Fertilizer Subsidy: A Brief Profile

According to the Economic Survey 2015-16, fertilizer subsidy forms 0.8 % of the GDP. In the Union Budget 2016-17, fertilizer subsidy amounted to almost 27.9 % of the total subsidy amount. It accounts for the second highest subsidy component after payments for food subsidy. The subsidy is provided on both indigenously manufactured and imported fertilizer. India lacks self sufficiency in the production of fertilizers leading to large imports from foreign sources . Within the subsidy regime, a gamut of policies exists for different types of fertilizers. The lack of a uniform policy also contributes to an unwieldy and complex fertilizer subsidy regime.

Present Scenario

On the basis of regulation, the fertilizers are divided into two categories.

- **Controlled Fertilizers:** Urea is the only fertilizer which is subject to price and distribution control. Fifty percent of the urea movement in the country is controlled under the Essential Commodities Act (ECA). The movement and distribution of the both manufactured and imported urea is controlled by the Department of Fertilizers.

- **De-controlled Fertilizers:** This category comprises of Phosphorus (P) and Potassium (K) based fertilizers which includes products like DAP, NPK complexes, MOP, MAP, TSP, AS , SSP etc. The maximum retail price of P&K fertilizers is fixed by the importers/manufactures at 'reasonable levels as per market dynamic'. Supply plans for imported and domestically manufactured P&K fertilizer is drawn up by the Department of Fertilizer and conveyed to the states. Twenty per cent of P&K fertilizer movement in the country is also controlled under the ECA.

Production Capacity: The production capacity of fertilizers in India is skewed towards Urea. The total installed capacity of fertilizer production in the country stands at around 202 million metric tons (MMT), with 132.58 lakh MT of nitrogen and 70.60 lakh MT of phosphatic nutrient. About 70% of the urea requirement is met through indigenous production with the balance being met through imports. In case of P&K fertilizers, India is dependent on imports for up to 90 % for Phosphatic nutrients and 100 % for Potassic nutrients, either in the form of raw material or finished product. This imbalance in production across Urea and P & K fertilizers is largely because due to lack of indigenously available raw materials used for P&K fertilizers. A significant proportion (27.95%) of subsidy payments made by the Government of India is for fertilizers out of which Urea accounts for the highest value.

Urea

Availability: Urea is domestically produced by 30 large size plants in the country. Out of the 30 plants, 27 of them use natural gas (domestic gas or LNG) as input (for feedstock and fuel) and the other 3 units utilize Naphtha. Urea import is heavily regulated and is only allowed through three State Trading Enterprises (viz. State Trading Corporation of India (STC), Metal and Minerals Trading Corporation of India (MMTC) and India Potash Limited (IPL)).

The Urea production increased from 219.85 lakh metric tonne to 225.74 in 2012-13. Over the next years, the production has been range-bound with minor annual variations. The overall production increased marginally by 2.72 % from the 2011-12 to 2014-15. There was a noticeable dip in imports for the years 2013-14 from 78.34 lakh metric tonnes in 2011-12 to 70.88 lakh metric tonnes. Overall, the import increased noticeably from 78.34 lakh metric tonne to 87.49 lakh metric tonne in 2014- 15, amounting for an increase of around 11.72 %.

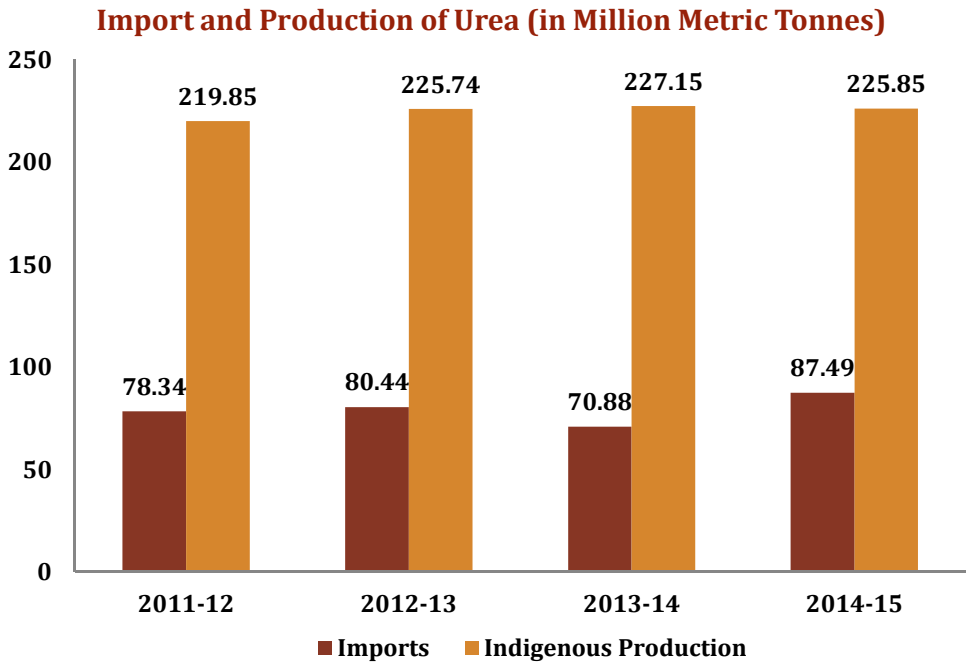


Figure 1: Production and Import of Urea 2011-12 to 2014-15; Source Lok Sabha Unstarrred Question 178, 21/07/2015, Unstarred Question 354, 26/02/2016

Subsidy Policy for Urea Fertilizer

Fixed Maximum Retail Price: The price of Urea is fixed by the Government at Rs 5360 per metric tonne . The difference between the government fixed price of Urea and the delivered cost of companies is given as subsidy.

New Pricing Policy (NPS): The New Pricing Policy (NPS) is the framework under which the delivered cost is calculated. It was formulated in 2003, whereby urea producing units were grouped depending on feedstock (natural gas, liquefied natural gas (LNG) or naphtha) and vintage (i.e. age of the machinery). The delivered cost was based on the group average comprising of a designated cost of production plus 12% post tax return on net worth. Units which have a lower or higher delivered cost of production by 20 % of the group average would get concession as per their own individual unit. Changes were made in the policy primarily to bring about energy efficiency and increase in overall production of Urea. The group based categorization of energy norms was done in order to promote healthier energy consumption by accommodating the different types of feedstocks which were used to produce Urea.

New Urea Policy 2015: Under NUP 2015, gas based urea producing plants are divided into three groups based on their energy consumption norms. In continuation of NPS-III, the energy consumption levels under the NPS 2015 are set at the average of pre set energy norms of NPS-III and the average energy consumption of the years 2011-12, 2012-13, 2013-14 or the levels of energy norms of NPS-III, whichever is lower. NUP 2015 paid the producers an additional fixed cost of Rs. 350/MT or the actual increase in the fixed cost up to Rs. 350/MT in 2012-13 as compared to 2002-3 whichever is lower. The policy also provides for the grant of the minimum fixed cost of Rs. 2300/MT or actual fixed cost prevailing during 2012-13, whichever is lower, after taking into account the aforesaid additional fixed cost.

Despite multiple policies which aim at strengthening the indigenous production of urea, the indigenous production of Urea has not shown any significant improvement. At the same time subsidy for Urea has been steadily rising from 2011-12 to 2014-15, as represented below.

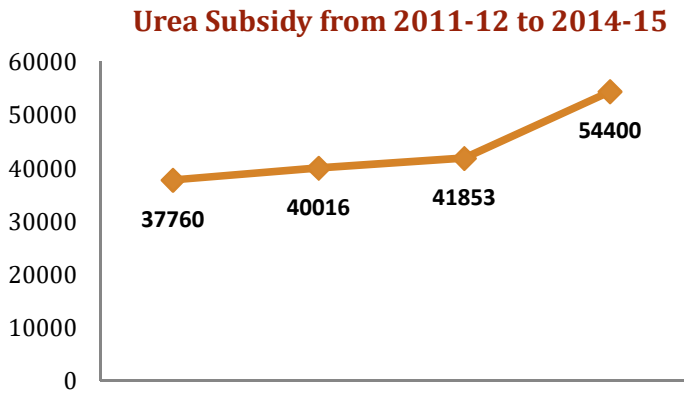
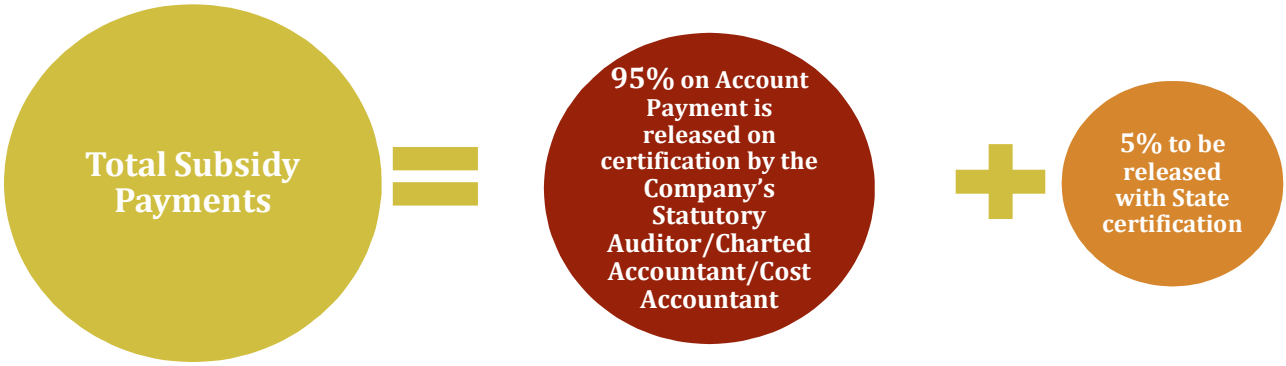


Figure 2: Lok Sabha Unstarred Question 354, 26/02/2016, Indian Fertilizer Scenario, 2013, Department of Fertilizers

The provision for subsidy has increased significantly from Rs 37,760 crore in 2011-12 to Rs 54,400 crore in 2014-15, which is a growth of 44.06 %. There was a stark increase in the subsidy payments from an amount of Rs 41,853 crore in 2013-14 to Rs 54,400 crore in 2014-15, which is a growth of 30 %.

The rise in the subsidy payments can be due to the high price of feedstock (gas or naphtha) and inflationary pressure on the economy amongst other reasons.

Subsidy Payments



Subsidy payments for Urea fertilizer are made in two installments. A majority of the funds (95%) are released with certification by the company itself through the statutory auditor or the chartered account. The last 5 % is released after State Government certification for quantity and quality which has to be done within 30 days and 6 months respectively. These certifications, required for the remainder of 5%, are known as Proforma B. The data for the quality and quantity certification is uploaded on Fertilizer Management System (FMS), which is a web based monitoring device for fertilizer movement. All real time movement of fertilizers is supposed to be uploaded on this web portal in order to track fertilizer consignments.

Problems and Leakages in Urea Subsidy

Despite the large amount of subsidy which is paid to manufacturers and importers of Urea, it still cannot be guaranteed that the end beneficiaries are farmers because of the leakages that exist.

Black Marketing: The subsidy on urea means that the price of Urea fixed by the government is considerably lower than the non-subsidized market price. Urea subsidy is provided for agricultural purposes only. However, as urea is also used as an ingredient in other industries and manufacturing processes like chemical industry, automobile systems, and laboratories; subsidized urea is diverted towards other industries. This often leads to a shortage of urea for the intended beneficiary of the subsidy i.e. the farmer. The diversion of subsidized urea

Economic Survey 2015-16, around 51 % of Indian farmers buy urea at a price which is above the fixed cost. However, the Central government has taken measures to control the black marketing of Urea, through a new policy of promoting neem coated Urea. Indigenous manufacturers of Urea have to mandatorily produce 75% of the subsidized Urea as neem coated urea (NCU). Further, they are free to produce the whole amount of subsidized urea as NCU. This form of urea i.e. NCU is not only environment friendly but it also prevents the usage of Urea for non agricultural purposes.

Cross-border Smuggling: The low price of Urea within India provides an incentive for smuggling of Urea to other countries where the price is higher. In Bangladesh and Nepal, a 50 kg bag of urea costs Rs.685 and Rs. 622 in respectively, as compared to the cost of a 50 kg bag in India which is Rs 268. It is estimated that around 41% of subsidized Urea is smuggled across borders or diverted to other countries. From 2012 to June 2015, there have been a total of 2561 cases registered for smuggling of Urea from India, mainly to Bangladesh and Nepal.

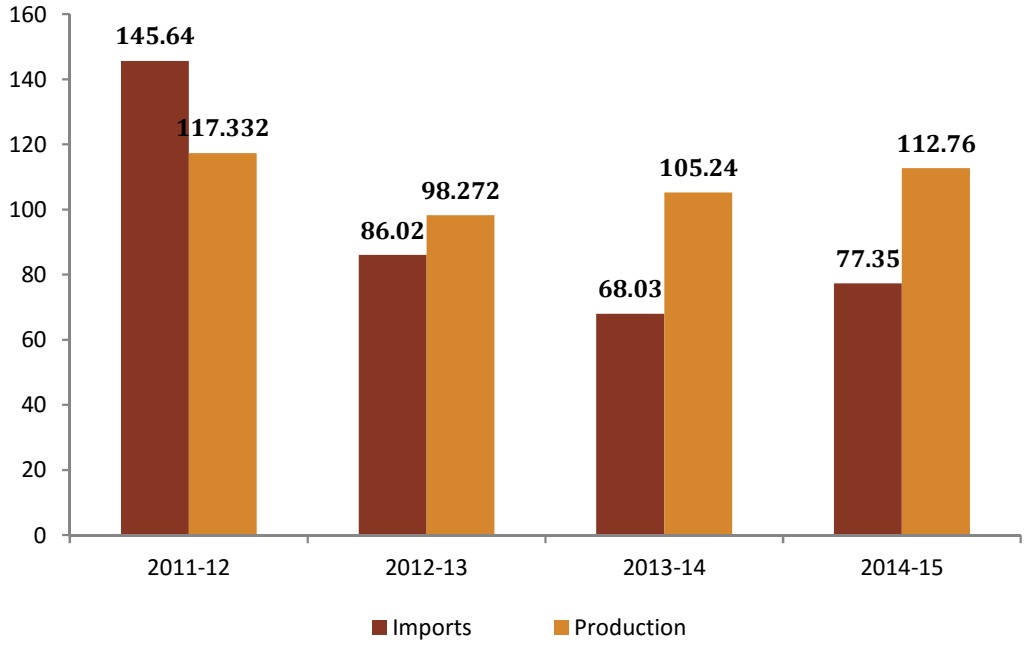
Inefficiency in Production: The present subsidy regime allows individual inefficient units to exceed the group energy consumption levels with no disincentives; as the delivered cost is calculated on the basis of the individual unit's level of energy consumption. The original intent of allowing differential energy consumption for individual units was to incentives higher energy efficiency. Allowing individual units' concession even for higher energy consumption disincentivizes the units to transition to energy efficient manufacturing process. An estimated 24 % of the fertilizer subsidy is lost due to inefficient manufacturing processes.

P&K Fertilizers

Availability: India lacks self sufficiency in the production of P&K fertilizers. The indigenous production of P&K fertilizers is much less extensive as compared to that of Urea. At present, there are 21 medium size units which produce DAP and complex fertilizers, 2 units which produce ammonium sulphate as a byproduct and 97 small scale units which produce Single Super Phosphate (SSP).

There is a high dependency on imports for P&K fertilizers, due to shortage of indigenous raw material required for the production of both potash and phosphate fertilizers. For example, the indigenous rock salt phosphate

Import and Production of P&K Fertilizers (Million Metric Tonne)



output fulfils only 10 % of the requirement of phosphate fertilizers. In the case of potassic fertilizers, the dependency is even more, due to the paucity of commercially exploitable sources. Unlike urea, the imports of P&K fertilizers are not heavily regulated. They are imported under 'Open General License' and hence companies are free to import P&K fertilizers as per their own commercial judgment. The paucity of natural resources for the production of P&K fertilizers results in imports for this type of fertilizer remains high.

As evident in the figure above, the imports of P&K fertilizers have reduced significantly, from 145.64 Lakh MT to 112.76 Lakh MT between 2011-12 and 2014-15. The decrease in the amount of imports has been almost 22.3 %.The internal production of P&K fertilizers has been consistently declining from 117.3 Lakh MT to 77.3 Lakh MT, which is a decrease of 34%.

Subsidy Policy for P&K fertilizers

The Nutrient Based Subsidy (NBS) policy governs the subsidy for P&K fertilizers. Under NBS, the subsidy is given to manufacturers/importers on the basis on the nutrient contents of the fertilizer. The nutrient content is measured on the basis of per kg. The subsidy is provided for nutrients like Phosphorus (P), Potash (K), Nitrogen (N) and Sulphur (S) as well as micro nutrients Zinc (Zn) and Boron (Br).

Nutrient Based Subsidy (NBS) Policy: An Inter-Ministerial Committee (IMC) decides the subsidy for nutrient per kg on an annual basis. The subsidy is fixed based on a number of factors including international prices of fertilizers and raw materials, exchange rates, inventory levels and the current prices of these fertilizers. The fertilizer manufacturers/importers are free to decide the price of the fertilizers based on reasonable grounds. At present, 22 grades of P&K fertilizers are covered under the NBS policy. In order to curb excessive price rise of P&K fertilizers, the manufacturers/ importers are required to submit the certified cost data which explains the pricing of their products.

The intention behind the institutionalization of the NBS policy was to encourage production as well as competition between the fertilizer producers and to diversify the production of P&K fertilizers within the country; however fertilizer production of the P&K category has only decreased in the country since the introduction of NBS.

The subsidy amount has decreased from 36108 crore in 2011-12 to 20667.3 crore in 2014-15, a decrease of 42.7%.

Subsidy for P&K Fertilizers 2011-12 to 2014-15

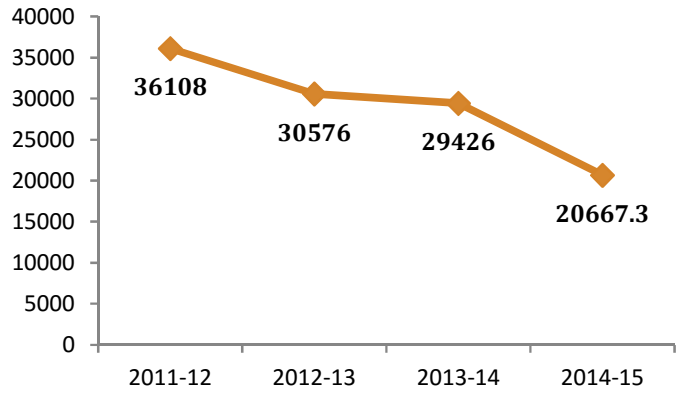
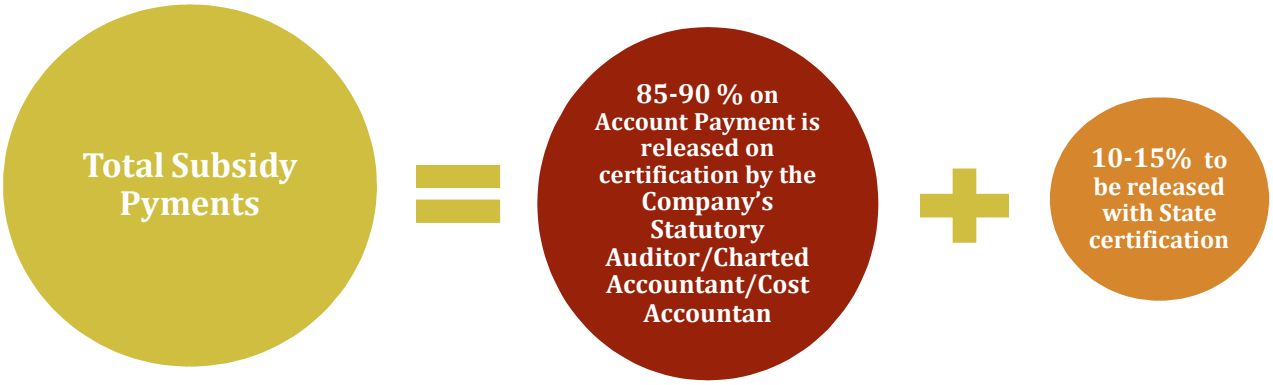


Figure 4: Lok Sabha Unstarred Question Number 354, 26/022016, Indian Fertilizer Scenario, 2013, Department of Fertilizers

Subsidy Payments

A majority of the subsidy is released in the first installment, 85 % (90 % with bank guarantee) is paid as 'on account' payment against certification by the Company's Statutory Auditor/ Chartered Accountant. The remaining 10-15% is released through retailer's receipt based on first point sales which is uploaded on FMS. State confirmation of quantity and quality is required within thirty days and 6 months respectively, which is also uploaded on FMS.



Problems/Leakages with NBS: Under NBS, the overall subsidy for the P&K fertilizers has decreased however certain problems still remain as pointed out by a CAG performance audit (Audit Report no. 16 of 2015) of the Nutrient Based Subsidy Policy for Decontrolled Phosphatic & Potassic Fertilizers. Some of these problems have been outlined below.

Lack of a clear road map: The Audit report observed that Department of Fertilizers (DoF) did not have a defined road map or timelines for achieving the objectives of NBS. There is no prescribed monitoring mechanism which has been laid out by the DoF, through which each stage of the subsidy flow could be examined.

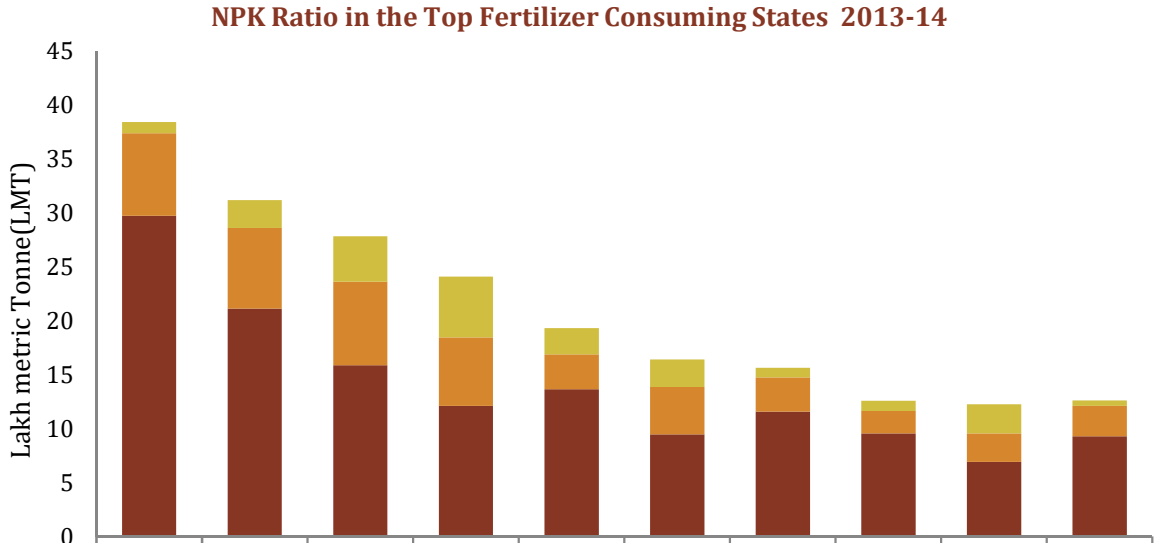
Non-recovery of gains from P&K manufactures using cheaper domestic gas: The subsidy on P&K fertilizer is fixed annually regardless of feedstock. Companies use imported or domestic gas for the production of fertilizers. In effect, companies which use cheaper feedstock gain an advantage over others which use a more expensive energy source. The report pointed out that certain companies use domestic gas which is cheaper, as compared to imported gas, which allows them an unfair advantage in terms of subsidy payments. The DoF has not formulated guidelines which would allow the department to recover the differential amount which was spent on these companies as subsidy.

Lack of an accurate monthly supply plan: A monthly supply plan for all the fertilizers is drawn up by the DoF and given to other stakeholders to fulfill the requirement of the fertilizers. However after the supply of fertilizer by the companies, the monthly supply plan was adjusted according to the supply of fertilizers reported by the companies. There was a significant difference between the monthly supply plan and the actual supply by the companies, which negates the purpose of a prescribed supply plan.

Fixing of price: Under NBS, companies are required to submit cost plans to justify the Maximum Retail Price fixed by them for their products. The audit report concluded that unreasonable costs had been taken into consideration for fixing the MRP of the fertilizers in many cases. Further some companies did not factor in the low procurement cost of imported DAP, while fixing the MRP which allowed the companies to gain an undue profit.

Long Term Impact of Imbalance in Subsidies

The low cost of Urea has led to an imbalance in use of fertilizers due to overuse of Urea. This usage pattern has an adverse impact on soil health as it is not based on the actual requirement of the soil. The ideal ratio of nutrients differs according to soil types, but generally the optimal ratio for Indian soils is considered to be 4:2:1 corresponding to the Nitrogen (N), Phosphorus (P) and Potassium (K) content. The ratio of N in NPK ratio of the fertilizers consumed has been constantly rising since 2007-08, when the ration was 5.5:2:1 to 8.0:2.7:1 in 2013.



	U.P.	A.P.	Maharashtra	M.P.	Punjab	Karnataka	Gujarat	Bihar	West Bengal	Rajasthan
Potassium (K)	1.04	2.59	4.24	5.63	2.4	2.53	0.9	0.95	2.7	0.51
Phosphorus (P)	7.64	7.47	7.73	6.34	3.25	4.42	3.15	2.09	2.62	2.8
Nitrogen (N)	29.72	21.12	15.86	12.1	13.64	9.45	11.58	9.54	6.92	9.3

Figure 5: Agriculture Statistics at a Glance, 2014, Table 14.4(a)

As represented in the figure above, the nutrient consumption ratio of most of the states does not align with the normative 4:2:1 NPK ratio. Uttar Pradesh, which consumes the highest nutrients, has one of the most skewed NPK ration i.e. 29:7:1

Way Forward

Direct subsidy to the farmers can help prevent leakages which are a characteristic of this present system. The report of the Task Force on Direct Transfer of Subsides on Kerosene, LPG and Fertilizer had suggested in 2011 a phased direct transfer of fertilizer subsidy to the farmer. A brief outline of the phases is given below.

Phase 1: A robust information system which would allow the authorities to track the movement of the fertilizers. The data should be made available right from the manufacturer to the retailer level in order to ensure transparency of process. Up-to-date information would bring about more accountability from all the stakeholders involved in subsidy disbursements.

Phase 2: The second stage would involve shifting the subsidy payments from the manufacturer to the retailer. This stage will involve strengthening of the payment procedures which are followed in subsidy disbursements. Further, the procedure adopted for payments should be "electronic and auditable" which would ensure all payments can be tracked to the last beneficiary.

Phase 3 (Direct Benefit Transfer): The last stage would be subsidy payments made to the farmers. This payment would be directly made to the bank account of the farmers, under Direct Benefit Transfer (DBT) thus eliminating any intermediaries. However a critical gap which needs to be fulfilled for the success of this stage is the assessment of individual specific requirement of soil so that farmers can use customized fertilizer which satisfies the requirement of the soil. For this purpose fertilizer subsidy needs to be linked up with the Soil Health Card Schemes.

Soil Health Card Scheme: The Soil Health Card Scheme has been introduced in order to promote better nutrient management of the soil. The scheme was initiated in the year 2015, under the Department of Agriculture and Farmers Welfare, with an outlay of Rs 568.54 crore for the next three years. Soil samples would be collected by the State government in order to examine the nutrient make up of the soil, which would then be documented on a card. It will also contain an advisory section which would inform the farmer about the dosages of certain nutrients which need to be added in the soil. In order to ensure requirement specific subsidy for fertilizers, it is imperative that soil health cards are generated for maximum number of land holdings in the country. Soil Health Cards would not only provide for targeted subsidy, but can also correct the nutrient imbalance in Indian soils which has been pointed out in the earlier section.

Additional Recommendations

Division of subsidy payments: The subsidy payments for Urea and P&K fertilizers have a similar installment structure. The first installment with the majority of the funds is paid after certification by the Company's auditor. The second installment is paid whether 5% or 10-15% after certification by the State or the retailer. Thus, the subsidy payments are not based on consumption. The only accountability which exists in the system is the receipt of retailer and state verification for the payment of the second installment of the subsidy. In order to increase the accountability, at least a section of the first installments of payments (when the majority of the funds are disbursed) could be based on actual first point sales, instead of the company's self certification. The web based FMS could be utilized efficiently to track first point sales.

Targeted subsidy: All farmers, irrespective of the farm size, are eligible for subsidy under the current subsidy regime. A cap of certain amount of subsidized fertilizer can be allotted to each farmer, beyond which the subsidy would be withdrawn and the fertilizer would be sold at MRP, like the LPG subsidy system. This would allow small farmers to buy the amount of fertilizers they need. The farmers, who do not need the subsidized fertilizer, would be liable to pay the MRP after acquiring a certain amount of subsidized fertilizer.

Low price of Urea: The price of Urea per MT has increased by around 1% over the last five years. On the other hand, the price of DAP: 18-46-0-0 has increased from Rs 17000/MT in 2012 to Rs 23060/MT by June 2014. Another example is that of MOP 16-20-0-13 which cost Rs 18200 /MT in 2012 to Rs 18560/MT in 2015. This has led to a severe imbalance in favour of use of Urea at the cost of P&K fertilizers. There has to be some price parity between the two types of fertilizers to encourage healthier fertilizer consumption. The price of Urea needs to be increased by some percentage every year, in order to keep up with the inflationary pressures. This would also encourage further usage of P&K fertilizers which could provide for a balance fertilized usage in the country.

Conclusion

The fertilizer subsidy regime is extensive but with no uniform policy. Different policies are followed for different types of fertilizers. There have been certain improvements which have been made in the subsidy regime due to which the subsidy burden of P&K fertilizers has decreased. However, the indigenous production of P&K fertilizers has also gone significantly. As far as Urea is concerned, the subsidy burden continues to increase while there is no significant increase in production. In order to reduce the subsidy burden, it is crucial to increase the capacity of indigenous production. In order to streamline the whole process of subsidy payments it is imperative that greater accountability is created in the system.