

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL

PRINCIPAL BENCH, NEW DELHI

Original Application No. 1093/2024

In the matter of:

News Item titled " Study finds wide variety of nitrogen-use efficiency in Indian rice varieties" appearing The Hindu dated 11.08.2024.

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Delhi
Dated:02.12.2024

Filed by Adv. Mohit Singhal
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BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL**PRINCIPAL BENCH, NEW DELHI**

Original Application No. 1093/2024

In Matter Of:-

News Item titled "Study finds wide variety of nitrogen-use efficiency in Indian rice varieties" appearing in The Hindu dated 11.08.2024

AFFIDAVIT ON BEHALF OF THE RESPONDENT NO-4 CENTRAL POLLUTION CONTROL BOARD

1. That, Hon'ble NGT vide Order dated 28.08.2024 impleaded the Central Pollution Control Board (hereinafter referred as CPCB) as Respondent no. 4. Thereby, the reply is made in succeeding paragraphs.
2. That, CPCB is a statutory Board constituted under Section 3 of The Water (Prevention and Control of Pollution) Act, 1974. It performs the functions under The Water (Prevention and Control of Pollution) Act, 1974, The Air (Prevention and Control of Pollution) Act, 1981, and The Environment (Protection) Act, 1986.
3. It is respectfully submitted that the issues pertaining to excessive use of fertilizers are dealt by the Ministry of Agriculture and Farmers Welfare. Ministry of Agriculture & Farmers Welfare has submitted information on "Excessive Use of Fertilizer" in the Lok Sabha on 09th February 2021 that investigations carried out under All India Coordinated Research Project on 'Long Term Fertilizer Experiments' over five decades at fixed sites have indicated that continuous use of nitrogenous fertilizer alone had deleterious effect on soil health and crop productivity. It was also informed that the Government has launched a National Mission on Soil Health Card to promote soil test based balanced and judicious fertilizer application in the country ; and that trainings and demonstrations are organized through ICAR institutions including Krishi Vigyan Kendras and agricultural universities to educate farmers on all these aspects.



The aforementioned information has been released by Press Information Bureau, Government of India as available on website <https://pib.gov.in/Pressreleaseshare.aspx?PRID=1696465> and the copy of the same is enclosed as Annexure – 1.

4. That ,the Ministry of Chemicals and Fertilizers vide notification dated 25.05.2015 has made it mandatory for all the indigenous producers of urea to produce 100 % of their total production of subsidized urea as Neem Coated urea. Copy of aforementioned notification as available on website <https://www.faidelhi.org/Member/govtnote/NCU-May-15.pdf> is enclosed as Annexure - 2.

It is respectfully submitted that the primary benefits of Neem coating is slow release of urea which results in increased Nitrogen Use Efficiency (NUE) leading to less consumption of neem coated urea as compared to normal Urea. Copy of reply of Parliament question of Ministry of Chemicals and fertilizer as available on website https://rsdebate.nic.in/bitstream/123456789/681305/1/IQ_244_05012018_U2131_p215_p216.pdf is enclosed as Annexure -3.

It is respectfully submitted that The Ministry of Chemicals and Fertilizers has stated that the Nano urea application may lead to urea saving of 25-50% in various crops. Copy of reply of Parliament question of Ministry of Chemicals and fertilizer is enclosed as Annexure -4.

5. That, excess release of Nitrogenous fertilizers may lead to environmental pollution including pollution in water bodies. In order to control nitrogen pollution from the fertilizer industry, The Ministry of Environment, Forest and Climate Change vide notification dated 29.12.2017 prescribed effluent and emission standards for nitrogenous compounds for fertilizer industries, i.e. Source emission standards w.r.t NOX (400 mg/Nm³), NH₃-150 mg/Nm³ and effluent standards of Ammonical Nitrogen (50 mg/l), Free ammonical Nitrogen (2 mg/l), TKN (75 mg/l), Nitrate Nitrogen (Other than Urea plant-20 mg/l and Urea Plant-10 mg/l),. The waste water generation from fertilizer industry is restricted to 3.0 m³/ton of urea. The copy of aforementioned standards is enclosed as Annexure-5.



6. The answering respondent No. 2 craves leave of this Hon'ble Tribunal for filing additional reply, if required, in future.
7. That, in light of the above submission, it is respectfully submitted that this Answering respondent i.e. CPCB, shall abide by any order(s) or direction(s) passed by this Hon'ble tribunal in the instant OA and render justice.



A handwritten signature in blue ink, appearing to be "Dinabandhu Gouda".

(Dinabandhu Gouda)
Scientist 'F'
Central Pollution Control Board

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL

PRINCIPAL BENCH, NEW DELHI

Original Application No. 1093/2024

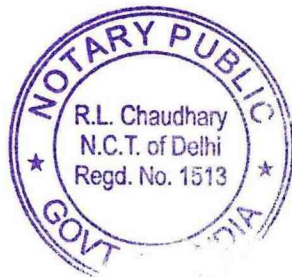
In Matter Of:-

News Item titled "Study finds wide variety of nitrogen-use efficiency in Indian rice varieties" appearing in The Hindu dated 11.08.2024

AFFIDAVIT

I, Dinabandhu Gouda, working as Scientist 'F' in Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Delhi, do hereby solemnly affirm, declare on oath and state as under :-

1. That I, the deponent herein is the authorized representative to represent the Respondent CPCB in the present case, and as such, I am well conversant with the facts and circumstances of the present case on the basis of the information derived from the official records, and hence, I am competent to verify, sign and swear this affidavit on behalf of the Respondent CPCB.
2. That the accompanying reply may be read part and parcel of the present affidavit.
3. That the accompanying reply has been drafted and filed under my instructions and authority the contents thereof are true and correct on the basis of the records maintained during ordinary course of business of CPCB and available records and documents and the contents of the same are read over and explained to me and are not repeated herein for the sake of brevity.



DEPONENT

दानबन्धु गौडा /Dinabandhu Gouda
 प्रभागीय प्रमुख, आई.पी.सी.-I/Divisional Head, IPC-I
 केन्द्रीय प्रदूषण नियंत्रण बोर्ड
 Central Pollution Control Board
 पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार
 M/o Env. Forest & Climate Change, Govt. of India
 परिवेश भवन, पूर्वी अर्जुन नगर, दिल्ली-110032
 Parivesh Bhawan, East Arjun Nagar, Delhi-110032

VERIFICATION

02 DEC 2024

Verified at Delhi on this day of _____ 2024 that the contents of the above reply are correct and true on the basis of the record of the cases as mentioned in the day to day affairs of the CPCB. Nothing has been concealed therefrom or mis-stated.



DEPONENT

दानबन्धु गोडां /Dinabandhu Goud
 प्रभागीय प्रमुख, आई.पी.सी.-1/Divisional Head, IPC-1
 केन्द्रीय प्रदूषण नियंत्रण बोर्ड
 Central Pollution Control Board
 पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार
 M/o Env't. Forest & Climate Change, Govt. of India
 परिवेश भवन, पूर्वी अर्जुन नगर, दिल्ली-110032
 Parivesh Bhawan, East Arjun Nagar, Delhi-110032

ATTESTED

NOTARY PUBLIC
GOVT. OF INDIA

02 DEC 2024

**Press Information Bureau
Government of India
Ministry of Agriculture & Farmers Welfare**

09 FEB 2021 2:57PM by PIB Delhi

Excessive Use of Fertilizer

Investigations carried out under All India Coordinated Research Project on 'Long Term Fertilizer Experiments' over five decades at fixed sites have indicated that continuous use of nitrogenous fertilizer alone had deleterious effect on soil health and crop productivity showing deficiencies of other major and micro nutrients. Even with recommended doses of NPK and more, deficiency of micro and secondary nutrients has become yield limiting factors over the years. Deficient nutrient may also affect plant growth and cause plant physiological disorders. There is also possibility of nitrate contamination in groundwater above the permissible limit of 10 mg NO₃-N /L due to excessive/over-use of nitrogenous fertilizers, particularly in light textured soils that has consequence on human/animal health if used for drinking purpose. ICAR recommends soil test based balanced and integrated nutrient management through conjunctive use of both inorganic and organic sources of plant nutrients to reduce the use of chemical fertilizers, preventing deterioration of soil health, environment and contamination of groundwater. In addition, split application and placement of fertilizers, use of slow releasing N-fertilizers and nitrification inhibitors, growing leguminous crops and use of resource conservation technologies (RCTs) are also advocated.

As per the latest information available, the consumptions of chemical fertilizers in the country during 2017-18, 2018-19, 2019-20 and 2020-21 (upto kharif 2020) are 54.38, 56.21, 59.88 and 33.85 million tonnes of fertilizer products (Urea, Di-Ammonium Phosphate (DAP), Murate of Potash (MOP), Complexes and Single Super Phosphate (SSP), respectively.

The Government has launched a National Mission on Soil Health Card to promote soil test based balanced and judicious fertilizer application in the country. Similarly, organic farming is being promoted under Parampragat Krishi Vikas Yojana (PKVY) and Mission Organic Value Chain Development for North East Region (MOVCD-NER) in the country. Trainings and demonstrations are organized through ICAR institutions including Krishi Vigyan Kendras (KVKs), and agricultural universities to educate farmers on all these aspects.

This information was given in a written reply by the Union Minister of Agriculture and Farmers Welfare Shri Narendra Singh Tomar in Lok Sabha today.

APS

Written Answers to [5 January, 2018] Unstarred Questions 215

NIPER	2015-16	2016-17
Guwahati	21.00	26.27
Hyderabad	35.00	35.00
Hajipur	6.00	5.00
Kolkata	6.30	8.00
Raebareli	5.50	6.25
TOTAL	130.83	127.48

Savings with usage of reduced quantity in urea bags

2131. SHRI C.M. RAMESH: Will the Minister of CHEMICALS AND FERTILIZERS be pleased to state:

- (a) whether Ministry has decided to have urea bag of 45 Kgs. in place of 50 Kgs.;
- (b) if so, the reasons for reducing the quantity;
- (c) the normal quantity of urea used for one acre of land;
- (d) whether Ministry is aware that farmers calculate number of bags to be used per acre rather than judiciously using only the required quantity of urea;
- (e) how the Ministry is coordinating with Ministry of Agriculture and Farmers welfare to bring awareness among the farmers in this regard; and
- (f) the percentage the Ministry thinks of saving in usage of urea with the reduced quantity in bags?

THE MINISTER OF STATE IN THE MINISTRY OF CHEMICALS AND FERTILIZERS (RAO INDERJIT SINGH): (a) Yes, Sir.

(b) With the objective of encouraging balanced use of fertilizers, Department of Fertilizers has made it mandatory for all the domestic producers of urea to produce 100% as Neem Coated Urea (NCU). Entire quantity of both indigenously produced urea and imported urea is being neem coated *w.e.f.* 1st September, 2015 and 1st December, 2015 respectively. One of the primary benefits of Neem coating is slow release of urea which results in increased Nitrogen Use Efficiency (NUE) leading to less consumption of NCU as compared to Normal Urea.

In the light of above, Government of India *vide* notification dated 4th September, 2017, has decided to introduce 45 Kg. bag of urea in place of existing 50 Kg. bag and a period of six months have been given to urea units as lead time to ensure smooth implementation of the policy.

(c) The quantity of urea to be applied per acre is location specific and depends on soil type and crop/cultivar to be grown.

(d) and (f) Since farmers mostly assess the requirement of urea in terms of bags for agriculture purpose, it is estimated that the availability of urea in 45 Kg bags instead of 50 Kg bag may bring down consumption of Urea by 10%.

(e) Department of Agriculture, Cooperation & Farmers Welfare is promoting the judicious and balanced use of fertilizers. The Government of India is implementing a Soil Health Card (SHC) scheme which not only provides information to the farmers regarding soil fertility but also mentions about the doses of fertilizers to be applied for a particular crop.

Shortage of fertilizers

2132. SHRI HARIVANSH: Will the Minister of CHEMICALS AND FERTILIZERS be pleased to state:

(a) whether Government has received any reports from some State Governments about shortage of fertilizers in their respective States, if so, the details thereof; and

(b) the steps being taken to ensure sufficient supply of fertilizers to these States so that farmers do not suffer-any losses on this account?

THE MINISTER OF STATE IN THE MINISTRY OF CHEMICALS AND FERTILIZERS (RAO INDERJIT SINGH): (a) No, Sir.

(b) Before the commencement of each cropping season, Department of Agriculture, Cooperation and Farmers Welfare (DAC&FW), in consultation with all the State Governments, assesses the requirement of fertilizers. After assessment of requirement, DAC&FW projects month-wise requirement of fertilizers.

On the basis of month-wise & State-wise projections given by DAC&FW, Department of Fertilizers allocates sufficient/ adequate quantities of fertilizers to States

GOVERNMENT OF INDIA
MINISTRY OF CHEMICALS AND FERTILIZERS
DEPARTMENT OF FERTILIZERS

LOK SABHA

UNSTARRED QUESTION NO. 1850 TO BE ANSWERED ON: 02.08.2024

EFFECTS OF USE OF NANO UREA

1850: SHRI UMMEDA RAM BENIWAL:

Will the Minister of CHEMICALS AND FERTILIZERS be pleased to state:

- (a) whether the Government has conducted any study on the adverse impact of the use of Nano urea on the production of crops in the country particularly in Rajasthan;
- (b) if so, the details and the outcome thereof;
- (c) whether the Government proposes to issue any direction/circular to the companies selling fertilizers/pesticides not to force the farmers to buy nano urea while buying fertilizer/pesticide;
- (d) if so, the details thereof and the time by which it is likely to be done; and;
- (e) if not, the reasons therefor?

ANSWERTHE MINISTER OF STATE IN THE MINISTRY OF CHEMICALS & FERTILIZERS
(SMT. ANUPRIYA PATEL)

(a) & (b): Based on the multi-locational trials in the State Agricultural Universities (SAUs) and Indian Council of Agricultural Research (ICAR) institutions, Department of Agriculture & Farmers Welfare (DA&FW) has notified the specifications of Nano Urea produced by specific companies under Fertilizer Control Order, 1985. Indian Council of Agricultural Research (ICAR) has informed that experimental trials of Nano urea revealed that two spray of Nano urea as top-dressing along with recommended basal dose of nitrogen gave comparable yield with full recommended dose of nitrogen with yield advantage of 3-8% and urea saving of 25-50% in various crops.

(c) to (e): Tagging of other products with fertilizers is not encouraged by Department of Fertilizers. Accordingly, suitable directions are issued to fertilizer companies directing them not to indulge in such practices. Further, State Governments are also advised to take strict action under the Fertilizer Control Order (FCO) – 1985 to prevent tagging.

However, the usage of Nano Urea is promoted by the Government of India along with the State Governments & fertilizer companies through different activities.

रजिस्ट्री सं० डी० एल०-33004/99

REGD. NO. D. L.-33004/99



भारत का राजपत्र The Gazette of India

असाधारण

EXTRAORDINARY

भाग II—खण्ड 3—उप-खण्ड (i)

PART II—Section 3—Sub-section (i)

प्राधिकार से प्रकाशित

PUBLISHED BY AUTHORITY

सं. 1044]

नई दिल्ली, शुक्रवार, दिसम्बर 29, 2017/पौष 8, 1939

No. 1044]

NEW DELHI, FRIDAY, DECEMBER 29, 2017/PAUSA 8, 1939

पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय

अधिसूचना

नई दिल्ली, 29 दिसम्बर, 2017

सा.का.नि. 1607(अ).—केन्द्रीय सरकार, पर्यावरण (संरक्षण) अधिनियम, 1986 (1986 का 29) की धारा 6 और धारा 25 द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए, पर्यावरण (संरक्षण) नियम, 1986 का और संशोधन करने के लिए निम्नलिखित नियम बनाती है, अर्थात् :-

- संक्षिप्त नाम और प्रारम्भ :— (1) इन नियमों का संक्षिप्त नाम पर्यावरण (संरक्षण) द्वितीय संशोधन नियम, 2017 है।
(2) ये राजपत्र में उनके प्रकाशन की तारीख को प्रवृत्त होंगे।
- पर्यावरण (संरक्षण) नियम, 1986 की अनुसूची-1 में, क्रम संख्यांक 17 और उससे सम्बन्धित प्रविष्टियों में निम्नलिखित क्रम संख्यांक और प्रविष्टियां प्रतिस्थापित की जाएगी, अर्थात् :—

क्र. सं.	उद्योग	मानदंड	मानक
(1)	(2)	(3)	(4)
"17.		क. - बहिःस्त्राव मानक	
	उर्वरक उद्योग	(i) स्ट्रेट नाईट्रोजिनस उर्वरक संयंत्र / अमोनिया (यूरिया संयंत्र), कैल्शियम अमोनियम नाइट्रेट और अमोनियम नाइट्रेट उर्वरक	pH को छोड़कर संकेन्द्रण सीमा मिलिग्राम/लितर(mg/l) से अधिक न हो

क्र. सं.	उद्योग	मानदंड	मानक	
(1)	(2)	(3)	(4)	
		pH	6.5 से 8.5	
		सस्पेन्डिड ठोस पदार्थ	100	
		तेल और ग्रीस	10	
		अमोनिकल नाइट्रोजन N	50	
		कुल जेल्डाल नाइट्रोजन (TKN) N	75	
		फ्री अमोनिकल नाइट्रोजन N	2.0	
		सी एन संकेन्द्रण	0.1	
		नाइट्रोजन N	यूरिया संयंत्र	10
			यूरिया संयंत्र से अलग	20
		(ii) स्ट्रेट फॉस्फेटिक उर्वकर संयंत्र		
		pH	6.5 से 8.5	

	सस्पेन्डिड ठोस पदार्थ	100
	तेल और ग्रीस	10
	फ्लोराइड	10
	घुलित फास्फेट P	5.0
	(iii) काम्प्लेक्स फर्टिलाइजर संयंत्र या NP/NPK (N - नाइट्रोजन, P - फास्फोरस और K - पोटेशियम)	
	pH	6.5 से 8.5
	सस्पेन्डिड ठोस पदार्थ	100
	तेल और ग्रीस	10
	अमोनिकल नाइट्रोजन, N	50
	कुल जेल्डाल नाइट्रोजन (TKN) N	75
	फ्री अमोनिकल नाइट्रोजन N	4.0
	कुल जेल्डाल नाइट्रोजन (TKN) N	75

	फ्री अमोनिकल नाइट्रोजन N	4.0
	नाइट्रेट नाइट्रोजन N	20
	घुलित फोस्फेट P	5.0
	फ्लोराइड F	10
<p>टिप्पण: (i) कूलिंग टावर में क्रोमियम साल्ट को एल्गीसाइट के रूप में प्रयुक्त नहीं किया जाएगा।</p> <p>(ii) वर्ष में एक बार वेनेडियम और आर्सेनिक के लिए बहिःस्राव का विश्लेषण किया जाएगा और विश्लेषण की रिपोर्ट संबंधित राज्य प्रदूषण नियंत्रण बोर्ड / प्रदूषण नियंत्रण समिति को प्रस्तुत की जाएगी।</p>		
ख - उत्सर्जन मानक		
(i) स्ट्रेट नाइट्रोजिनस		
(क) अमोनिया संयंत्र - रिफार्मर		
	नाइट्रोजन के आक्साइड (NO ₂)	400 मिग्रा / प्रति Nm ³
(ख) यूरिया संयंत्र - प्रिलिंग टावर		
	पार्टिकुलेट मैटर	1982 से पूर्व यूनिट 150 मिग्रा / Nm ³
		1982 के पश्चात यूनिट 50 किग्रा / Nm ^{3**}
(ii) अमोनियम नाइट्रेट / कैल्शियम अमोनियम नाइट्रेट / NPK प्लांट		

	पार्टिकुलेट मैटर	विद्यमान संयंत्र	150 मिग्रा / Nm ³
		नया संयंत्र	100 मिग्रा / Nm ³
	अमोनियम NH ₃	विद्यमान संयंत्र	300 मिग्रा / Nm ³
		नया संयंत्र	150 मिग्रा / Nm ³
	कुल फ्लोराइड F	<10 mg/Nm ³ (केवल NPK संयंत्र)	
(iii) फॉस्फेटिक उर्वरक संयंत्र - फॉस्फोरिक एसिड संयंत्र रॉक / ग्राइंडिंग एण्ड एसीड्यूलेशन एसएसपी संयंत्र			
	पार्टिकुलेट मैटर	125 मिग्रा / Nm ³	

कुल फ्लोराइड F	20 मिग्रा / Nm ³
(iv) नाइट्रिक एसिड संयंत्र	
नाइट्रोजन के आक्साइड (NO ₂)	400 मिग्रा / Nm ³
<p>*मूल्यों की सूचना 3% O₂ पर दी जाएगी</p> <p>**0.5 किग्रा / टन उत्पाद का कुल उत्सर्जन</p> <p>टिप्पण : (i) फ्लोराइड के मापदण्ड केवल NPK संयंत्र के लिए लागू होंगे।</p> <p>(ii) अधिसूचना की तारीख या उसके बाद चालू किये गए संयंत्र को 'नया संयंत्र' माना जाएगा।</p> <p>(iii) सल्फर डाइआक्साइड, नाइट्रोजन के आक्साइडों या फास्फोरस के आक्साइडों या तेजाब की धुंध को उत्सर्जित करने वाले चट्टे की ऊंचाई न्यूनतम 30 मीटर या सूत्र $H=14(Q)^{0.3}$ अनुसार जो भी अधिक हो, होगी जहां "H" चट्टे की ऊंचाई मीटरों में और Q टेल गैस प्लांट (एस) की 100 प्रतिशत रेटिड क्षमता पर चट्टे में से SO₂, NO_x या P₂O₅ की किग्रा / घंटा के रूप में जो अधिकतम मात्रा के बराबर उत्सर्जित होनी प्रत्याशित है और जिसका आकलन गैसों के उत्सर्जन के मापदण्डों के अनुसार किया जाता है।</p> <p>(iv) जिन टेल गैस प्लांटों में एक ही स्थान पर एक से अधिक स्ट्रीम या सल्फ्यूरिक एसिड, नाइट्रिक एसिड या फॉस्फोरिक एसिड के यूनिट हैं चट्टे की ऊंचाई निर्धारित करने के लिए किसी विशेष एसिड के लिए सभी स्ट्रीमों या यूनिटों की सम्मिलित क्षमता को ध्यान में रख जाएगा।</p> <p>(v) ऐसे टेल गैस प्लांट जिसमें स्क्रबिंग यूनिटों के लिए गैसीय उत्सर्जन हेतु अलग से चट्टा हो, तो चट्टे की ऊंचाई मुख्य चट्टे के बराबर अथवा 30 मी. जो भी अधिक हो, होगी।</p>	

(ख) अनुसूची VI अपशिष्ट जल उत्पादन मानक भाग ख में क्रम सं. 11 के लिए उर्वरक और उससे संबंधित प्रविष्टियों के लिए निम्नलिखित क्रम सं. और प्रविष्टियां प्रतिस्थापित की जाएंगी, अर्थात:—

(1)	(2)	(3)	(4)
"11	उर्वरक उद्योग	नैपथा, प्राकृतिक गैस और मिश्रित फीड स्टॉक (नैपथा + प्राकृतिक गैस) आधारित (स्ट्रेट नाइट्रोजनस उर्वरक)	उत्पादित 3.0 एम ³ /टन यूरिया अथवा समतुल्य
		स्ट्रेट फॉस्फेटिक उर्वरक (सिंगल सुपर फॉस्फेट (एसएसपी) और ट्रिपल सुपर फॉस्फेट (टीएसपी), किसी एसिड के विनिर्माण को अपवर्जित करते हुए	एसएसपी या टीएसपी का 0.4एम ³ /टन
		कॉम्प्लेक्स उर्वरक	नाइट्रोजनस और फोस्फेटिक उर्वरक के मानक प्राथमिक उत्पाद पर निर्भर करते हुए लागू होंगे।"

टिप्पण : मूल नियम भारत के राजपत्र, असाधारण, भाग II, खंड 3, उप-खंड (i) में का.आ. सं. 844(अ), तारीख 19 नवम्बर, 1986 द्वारा प्रकाशित किए गए थे और तत्पश्चात् उनमें निम्नलिखित अधिसूचनाओं द्वारा संशोधन किए गए थे, अर्थात् :—

का.आ. 433(अ), तारीख 18 अप्रैल, 1987; सा.का.नि. 176(अ), तारीख 2 अप्रैल, 1996; सा.का.नि. 97(अ), तारीख 18 फरवरी, 2009; सा.का.नि. 149(अ), तारीख 4 मार्च, 2009; सा.का.नि. 543(अ), तारीख 22 जुलाई, 2009; सा.का.नि. 739(अ), तारीख 9 सितम्बर, 2010; सा.का.नि. 809(अ), तारीख 4 अक्तूबर, 2010; सा.का.नि. 215(अ), तारीख 15 मार्च, 2011; सा.का.नि. 221(अ), तारीख 18 मार्च, 2011; सा.का.नि. 354(अ), तारीख 2 मई, 2011; सा.का.नि. 424(अ), तारीख 1 जून, 2011; सा.का.नि. 446(अ), तारीख 13 जून, 2011; सा.का.नि. 152(अ), तारीख 16 मार्च, 2012; सा.का.नि. 266(अ), तारीख 30 मार्च, 2012; सा.का.नि. 277(अ), तारीख 31 मार्च, 2012; सा.का.नि. 820(अ), तारीख 9 नवम्बर, 2012; सा.का.नि. 176(अ), तारीख 18 मार्च, 2013; सा.का.नि. 535(अ), तारीख 7 अगस्त, 2013; सा.का.नि. 771(अ), तारीख 11 दिसम्बर, 2013; सा.का.नि. 2(अ), तारीख 2 जनवरी, 2014; सा.का.नि. 229(अ), तारीख 28 मार्च, 2014; सा.का.नि. 232(अ), तारीख 31 मार्च, 2014; सा.का.नि. 325(अ), तारीख 7 मई, 2014; सा.का.नि. 612(अ), तारीख 25 अगस्त, 2014; सा.का.नि. 789(अ), तारीख 11 नवम्बर, 2014; का.आ. 3305(अ), तारीख 7 दिसम्बर, 2015; का.आ. 4(अ), तारीख 1 जनवरी, 2016; सा.का.नि. 35(अ), तारीख 14 जनवरी, 2016; सा.का.नि. 281(अ), तारीख 7 मार्च, 2016; सा.का.नि. 496(अ), तारीख 9 मई, 2016; सा.का.नि. 497(अ), तारीख 10 मई, 2016; सा.का.नि. 978(अ), तारीख 10 अक्तूबर, 2016; और अंतिम बार अधिसूचना संख्यांक सा.का.नि. 1265(अ), तारीख 13 अक्तूबर, 2017 द्वारा संशोधित किए गए थे।

MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

NOTIFICATION

New Delhi, the 29th December, 2017

G.S.R. 1607(E).—In exercise of the powers conferred by sections 6 and 25 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government hereby makes the following rules further to amend the Environment (Protection) Rules, 1986, namely:—

- Short title and commencement.**— (1) These rules may be called the Environment (Protection) Second Amendment Rules, 2017.
(2) They shall come into force on the date of their final publication in the Official Gazette.
- (a) In the Environment (Protection) Rules, 1986, in Schedule I, for serial number 17 and entries relating thereto, the following serial number and entries shall be substituted, namely:—

Sl. No.	Industry	Parameter	Standards
(1)	(2)	(3)	(4)
“17.	Fertilizer Industry	A .- Effluent Standards	
		(i) Straight Nitrogenous Fertilizer Plant/Ammonia (Urea Plant), Calcium Ammonium Nitrate and Ammonium Nitrate Fertilizers	
			Limiting concentration not to exceed in milligram/litre (mg/l), except for pH
		pH	6.5 to 8.5
		Suspended Solids	100
		Oil and Grease	10

Sl. No. (1)	Industry (2)	Parameter (3)	Standards (4)
		Ammonical Nitrogen as N	50
		Total Kjeldhal Nitrogen (TKN) as N	75
		Free Ammonical Nitrogen as N	2.0
		CN concentration	0.1
		Nitrate Nitrogen as N	Urea Plant 10
			Other than Urea Plant 20
		(ii) Straight Phosphatic Fertilizer Plant	
		pH	6.5 to 8.5
		Suspended Solids	100
		Oil and Grease	10
		Fluoride	10
		Dissolved Phosphate as P	5.0
		(iii) Complex Fertilizer Plant and / or NP/NPK(N-Nitrogen, P-Phosphorus and K-Potassium)	
		pH	6.5 to 8.5
		Suspended Solids	100
		Oil and Grease	10
		Ammonical Nitrogen as N	50
		Total Kjeldhal Nitrogen (TKN) as N	75
		Free Ammoniacal Nitrogen as N	4.0

		Total Kjeldhal Nitrogen (TKN) as N	75
		Free Ammoniacal Nitrogen as N	4.0
		Nitrate Nitrogen as N	20
		Dissolved Phosphate as P	5.0
		Fluoride as F ⁻	10
		Note: (i) Chromium salt shall not be used in cooling tower as algacide. (ii) The effluent shall be analysed for Vanadium and Arsenic once in a year and analysis report shall be submitted to the concerned State Pollution Control Board / Pollution Control Committee.	
		B .- Emission Standards	
		(i) Straight Nitrogenous	
		(a) Ammonia Plant- Reformer	
		Oxides of Nitrogen (as NO ₂)	400 mg/Nm ³
		(b) Urea Plant – Prilling Tower	
		Particulate Matter	Pre 1982 units 150 mg/Nm ³
			Post 1982 units 50 mg/Nm ³ **
		(ii) Ammonium Nitrate/ Calcium Ammonium Nitrate/NPK plant	
		Particulate Matter	Existing Plant 150 mg/Nm ³
			New Plant 100 mg/ Nm ³
		Ammonium as NH ₃	Existing Plant 300 mg/Nm ³
			New Plant 150 mg/Nm ³
		Total Fluoride as F ⁻	<10 mg/Nm ³ (only NPK Plant)
		(iii) Phosphatic Fertilizer Plants – Phosphoric Acid Plants/ Rock grinding and Acidulation SSP Plants	
		Particulate Matter	125 mg/Nm ³
		Total Fluoride as F ⁻	20 mg/Nm ³
		(iv) Nitric Acid Plant	
		Oxides of Nitrogen (as NO ₂)	400 mg/Nm ³
		*Values to be reported at 3% O ₂ ** Total emission of 0.5 kg/ tonne of product.	
		Note: (i) Fluoride norms shall be applicable only for NPK plant. (ii) Plant commissioned on or after the date of notification, shall be treated as 'New Plant'.	

		<p>(iii) The height of the stack emitting Sulphur Dioxide, Oxides of Nitrogen or Oxides of Phosphorus or acid mist shall be a minimum of 30 metres or as per the formula $H=14(Q)^{0.3}$, whichever is more, where "H" is the height of stack in metres and "Q" is the maximum quantity of SO₂ NO_x or P₂O₅ equivalent expected to be emitted in kg/hr through the stack at 100 per cent rated capacity of the tail gas plant(s) and calculated as per the norms of gaseous emission.</p> <p>(iv) Tail Gas plants having more than one stream or unit of Sulphuric Acid, Nitric Acid or Phosphoric Acid at one location, the combined capacity of all the streams or units for a particular acid shall be taken into consideration for determining the stack height and applicability of emission standards individually.</p> <p>(iii) Tail gas plants having separate stack for gaseous emission for the scrubbing unit, the height of this stack shall be equal to main stack or 30 metres, whichever is higher.”;</p>
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(b) in Schedule VI, in Waste Water Generation Standards Part B, for serial number 11, Fertiliser and entries relating thereto, the following serial number and entries shall be substituted, namely:-

(1)	(2)	(3)	(4)
‘11	Fertiliser Industry	Naphtha, Natural Gas & Mixed Feedstock (Naphtha + Natural Gas) Based (Straight Nitrogenous Fertiliser)	3.0 m ³ /tonne of Urea or equivalent produced
		Straight Phosphatic Fertilizer (Single Super Phosphate (SSP) & Triple Super Phosphate (TSP) excluding manufacturing of any acid	0.4 m ³ /tonne of SSP or TSP
		Complex Fertilizer	Standards of nitrogenous and Phosphatic fertiliser are applicable depending on the primary product.”.

[F. No. Q-15017/13/2010-CPW]

Dr. A. SENTHIL VEL, Scientist ‘G’

Note:— The principal rules were published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (i) *vide* number S.O. 844 (E), dated the 19th November, 1986 and subsequently amended *vide* the following notifications, namely:—

S.O. 433 (E), dated the 18th April 1987; G.S.R. 176(E) dated the 2nd April, 1996; G.S.R. 97 (E), dated the 18th February, 2009; G.S.R. 149 (E), dated the 4th March, 2009; G.S.R. 543(E), dated the 22nd July, 2009; G.S.R. 739 (E), dated the 9th September, 2010; G.S.R. 809(E), dated the 4th October, 2010, G.S.R. 215 (E), dated the 15th March, 2011; G.S.R. 221(E), dated the 18th March, 2011; G.S.R. 354 (E), dated the 2nd May, 2011; G.S.R. 424 (E), dated the 1st June, 2011; G.S.R. 446 (E), dated the 13th June, 2011; G.S.R. 152(E), dated the 16th March, 2012; G.S.R. 266(E), dated the 30th March, 2012; and G.S.R. 277 (E), dated the 31st March, 2012; and G.S.R. 820(E), dated the 9th November, 2012; G.S.R. 176 (E), dated the 18th March, 2013; G.S.R. 535(E), dated the 7th August, 2013; G.S.R. 771(E), dated the 11th December, 2013; G.S.R. 2(E), dated the 2nd January, 2014; G.S.R. 229(E), dated the 28th March, 2014; G.S.R. 232(E), dated the 31st March, 2014; G.S.R. 325(E), dated the 7th May, 2014; G.S.R. 612(E), dated the 25th August 2014; G.S.R. 789(E), dated the 11th November 2014; S.O. 3305(E), dated the 7th December, 2015; S.O.4(E), dated the 1st January 2016; G.S.R. 35(E), dated the 14th January 2016; G.S.R. 281 (E), dated the 7th March, 2016; G.S.R. 496(E), dated the 9th May, 2016; G.S.R.497(E), dated the 10th May, 2016; G.S.R.978(E), dated the 10th October, 2016; dated the 28th October, 2016 ; and lastly amended *vide* notification G.S.R. 1265(E), dated the 13th October, 2017.

Item No.06

Court No. 1

**BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI**

Original Application No.1093/2024

News Item titled "Study finds wide variety of nitrogen-use efficiency in Indian rice varieties" appearing in The Hindu dated 11.08.2024

Date of hearing: 23.08.2024

**CORAM: HON'BLE MR. JUSTICE PRAKASH SHRIVASTAVA, CHAIRPERSON
HON'BLE DR. A. SENTHIL VEL, EXPERT MEMBER**

Applicant: None appeared

ORDER

1. This original application is registered *suo motu* on the basis of the news item titled "Study finds wide variety of nitrogen-use efficiency in Indian rice varieties" appearing in The Hindu dated 11.08.2024.

2. The news item relates to wide variations found among popular varieties of rice in India in their ability to use nitrogen. As per the article, this knowledge can be used to develop newer varieties that use less nitrogen and are high-yielding, thus slashing expenditure on imported fertilizers and reducing nitrogen-linked pollution.

3. The news article states that Cereals consume two-thirds of all urea in India, led by rice. Poor fertilizer nitrogen-use efficiency (NUE) wastes N (nitrogen)-fertilizers worth ₹1 trillion a year in India and over \$170 billion per year globally. It highlights that Nitrogen use efficiency refers to the yield of a crop relative to the nitrogen (natural and artificial) available to it.

4. The news item further states that N-fertilizers are the main source of nitrous oxide and ammonia pollution of air and nitrate/ammonium pollution of water, affecting health, biodiversity, and climate change. As

per the research, the NUE of the best varieties were five times as much as the least, the investigation found. However, a high NUE doesn't always mean the highest yields and farmers in India generally prefer varieties with the highest yields.

5. The article states that the focus of Indian agriculture has for a long time been to solely increase yield. The article alleges that though this was necessary during the green revolution, it also meant more synthetic fertilizers, more wastage and pollution. It claims that India needs to find newer crops that have improved NUE and yields.

6. The article further explains that India is the world's second-largest source of nitrous oxide (N₂O), a greenhouse gas that heats up the atmosphere far more than carbon dioxide. Nearly 11% of such global manmade emissions in 2020 were from India, topped only by China at 16%. The major source of these emissions is fertilizer usage, according to a global assessment of N₂O emissions.

7. The news item raises substantial issue relating to compliance of the environmental norms, especially compliance of Air (Prevention and Control of Pollution) Act, 1981 and the Environment Protection Act, 1986.

8. Power of the Tribunal to take up the matter *suo-motu* has been recognized by the Hon'ble Supreme Court in the matter of "*Municipal Corporation of Greater Mumbai vs. Ankita Sinha & Ors.*" reported in 2021 SCC Online SC 897.

9. Hence, we implead the following as respondents in the matter:

- (1). Indian Council of Agricultural Research, through its Secretary, Krishi Bhavan, New Delhi 110 001

- (2). Ministry of Agriculture and Farmer Welfare, through its Secretary, Krishi Bhavan, New Delhi 110 001
- (3). Ministry of Environment, Forest and Climate Change, through its Secretary, Indira Paryavaran Bhawan Jorbagh Road, New Delhi – 110 003
- (4). Central Pollution Control Board, through its Member Secretary, Parivesh Bhawan, East Arjun Nagar, Delhi-110032

10. Issue notice to the above respondents for filing their response/reply by way of affidavit before the Tribunal at least one week before the next date of hearing. If any of the respondents directly files the reply without routing it through his advocate then the said respondent will remain virtually present to assist the Tribunal.

11. List on 03.12.2024.

Prakash Shrivastava, CP

Dr. A. Senthil Vel, EM

August 23, 2024
Original Application No.1093/2024
SN