഗ്രാം തൂക്കമുള്ള 3-4 മുളകളുള്ള ഇഞ്ചി വിത്ത് സ്യൂഡോമൊണാസ് ലായനിയിൽ അഞ്ചു മിനിറ്റ് മുക്കി അരമണിക്കൂർ തണലത്ത് വച്ചതിനു ശേഷം നടാം. നട്ടതിനുശേഷം പരമാവധി കരിയിലകൾ തടത്തിനുമുകളിൽ വിരിച്ച് ഉണങ്ങിയ ഓല കൊണ്ട് പുതയിടാം. നട്ട് 60 ദിവസം കഴിഞ്ഞും 90 ദിവസം കഴിഞ്ഞും വീണ്ടും പുതയിട്ടു കൊടുക്കണം. നട്ട് 60, 120 ദിവസങ്ങളിൽ മേൽവളങ്ങൾ കൊടുക്കാം.

ഇഞ്ചി മുളച്ചു കഴിഞ്ഞാൽ രണ്ടാഴ്ച ഇടവിട്ട് പച്ചച്ചാണകം കലക്കി ഒഴിച്ചു കൊടുക്കാം. മാസത്തിലൊരിക്കൽ പുളിപ്പിച്ച കടലപ്പിണ്ണാക്ക് , പച്ചച്ചാണകം, എല്ലുപൊടി , വേപ്പിൻ പിണ്ണാക്ക് എന്നിവയുടെ മിശ്രിതം നേർപ്പിച്ച് ഒഴിച്ചുകൊടുക്കാം.

പണയുടെ വശങ്ങളിൽ നിന്നുമുള്ള മണ്ണ് കോരിയെടുത്ത് പുതയുടെ മുകളിലേക്കിട്ടു കൊടുക്കാം. ഇഞ്ചി തെളിഞ്ഞ് വരുന്നതിനനുസരിച്ച് മണ്ണ് കയറ്റിക്കൊടുക്കണം. പച്ചക്കറിയാവശ്യത്തിന് 6-ാം മാസം മുതൽ വിളവെടുക്കാം. വിത്തിഞ്ചിയായി സൂക്ഷിക്കാൻ എട്ടരമാസം കഴിയുമ്പോൾ വിളവെടുക്കാം.

ഇനി വരദയെക്കുറിച്ച് രണ്ട് വാക്ക്. ഹെക്ടറിന് 22600 കിലോ തരാൻ ശേഷിയുണ്ട്. ഉണക്കുമ്പോൾ അഞ്ചിലൊന്ന് ചുക്ക് ലഭിക്കും. മൂന്നടിയോളം പൊക്കത്തിൽ വളരും. ശരാശരി 10 ചിനപ്പുകൾ ഒരു മൂട്ടിൽ പൊട്ടിക്കാണാറുണ്ട്. വിത്തിന്റെ ലഭ്യതയ്ക്ക് ദേശീയ സുഗന്ധ വിള ഗവേഷണ കേന്ദ്രവുമായി ബന്ധപ്പെടുക.

കസ്തൂരിമഞ്ഞളാണെന്ന് കരുതി വാങ്ങിയത്.....

Mathrubhumi March 15, 2018

സൗന്ദര്യ വർദ്ധക ഗുണങ്ങൾക്ക് പുറമേ വിരയിളക്കുന്നതിനും കൊതുകിനെ അകറ്റിനിർത്തുന്നതിനുമൊക്കെ കസ്തൂരി മഞ്ഞൾ പ്രയോജനപ്രദമാണ്.

ഈ അബദ്ധം പലർക്കും പറ്റിയിട്ടുണ്ടാകാം. കസ്തൂരി മഞ്ഞൾ എന്ന പേരിൽ കിട്ടിയത് കാട്ടുമഞ്ഞൾ. നല്ല കടുംമഞ്ഞനിറത്തിൽ കൊഴുത്തുരുണ്ട കിഴങ്ങുകൾ വഴിവക്കിൽ കാണാൻ കഴിയും. എന്നാൽ മനസ്സിലാക്കിക്കോളിൻ. കസ്തൂരിമഞ്ഞൾ മുറിയ്ക്കുമ്പോൾ നിറം മഞ്ഞയല്ല. ക്രീം നിറമായിരിക്കും. പൊടിയും അതുപോലെ തന്നെ. മഞ്ഞളിന്റെ മണമേയല്ല. നല്ല കസ്തൂരി ഗന്ധം. മുഖത്ത് പുരട്ടിയാലോ. നിറം പിടിക്കുകയുമില്ല.

സാധാരണ മഞ്ഞളിന് കുർക്കുമ ലോംഗ എന്നാണ് ശാസ്ത്രനാമം. കസ്തൂരിമഞ്ഞളാകട്ടെ, കുർക്കുമ അരോമാറ്റിക്ക. കാട്ടുമഞ്ഞളോ..... കുർക്കുമ സിയോഡാരിയ. ഒരേ കുടുംബക്കാരാണെങ്കിലും സ്വഭാവം വ്യത്യസ്തമാണ്. മഞ്ഞളും കാട്ടുമഞ്ഞളും കടുംമഞ്ഞനിറം. മുഖത്തുപുരട്ടിയാൽ മഞ്ഞനിറം കുറച്ചുനേരം നിലനിൽക്കും.

ഇപ്പോൾ കസ്തൂരി മഞ്ഞൾ നടാൻ പറ്റിയ സമയമാണ്. ഇഞ്ചി കൃഷി ചെയ്യുന്നതുപോലെ മണ്ണ് നന്നായി കിളച്ച് ചാണകവും വേപ്പിൻ പിണ്ണാക്കും അടിവളമായി ചേർത്ത് 25 സെ.മീ അകലത്തിൽ 25 ഗ്രാം വീതമുള്ള കിഴങ്ങ് നട്ട് കരിയില നന്നായി ഇട്ട് പുതയിടണം. മുളച്ച് ഒന്നാംമാസത്തിലും രണ്ടാംമാസത്തിലും മേൽവളം ചേർത്ത് വീണ്ടും പുകയിട്ട് കൊടുക്കാം. ഇലകൾ ഉണങ്ങിത്തുടങ്ങുമ്പോഴോ 7-8 മാസം കഴിയുമ്പോഴോ വിളവെടുക്കാം.

ഒരു സൗന്ദര്യ വർദ്ധക വസ്തു എന്ന നിലയിലാണ് കസ്തൂരി മഞ്ഞളിന്റെ പ്രശസ്തി. പാൽ, തൈര്, തേൻ, പനിനീർ എന്നിവയിൽ ചാലിച്ചു മുഖത്തുപുരട്ടി അരമണിക്കൂർ കഴിഞ്ഞ് കഴുകിക്കളയുക. ഇങ്ങനെ ആഴ്ചയിലൊരിക്കൽ ചെയ്താൽ തൊലിക്ക് ചൈതന്യവും തിളക്കവും ലഭിക്കും.

കറുത്ത പാടുകളും മുഖക്കുരുവും കുറഞ്ഞു വരും. പച്ചക്കിഴങ്ങ് അരച്ചെടുത്തതിനാണ് കൂടുതൽ ഗുണം. പ്രസവിച്ച സ്ത്രീകൾ ഇതരച്ച് അടിവയറ്റിൽ പുരട്ടിയാൽ സ്ട്രെച്ച്മാർക്കുകൾ മങ്ങി വരുന്നത് കാണാം.

കസ്തൂരി മഞ്ഞളും കുപ്പമേനിയിലയും മുത്തങ്ങയുടെ കിഴങ്ങും നന്നായി അരച്ച് പുരട്ടി അരമണിക്കൂർ കഴിഞ്ഞു തുടച്ചുകളഞ്ഞാൽ ക്രമേണ അനാവശ്യരോമങ്ങളുടെ വളർച്ച തടയാം. സൗന്ദര്യ വർദ്ധക ഗുണങ്ങൾക്ക് പുറമേ വിരയിളക്കുന്നതിനും കൊതുകിനെ അകറ്റിനിർത്തുന്നതിനുമൊക്കെ കസ്തൂരി മഞ്ഞൾ പ്രയോജനപ്രദമാണ്.

മഞ്ഞളിന്റെ കുടുംബത്തിൽപ്പെടുന്ന മറ്റ് പ്രധാന ചെടികൾ മാങ്ങായിഞ്ചി (കുർകുമ അമാഡ), വെള്ളക്കൂവ (കുർകുമ അങ്കുസ്റ്റിഫോളിയ)കരിമഞ്ഞൾ (കുർക്കുമ കാസിയ) എന്നിവയാണ്.

കസ്തൂരിമഞ്ഞളിന്റെ ഇലകൾക്ക് വിളറിയ പച്ചനിറമായിരിക്കും. എന്നാൽ കാട്ടുമഞ്ഞൾ ,മഞ്ഞക്കൂവ എന്നിവയുടെ ഇലയുടെ നടുഞരമ്പിന് നേരിയ പർപ്പിൾ നിറമായിരിക്കും. അടുത്തതവണ കസ്തൂരിമഞ്ഞൾ വാങ്ങുമ്പോൾ ചതിപറ്റാതെ നോക്കണം.

(നടീൽ വസ്തു ലഭ്യതയറിയാൻ കള്ളിക്കാട് കൃഷി ഓഫീസർ സുനിലിനെ ബന്ധപ്പെടാവുന്നതാണ്.Ph: 8281663172, കേരള കാർഷിക സർവകലാശാലയുടെ ഓടക്കാലി ഗവേഷണ കേന്ദ്രത്തിലും വിത്ത് ലഭിക്കാൻ സാധ്യതയുണ്ട്)

അളഗപ്പനഗറിൽ 20 ഏക്കർ സ്ഥലത്ത് മഞ്ഞൾ വിപ്ലവം

മാതൃഭൂമി-29-MAR-2018

അളഗപ്പനഗർ പഞ്ചായത്തിലെ കുന്നിൻചെരിവുകളിൽ ഇനി മഞ്ഞൾവിളയും. വലിയ കൃഷികൾക്ക് ഇടവിളയായും ഇനി മഞ്ഞളുണ്ടാകും. സഹകരണമേഖലയിലെ മഞ്ഞൾ കൃഷിയിലൂടെ അളഗപ്പനഗറിൽ പുതിയ കാർഷികവിപ്ലവത്തിന് തുടക്കമാവുകയാണ്. കഴിഞ്ഞവർഷം പരീക്ഷണാടിസ്ഥാനത്തിൽ നടത്തിയ മഞ്ഞൾകൃഷിയുടെ വൻവിജയമാണ് സഹകരണബാങ്കുകൾക്ക് വൻതോതിൽ കൃഷി നടത്താൻ പ്രേരകമായത്.

വട്ടണാത്ര, ആമ്പല്ലൂർ സഹകരണബാങ്കുകൾ ചേർന്നുള്ള കൺസോർഷ്യമാണ് പഞ്ചായത്തിലെ തരിശുപ്രദേശങ്ങളിൽ മഞ്ഞൾകൃഷി നടത്തുന്നത്. പഞ്ചായത്ത് പരിധിയിലെ പത്ത് സെന്റ് മുതൽ പത്തേക്കർ വരെയുള്ള സ്ഥലങ്ങളിൽ മഞ്ഞൾ കൃഷിചെയ്യാനാണുദ്ദേശിക്കുന്നത്.

ഇതിന് കർഷകരും കുടുംബശ്രീപ്രവർത്തകരും കൈകോർക്കും. കോഴിക്കോട് ഭാരതീയ സുഗന്ധവിളകേന്ദ്രം വികസിപ്പിച്ച പ്രതിഭ ഇനത്തിൽപ്പെട്ട മഞ്ഞളാണ് ഇവിടെ ഉപയോഗിക്കുന്നത്. ഏറ്റവും ചെലവുകുറഞ്ഞ കൃഷിരീതിയാണ് പ്രതിഭ മഞ്ഞളിന്റെ സവിശേഷത. ഏപ്രിൽ, മേയ് മാസങ്ങളിലെ പുതുമഴയിലാണ് മഞ്ഞൾ കൃഷിയിറക്കുന്നത്.

കഴിഞ്ഞവർഷം 20 ഏക്കർ സ്ഥലത്ത് 15 ടൺ മഞ്ഞളാണ് അളഗപ്പനഗറിൽ കൃഷിചെയ്തത്. ഒരേക്കറിൽ 700 കിലോ മഞ്ഞൾ കൃഷിചെയ്യുകയും പതിനായിരം കിലോ ഉത്പാദിപ്പിക്കുകയും ചെയ്യാനായത് കർഷകർക്ക് ആവേശമായി. കിലോഗ്രാമിന് 45 രൂപ നിരക്കിലാണ് കൺസോർഷ്യം മഞ്ഞൾ സംഭരിക്കുന്നത്.

ഒരേക്കർ മഞ്ഞൾകൃഷിയിൽനിന്ന് ചെലവുകളെല്ലാം കഴിഞ്ഞ് രണ്ടുലക്ഷം രൂപയാണ് കർഷകർ ആദായം പ്രതീക്ഷിക്കുന്നത്. മഞ്ഞൾകൃഷിയുടെ വിളവെടുപ്പും പുതുക്കാട് നിയോജകമണ്ഡലത്തിൽ മഞ്ഞൾകൃഷി വ്യാപിപ്പിക്കുന്നതിനുള്ള വിത്തുവിതരണവും ഞായറാഴ്ച മന്ത്രി വി.എസ്. സുനിൽകുമാർ ഉദ്ഘാടനം ചെയ്തു. മണ്ഡലത്തിലെ പത്ത് സഹകരണബാങ്കുകൾക്കായി 50 ടൺ വിത്താണ് വിതരണംചെയ്യുന്നത്.

വട്ടണാത്ര സഹകരണബാങ്ക് പ്രസിഡന്റ് കെ.എം. ചന്ദ്രൻ ചെയർമാനും ആമ്പല്ലൂർ സഹകരണ ബാങ്ക് സെക്രട്ടറി എ.എസ്. ജിനി