

Demand for Grants 2019-20 Analysis

Agriculture and Farmers' Welfare

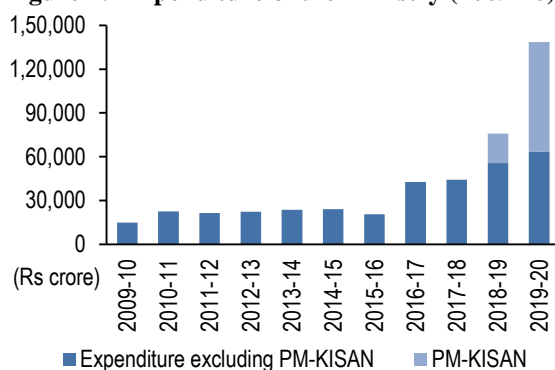
The Ministry of Agriculture and Farmers' Welfare has two Departments: (i) Agriculture, Cooperation and Farmers' Welfare, which implements policies and programmes related to crop husbandry and farmers' welfare, and manages agriculture inputs, and (ii) Agricultural Research and Education, which coordinates and promotes agricultural research and education in the country. This note examines the allocations to the two Departments within the Ministry and their expenditure, and discusses issues in the agriculture sector.

Overview of Finances

The Ministry has been allocated Rs 1,38,564 crore in 2019-20.¹ Allocation to the Ministry accounts for 5% of the central government's budget. This allocation is 82.9% higher than the revised estimate for 2018-19. This increase is due to the allocation of Rs 75,000 crore to PM-KISAN (income support scheme for farmers), which was announced in the 2019-20 interim budget.² The scheme (being implemented from December 2018) also received allocation of Rs 20,000 crore for the year 2018-19.

PM-KISAN accounts for 54% of the allocation to the Ministry in 2019-20. Other expenditure items of the Ministry have been allocated Rs 63,564 crore in 2019-20, a 14% increase over the previous year.

Figure 1: Expenditure of the Ministry (2009-20)



Note: Figures for 2018-19 and 2019-20 are estimates.

Source: Expenditure Budget, Union Budgets (2011-20); PRS.

Note that the Ministry's expenditure saw a major increase in 2016-17 due to the Interest Subsidy scheme (for providing interest subsidy on short-term loans to farmers). The scheme, which is being accounted under the Ministry of Agriculture since 2016-17, was under the Ministry of Finance earlier.

Departments: The Department of Agriculture, Cooperation and Farmers' Welfare has received 94% of the allocation to the Ministry in 2019-20, while 6% has been allocated to the Department of Agricultural Research and Education (Table 1).

Table 1: Allocations to the Ministry (Rs crore)

Department	2017-18 Actuals	2018-19 Revised	2019-20 Budgeted	% change in 2019-20 over 2018-19
Agriculture, Cooperation and Farmers' Welfare	37,397	67,800	1,30,485	92.5%
Agricultural Research and Education	6,943	7,953	8,079	1.6%
Total	44,340	75,753	1,38,564	82.9%

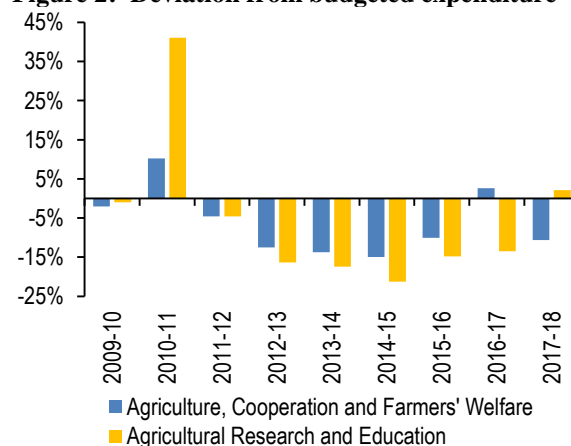
Sources: Expenditure Budget, Union Budget 2019-20; PRS.

Agriculture, Cooperation and Farmers' Welfare has been allocated Rs 1,30,485 crore in 2019-20, an increase of 92.5% (Rs 62,685 crore) over the revised estimate of 2018-19. More than 77% of the Ministry's budget is proposed to be spent on three schemes under this Department: PM-KISAN (54%), the Interest Subsidy scheme (13%), and Pradhan Mantri Fasal Bima Yojana (10%).

In 2019-20, Agricultural Research and Education has been allocated Rs 8,079 crore, an increase of 1.6% (Rs 126 crore) over the revised estimate of 2018-19.³ Expenditure under the Indian Council of Agricultural Research (ICAR) accounts for 60% of the Department's allocation in 2019-20. Table 5 and Table 6 in the Annexure show the allocations to major expenditure heads of the two Departments.

Budgeted vs actual expenditure: Expenditure by both the Departments has been lower than their budget allocations in most years during the period 2009-18 (Figure 2). The Standing Committee on Agriculture (2016) observed that a slow pace of utilisation of funds in the first two quarters of the financial year has resulted in cuts in allocations for the rest of the year, which leads to underspending.⁴

Figure 2: Deviation from budgeted expenditure



Source: Expenditure Budget, Union Budgets (2011-20); PRS.

Policy proposals in the Budget Speech

In her budget speech, the Finance Minister made the following proposals regarding agriculture:

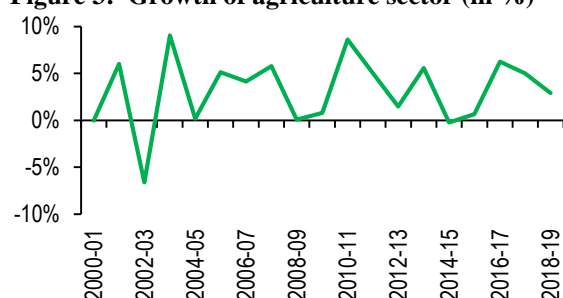
- The government will work with states to allow farmers to benefit from e-NAM, irrespective of the provisions of the APMC Acts of states.
- 10,000 new Farmer Producer Organisations are aimed to be formed in the next five years to ensure economies of scale for farmers.
- The government has proposed replication of the Zero Budget Farming model, which is already being practiced in a few states.

Issues

Growth of the agriculture sector

Growth of the sector comprising of agriculture and allied activities has been volatile over the years (Figure 3). In 2018-19, growth rate of the sector is estimated at 2.9%, as compared to 5% in 2017-18.

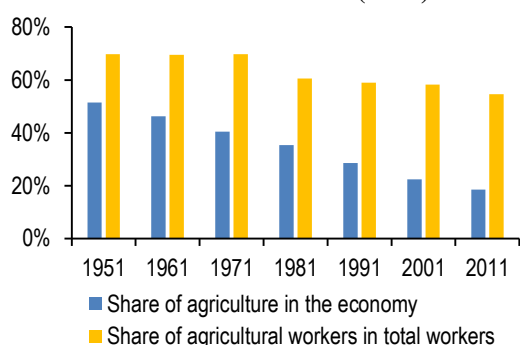
Figure 3: Growth of agriculture sector (in %)



Sources: Central Statistics Office (CSO), MOSPI; PRS.

The contribution of the agriculture sector in the economy has significantly decreased from 51% in 1951 to 19% in 2011. Meanwhile, the share of workers who are dependent on agriculture has decreased at a lower rate from 70% in 1951 to 55% in 2011. The Committee on Doubling Farmers' Income (Chair: Mr. Ashok Dalwai, 2017) observed that one way of significantly improving income of farmers is by shifting the agricultural workforce to more productive employment in non-farm sectors.⁵

Figure 4: Share of agriculture in the economy and in total number of workers (in %)



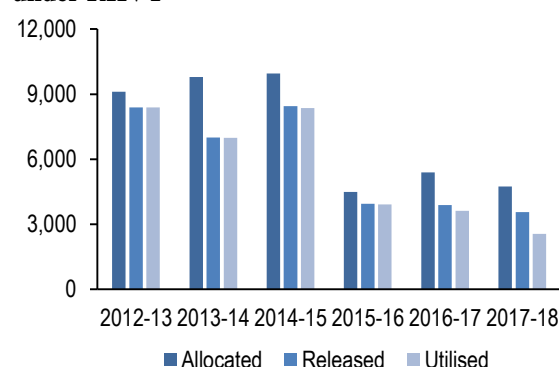
Sources: Agricultural Statistics at a Glance 2017, Ministry of Agriculture and Farmers' Welfare; CSO, MOSPI; PRS.

Rashtriya Krishi Vikas Yojana: The umbrella scheme was initiated in 2007 for ensuring holistic development of agriculture and allied sectors by allowing states to choose their own development activities as per district and state agriculture plans.⁶

With the aim of making farming a remunerative economic activity, the Ministry provides financial assistance to states to spend on sub-schemes such as: (i) pre-harvest and post-harvest infrastructure, (ii) value addition using agribusiness models, and (iii) projects based on local and national priorities.

In 2019-20, Rs 3,745 crore has been allocated to the scheme, a 4% increase over the 2018-19 revised estimate. The Standing Committee on Agriculture (2017) observed that allocations are not utilised optimally and timely due to delay in approval of projects and funds by states and consequent slow progress of implementation, causing reduction in release of funds.⁷ For instance, out of Rs 5,392 crore allocated in 2016-17, Rs 3,892 crore were released, leading to a shortfall of 28% (Figure 5). Further, out of the funds released, Rs 3,616 crore was utilised, which increased the shortfall to 33%.

Figure 5: Funds allocated, released and utilised under RKVY



Note: The decrease in 2015-16 from 2014-15 is due to change in funding pattern from 100% centre to fund sharing with states. Sources: Lok Sabha Unstarred Question Nos. 2912 and 4560, March 13, 2018 and January 8, 2019; PRS.

Income support to farmers

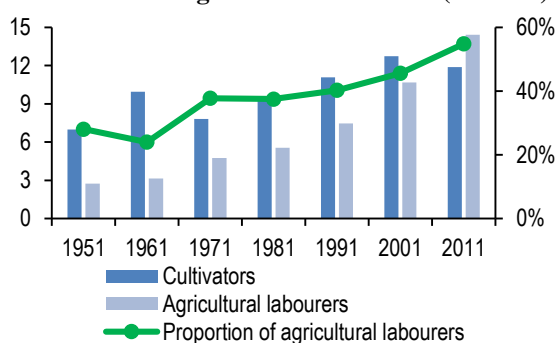
The PM-KISAN scheme was launched in February 2019 to provide income support of Rs 6,000 per year to farmer families with the aim of supplementing their financial needs in procuring inputs for appropriate crop health and yields.⁸

Earlier, only small and marginal landholder farmer families, i.e. families with total cultivable landholding of up to two hectares, were eligible for the scheme. In May 2019, the Union Cabinet approved extension of the scheme to all farmer families irrespective of their size of landholdings. With this increase in coverage, expenditure on the scheme is estimated to increase from Rs 75,000 crore to Rs 87,218 crore in 2019-20.⁹ However, allocation to the scheme in the budget remains at Rs 75,000 crore for the year 2019-20.

Implementation: Initially, the scheme was expected to cover 12.5 crore beneficiaries.⁹ With the increase in coverage, the revised number of beneficiaries are estimated to be 14.5 crore.⁹ As on June 25, 2019, the number of beneficiaries who have received the first and second instalments are 3.3 crore (December 2018 – March 2019) and 2.9 crore (April – July 2019), respectively. A total of Rs 12,455 crore has been disbursed so far under the scheme through these two instalments. State-wise details are given in Table 8 in the Annexure.

Land as an eligibility criterion: Farmer families which own cultivable landholding are eligible for receiving income support under the scheme. The beneficiaries are identified by states based on their land records. The scheme does not cover landless agricultural labourers who form 55% of the agricultural workers in the country (Figure 6).¹⁰ Agricultural workers include cultivators and labourers working in the agriculture sector. The share of agricultural labourers in total agricultural workers has increased over the years from 28% in 1951 to 55% in 2011. The share of cultivators has reduced from 72% to 45% during the same period.

Figure 6: Breakup of agricultural workers into cultivators and agricultural labourers (in crore)



Sources: Agricultural Statistics at a Glance 2017, Ministry of Agriculture and Farmers' Welfare; PRS.

Agricultural credit

Agriculture credit at a subsidised cost is provided to farmers through the Interest Subsidy scheme.¹¹ Under the scheme, interest subsidy of two percent is provided to farmers on their short-term crop loans of up to three lakh rupees. An additional interest subsidy of three percent is provided to farmers repaying their loan on time (within a year).

In 2019-20, the scheme has been allocated Rs 18,000 crore, a 20% increase over the 2018-19 revised estimate. Issues related to the scheme are:

Inadequate allocation for unsettled claims: The Standing Committee on Agriculture (2017) noted that the budget allocation to the scheme has been inadequate.⁷ It observed that, in 2017-18, against an estimated requirement of Rs 41,748 crore for unsettled claims (including past claims), Rs 15,000 crore was allocated. Of this, Rs 13,046 crore was spent, leaving Rs 28,702 crore as unsettled claims.

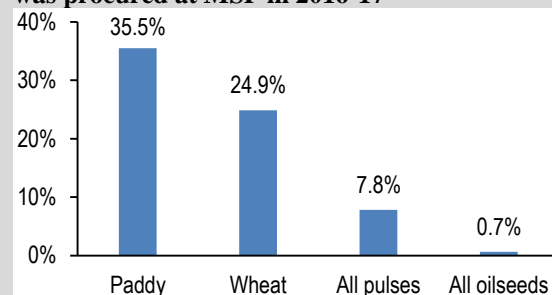
Minimum Support Prices (MSPs)

MSP is the price at which the government agencies purchase farmers' produce of certain notified crops.

The Finance Minister in the 2018-19 budget speech announced that MSPs for certain Rabi and Kharif crops will be provided at least at one and a half times the production cost.¹² This production cost, A2+FL, includes costs of inputs such as seeds and fertilisers, and implied cost of family labour.

While MSPs are announced for 23 crops every year, public procurement is limited to a few such as paddy, wheat, and, to a limited extent, pulses.¹³ The procurement is also largely from a few states. Three states (Haryana, Madhya Pradesh, and Punjab) which produce 45% of the wheat in the country account for 81% of its procurement.¹⁴ For paddy, six states (Andhra Pradesh, Chhattisgarh, Haryana, Odisha, Punjab, and Telangana) adding 38% production have 82% share in procurement.¹⁴

Figure 7: Percentage of crop production that was procured at MSP in 2016-17



Source: Committee on Doubling Farmers' Income (2017), Ministry of Agriculture and Farmers' Welfare; PRS.

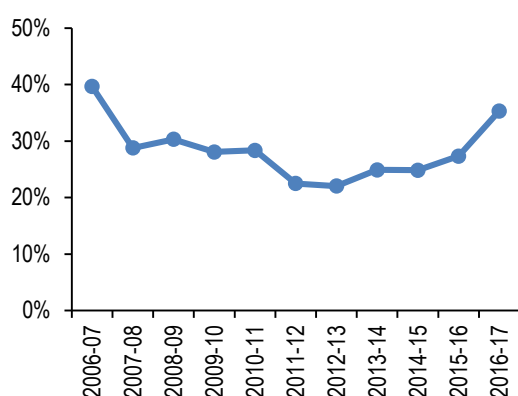
Other issues with the implementation of MSPs include: (i) low awareness among farmers before the sowing season (according to NITI Aayog, 62% of the farmers were informed of MSPs after the sowing season), (ii) long distances to the procurement centres, (iii) increasing cost of transportation for farmers, and (iv) inadequate storage capacity.¹⁵ The NITI Aayog noted that the agricultural pricing policy needs to be reviewed to ensure that farmers are receiving remunerative prices for their produce. Farmers are often forced to engage in distress sales, i.e. selling below MSPs.

In September 2018, the Union Cabinet approved the PM-AASHA scheme for procurement of crops from farmers.¹⁶ The scheme provides states the option to opt for another procurement mechanism (price deficiency payment system) as well. This mechanism does not involve any physical procurement of crops. Direct payment of the difference between the MSPs and the selling/modal prices of the crops will be made to pre-registered farmers in their bank accounts. Farmers who sell their crops in the notified market yards through a transparent auction process will be eligible.

Short-term vs long-term loans: In 2015, the Committee on Medium-term Path on Financial Inclusion under the Reserve Bank of India (RBI) observed that the interest subsidy scheme for short-term crop loans discriminates against long-term loans.¹⁷ Short-term crop loans are used for pre-harvest activities such as weeding, harvesting, sorting and transporting. Long-term loans are taken to invest in agricultural machinery and equipment, or irrigation. The Committee observed that the scheme does not incentivise long-term capital formation in agriculture, which is essential to boost productivity in the sector.

Over the past few years, the share of long-term loans in total agricultural credit in the country has decreased. It decreased from 40% in 2006-07 to 22% in 2012-13 (Figure 8).¹⁸ The share has increased to 35% in 2016-17. A low share of long-term loans in agricultural credit implies that farmers are taking loans for recurring expenditures rather than to fund long-term investments.

Figure 8: Share of long-term credit (2006-17)



Sources: Committee on Doubling Farmers' Income (2017), Ministry of Agriculture and Farmers' Welfare; PRS.

An Internal Working Group under the RBI (2015) observed that the Interest Subsidy scheme has distorted the agricultural credit system.¹⁹ Further, it stated that the scheme led to banks granting loans under the scheme without establishing that the loans are for agriculture, and claiming interest subsidy as well as priority sector benefit.

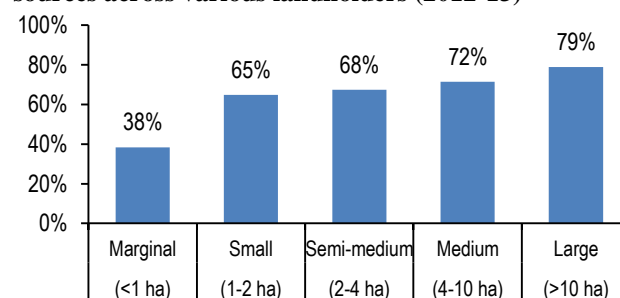
The RBI Committee (2015) observed that owner of the land is often not the cultivator even in the case of small and marginal holdings. For example, a landowner may get the benefit of subsidised credit at times, and may be the moneylender to his cultivator.¹⁷ The Committee recommended that agricultural credit must flow to the actual cultivator for which substantial reform is necessary.¹⁷ Further, it stated that the subsidised credit increases the probability of misuse. The Committee on Comprehensive Financial Services for Small Businesses and Low-Income Households (2016) also recommended the transfer of benefits to farmers directly, instead of subsidy and waivers.²⁰

Land reforms: Considering that access to agricultural credit is linked to formal land titles, the RBI Committee (2015) recommended that credit eligibility certificates, which would act as tenancy or lease certificates, should be issued to tenant farmers.¹⁷ These certificates would enable landless tenant cultivators to obtain agricultural credit.

Small and marginal farmers: Farmers with landholdings of less than a hectare primarily borrow from informal sources of credit such as moneylenders, whereas those with landholdings of two or more hectares primarily borrow from banks (Figure 9).¹⁷ Informal sources of credit are typically offered at higher rates of interests, and may not have proper documentation.

Note that 68% of the agricultural landholdings in the country belong to the marginal (less than one hectare) category.²¹ Another 18% belong to the small (between one to two hectare) category. Further, the share of the marginal category in total agricultural landholdings has been increasing over the years, from 51% in 1970-71 to 68% in 2015-16.

Figure 9: Share of borrowings from institutional sources across various landholders (2012-13)



Source: Committee on Medium-term Path on Financial Inclusion (2015), Reserve Bank of India; PRS.

Crop insurance

Crop insurance is provided to farmers under the Pradhan Mantri Fasal Bima Yojana (PMFBY).²² The scheme covers all farmers, including tenant farmers and sharecroppers, who are growing notified crops in notified areas. In 2019-20, the scheme has been allocated Rs 14,000 crore, an 8% increase over the 2018-19 revised estimate. Issues related to crop insurance raised over the years are:

Awareness about crop insurance: The Economic Survey 2017-18 noted that the share of agricultural households insuring their crops was low.²³ Less than 5% of the agricultural households cultivating major crops, such as rice and wheat, insured crops. Lack of awareness about crop insurance among farmers was the major factor for not insuring their crops. Further, lack of awareness about availability of crop insurance programmes was another reason.

The Standing Committee on Finance (2016) recommended that the awareness should be created about what crops should be grown based on factors such as soil quality and incidence of rainfall.²⁴

Coverage of farmers: In 2017-18, 5.18 crore farmers were insured under the scheme.²⁵ Note that PMFBY is mandatory for farmers with loans and optional for those without loans.²² Majority (73%) of the farmers had to compulsorily enrol under the scheme, whereas 27% were non-loanee farmers.

The Comptroller and Auditor General of India (2017) observed a low coverage of farmers without loans under the previous crop insurance schemes. It recommended the Ministry to ensure coverage of more farmers including those without loans.²⁶

Assessment of losses: The Standing Committee on Agriculture (2017) observed that the state governments are not readily accepting and adopting use of technology for assessing yield loss. It also observed that crop cutting experiments are not being carried out diligently.⁷ The Committee recommended that the Ministry should pursue state governments to adopt technology aids and satellite imagery for crop cutting experiments.

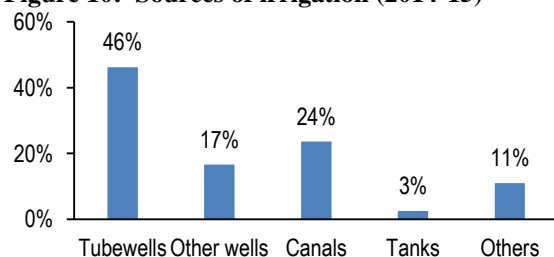
Timely settlement of claims: Claims under the insurance scheme must be settled within two months from the crop harvest. The Standing Committee on Agriculture (2017) recommended that an institutional mechanism be put in place to monitor faster settlement of pending claims.⁷

The Ministry revised the operational guidelines of the scheme in September 2018 (effective from the Rabi season 2018-19).²⁷ The revised operational guidelines specify penalties for state governments and insurance companies in case of a delay in settlement of claims. Insurance companies are required to pay farmers 12% interest on the claim amount in case of a delay beyond two months. Further, states are required to pay 12% interest for a delay in release of their share of premium.

Irrigation

As of 2014-15, 49% of the country's net sown area was under irrigation.²⁸ The remaining agricultural area in the country depends on rainfall. Major irrigation sources for agriculture include tubewells (46%) and other wells (17%), and canals (24%).²⁹

Figure 10: Sources of irrigation (2014-15)



Source: Land Use Statistics at a Glance (2014-15), Ministry of Agriculture and Farmers' Welfare; PRS.

Sources such as canals and tubewells use the flood irrigation technique, where water is allowed to flow in the field and seep into the soil.³⁰ This results in

wastage of water since excess water seeps into the soil or flows off the surface without being utilised. It has been recommended that farmers move from flood irrigation to micro irrigation (drip or sprinkler irrigation systems) in order to conserve water.³¹

The Pradhan Mantri Krishi Sinchai Yojana was launched in 2015 to increase the coverage of irrigated area.³² The Ministry implements the 'Per Drop More Crop' component under the scheme to increase water efficiency through micro irrigation and other interventions. In 2019-20, Rs 3,500 crore has been allocated for the scheme, an 18% increase over the revised estimates of 2018-19.

During the period 2015-19, 36.2 lakh hectares (ha) of area was covered under micro-irrigation (5.7 lakh ha in 2015-16, 8.4 lakh ha in 2016-17, 10.5 lakh ha in 2017-18, and 11.6 lakh ha in 2018-19).

Shortfall in funds: Allocation to the scheme has been increasing over the years, but it is revised down at later stages (Table 2).⁷ Allocation to the scheme in 2018-19 has been revised down by 26% from Rs 4,000 crore (BE) to Rs 2,955 crore (RE).

Table 2: Budgeted vs actual expenditure under PMKSY under the Ministry (in Rs crore)

Year	Budgeted	Actual/Revised	% shortfall
2015-16	1,800	1,556	14%
2016-17	2,340	1,991	15%
2017-18	3,400	2,819	17%
2018-19 (RE)	4,000	2,955	26%

Sources: Expenditure Budget, Union Budgets (2015-20); PRS.

Soil health and fertilisers

While the Department of Fertilisers is responsible for monitoring the production, distribution, and prices of fertilisers, the Department of Agriculture, Cooperation and Farmers' Welfare is responsible for promotion of balanced use of fertilisers.³³

Balanced use refers to use of proper combination of various nutrients (N, P, K and S) and other micro-nutrients. Three major nutrients are primarily used: Nitrogen (N), Phosphatic (P), and Potassic (K). The government subsidises fertilisers through: (i) subsidy for urea (containing N fertiliser), and (ii) nutrient based subsidy for P and K fertilisers.

Rs 79,996 crore is allocated for fertiliser subsidy in 2019-20, a 14% increase (Rs 9,910 crore) over the 2018-19 revised estimate (Table 3). This is largely due to a 19% increase in allocation to urea subsidy.

Table 3: Fertiliser subsidy allocation (Rs crore)

Subsidy	2017-18 Actuals	2018-19 Revised	2019-20 Budgeted	% change in 2019-20 over 2018-19
Urea	44,223	44,995	53,629	19.2%
Nutrient based	22,244	25,090	26,367	5.1%
Fertiliser subsidy	66,468	70,086	79,996	14.1%

Sources: Expenditure Budget, Union Budget 2019-20; PRS.

Prices of urea are controlled by the government, whereas the prices of P and K fertilisers are market driven.³³ This has led to the lower prices of urea (N) over the years, whereas market prices of P and K fertilisers have remained higher. This is one of the reasons for imbalanced use of nutrients as urea is used more than other fertilisers.³³ While the recommended ratio of use of the N, P, and K fertilisers is 4:2:1, this ratio in India in 2016-17 was at 6.7:2.7:1.³⁴ Details of consumption of N, P, and K fertilisers are given in Table 7 in the Annexure.

Overuse of fertilisers could lead to imbalance of nutrients in the soil and deteriorate the soil quality. The Standing Committee on Agriculture (2015) observed that use of fertilisers in the country was not based on scientific analysis of soil due to near absence of soil testing facilities, low awareness, and over reliance on urea.³⁴

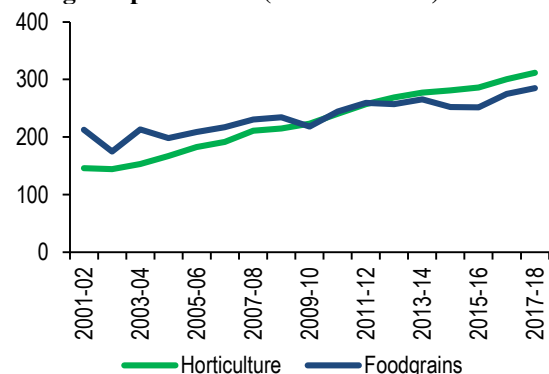
In order to provide farmers with information regarding the quality of their soil, the Soil Health Card scheme was launched in 2015. Under the Soil Health Card scheme, farmers are issued soil health cards, which contain information such as nutrient status of soil and recommended dose of nutrients to be provided to improve its fertility.

Rs 324 crore has been allocated for the National Project on Soil Health and Fertility in 2019-20, an 8% increase over the revised estimates of 2018-19. During the first cycle (2015-17) of the scheme, 10.74 crore soil health cards were provided.³⁵ During the second cycle (2017-19), as on June 21, 2019, 10.53 crore soil health cards have been provided. Further, 1,304 static, 165 mobile, 154 village-level, and 6,326 mini soil testing laboratories are working under the scheme.

Horticulture

Between 2001-02 and 2017-18, production of horticulture crops increased from 146 million tonnes to 312 million tonnes (Figure 11).³⁶ This implies that the horticulture production increased at an average rate of 4.9%. Production of foodgrains increased at a rate of 1.7% during the same period.

Figure 11: Comparison of horticulture and foodgrain production (million tonnes)



Source: Horticulture Statistics at a Glance 2017, Ministry of Agriculture and Farmers' Welfare; PRS.

In 2017-18, fruits and vegetables contributed to 31% and 59% of the total horticultural production. The National Mission on Horticulture seeks to promote horticulture by providing availability of quality inputs such as planting material, and post-harvest interventions such as reduction in losses and access to markets. In 2019-20, the scheme has been allocated Rs 2,225 crore, which is 6% more than the revised estimate of 2018-19.

Over the past few years, the actual expenditure under horticulture has been lower than the budgeted allocation, except in 2013-14 (Table 4).

Table 4: Budgeted vs actual expenditure on horticulture (in Rs crore)

Year	Budgeted	Actual	% shortfall
2012-13	2,212	1,860	15.9%
2013-14	2,556	2,857	-11.8%
2014-15	2,263	1,959	13.4%
2015-16	2,000	1,699	15.0%
2016-17	1,620	1,496	7.7%
2017-18	2,329	2,035	12.6%

Note: Negative figure for % shortfall indicates overspending. Source: Horticulture Statistics at a Glance 2017, Ministry of Agriculture and Farmers' Welfare; PRS.

Agricultural Marketing

The Integrated Scheme on Agriculture Marketing includes sub-schemes such as: (i) agriculture marketing infrastructure, to create storage capacity and farmer consumer markets, (ii) market research and information network, (iii) strengthening of Agmark grading facilities, (iv) agro-business development to provide market linkages to farmers, and (v) e-NAM (National Agriculture Market), which is a national electronic market platform on which farmers can sell their produce.

In 2019-20, the scheme has been allocated Rs 600 crore. This is 20% higher than the 2018-19 revised estimate. However, the allocation in 2018-19 has been revised down by 52%, from Rs 1,050 crore to Rs 500 crore. As of January 2019, 585 mandis across 18 states were integrated with e-NAM.³⁷

APMCs: Agriculture marketing in most states is regulated by the Agriculture Produce Marketing Committees (APMCs) established by state governments. The Standing Committee on Agriculture (2018) observed that small and marginal farmers face various issues in selling their produce in APMC markets such as inadequate marketable surplus, long distance to nearest APMC markets, and lack of transportation facilities. Most farmers lack access to government procurement facilities including APMC markets.³⁷

The Committee observed that provisions of the APMC Acts are not implemented in their true sense, due to reasons such as: (i) limited number of traders in APMC markets thereby reducing

competition, (ii) cartelisation of traders, and (iii) undue deductions in the form of commission charges and market fee.³⁷ It observed that APMC Acts need to be reformed urgently. The Acts are highly restrictive in promotion of multiple channels of marketing and competition in the system.

Agricultural Research

The Indian Council of Agricultural Research (ICAR) has been allocated Rs 4,869 crore for the year 2019-20. This is 3.7% lower than the revised estimate of 2018-19. The allocation is primarily for salaries, pensions and administrative expenses and support for different schemes under ICAR.

Research under crop sciences and animal sciences have been allocated Rs 934 crore and Rs 453 crore in 2019-20. Observing that vegetable oils, pulses, cashew are among the major commodities imported between 2011 and 2016, the Standing Committee on Agriculture (2017) observed that there is need for enhancing production of these commodities.³⁸ It also recommended the central government to allocate additional funds to ICAR for this purpose.

The Committee noted that the production of animal vaccine is inadequate in the country. It recommended that adequate resources and manpower must be devoted to ICAR for the development of animal vaccines.

International comparison: The Committee on Doubling Farmers' Income (Chair: Mr. Ashok Dalwai, 2018) observed that the expenditure on agricultural research in India has remained around 0.3-0.4% of the agriculture GDP since 2001 (except in 2011 when it was 0.52% because of higher plan allocations by the government).³⁹

The Committee observed that this is substantively lower in comparison to many developed countries, and also vis-à-vis comparable developing economies. The share of agricultural research in agriculture GDP is much higher in Brazil (1.8%), Mexico (1.05%), Malaysia (0.99%), and China (0.62%). It observed that in the high income countries, the share stands at 3.01%. The Committee recommended that expenditure on agricultural research should be increased to upto one per cent of agriculture GDP.

¹ Ministry-wise Summary of Budget Provisions, Union Budget 2019-20, <https://www.indiabudget.gov.in/doc/eb/sumsbe.pdf>.

² Demand No. 1, Department of Agriculture, Cooperation and Farmers' Welfare, Expenditure Budget, Union Budget 2019-20, <https://www.indiabudget.gov.in/doc/eb/sbe1.pdf>.

³ Demand No. 2, Department of Agricultural Research and Education, Expenditure Budget, Union Budget 2019-20, <https://www.indiabudget.gov.in/doc/eb/sbe2.pdf>.

⁴ Report no. 25, Standing Committee on Agriculture: 'Demand for Grants (2016-17), Department of Agriculture, Cooperation and Farmers' Welfare', Lok Sabha, May 2016, http://164.100.47.193/lssccommittee/Agriculture/16_Agriculture_25.pdf.

⁵ "Status of Farmers' Income: Strategies for Accelerated Growth", Report of the Committee on Doubling Farmers' Income, Ministry of Agriculture and Farmers Welfare, August 2017, <http://farmer.gov.in/imagedefault/DFI/DFI%20Volume%202.pdf>.

⁶ Revised guidelines, Rashtriya Krishi Vikas Yojana, Department of Agriculture, Cooperation and Farmers' Welfare, https://rkvy.nic.in/static/download/pdf/RKVY_14th_Fin_Com_m.pdf.

⁷ Report no. 35, Standing Committee on Agriculture: 'Demand for Grants (2017-18), Department of Agriculture, Cooperation and Farmers' Welfare', Lok Sabha, March 2017, http://164.100.47.193/lssccommittee/Agriculture/16_Agriculture_35.pdf.

⁸ Operational Guidelines of "Pradhan Mantri Kisan Samman Nidhi (PM-KISAN)", Ministry of Agriculture and Farmers Welfare, http://agricoop.gov.in/sites/default/files/operational_GuidePM.pdf.

⁹ "PM-KISAN Scheme extension to include all eligible farmer families irrespective of the size of landholdings", Press Information Bureau, Cabinet, May 31, 2019.

¹⁰ "March of Agriculture since Independence and Growth Trends", Report of the Committee on Doubling Farmers' Income, Ministry of Agriculture and Farmers Welfare, August 2017, <http://farmer.gov.in/imagedefault/DFI/DFI%20Volume%201.pdf>.

¹¹ "Cabinet approves Interest Subvention to banks on short-Term crop loans to farmers", Press Information Bureau, Ministry of Agriculture and Farmers' Welfare, June 14, 2017.

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Annexure

Allocation to major expenditure heads under the Departments

Table 5: Allocation to major heads of expenditure under the Department of Agriculture, Cooperation and Farmers' Welfare in 2019-20 (Rs crore)

	2017-18 Actuals	2018-19 Budgeted	2018-19 Revised	% change in RE of 2018-19 over BE of 2018-19	2019-20 Budgeted	% change in BE of 2019-20 over RE of 2018-19
PM-KISAN	-	-	20,000	-	75,000	275.0%
Interest subsidy for short-term credit to farmers	13,046	15,000	14,987	-0.1%	18,000	20.1%
Pradhan Mantri Fasal Bima Yojana	9,419	13,000	12,976	-0.2%	14,000	7.9%
Pradhan Mantri Krishi Sinchai Yojana (Per Drop More Crop)	2,819	4,000	2,955	-26.1%	3,500	18.5%
Market intervention scheme and price support scheme (MIS-PSS)*	701	200	2,000	900.0%	3,000	50.0%
PM-AASHA	-	-	1,400	-	1,500	7.1%
Pradhan Mantri Kisan Pension Yojana	-	-	-	-	900	-
Green Revolution	11,057	13,909	11,802	-15.1%	12,561	6.4%
Rashtriya Krishi Vikas Yojna	3,560	3,600	3,600	0.0%	3,745	4.0%
National Mission on Horticulture	2,027	2,536	2,100	-17.2%	2,225	6.0%
National Food Security Mission	1,377	1,691	1,510	-10.7%	2,000	32.5%
Department	37,397	46,700	67,800	45.2%	1,30,485	92.5%

*for procurement of pulses and oilseeds

Sources: Demand no. 1, Expenditure Budget, Union Budget 2019-20; PRS.

Table 6: Allocation to major heads of expenditure under the Department of Agricultural Research and Education in 2019-20 (Rs crore)

	2017-18 Actuals	2018-19 Budgeted	2018-19 Revised	% change in RE of 2018-19 over BE of 2018-19	2019-20 Budgeted	% change in BE of 2019-20 over RE of 2018-19
ICAR headquarters	4,574	4,599	5,056	9.9%	4,869	-3.7%
Agricultural education	695	725	761	5.0%	819	7.6%
Crop sciences	591	1,051	868	-17.3%	934	7.6%
Central agricultural universities	235	270	364	34.8%	455	25.0%
Animal sciences	388	571	421	-26.2%	453	7.6%
Department	6,943	7,800	7,953	2.0%	8,079	1.6%

Sources: Demand no. 2, Expenditure Budget, Union Budget 2019-20; PRS.

Consumption of Fertilisers

Table 7: Consumption of fertilisers in terms of N, P, and K nutrients (in lakh tonnes)

Year	Urea (N)	Phosphatic (P)	Potassic (K)	Total (N+P+K)
2004-05	117.1	46.2	20.6	184.0
2005-06	127.2	52.0	24.1	203.4
2006-07	137.7	55.4	23.3	216.5
2007-08	144.2	55.1	26.4	225.7
2008-09	150.9	65.1	33.1	249.1
2009-10	155.8	72.7	36.3	264.9
2010-11	165.6	80.5	35.1	281.2
2011-12	173.0	79.1	25.8	277.9
2012-13	168.2	66.5	20.6	255.4
2013-14	167.5	56.3	21.0	244.8
2014-15	169.4	60.9	25.3	255.8
2015-16	173.7	69.8	24.0	267.5
2016-17	167.4	67.1	25.1	259.5

Sources: Agricultural Statistics at a Glance 2017, Ministry of Agriculture and Farmers' Welfare; PRS.

Implementation of PM-KISAN**Table 8: State-wise number of beneficiaries of the PM-KISAN scheme and the total amount given by the government in the first two instalments as on June 25, 2019 (no. of beneficiaries in lakh)**

State/UT	Beneficiaries of the first instalment (December 2018 – March 2019)	Beneficiaries of the second instalment (April 2019 – July 2019)	Total amount given in first two instalments (in Rs crore)
Andaman and Nicobar Islands	0.10	-	2.00
Andhra Pradesh	34.43	31.27	1,313.99
Arunachal Pradesh	-	-	-
Assam	11.20	10.29	429.88
Bihar	2.32	2.19	90.20
Chandigarh*	0.00	-	0.00
Chhattisgarh	1.12	1.09	44.27
Dadra and Nagar Haveli	0.05	-	1.06
Daman and Diu	0.02	-	0.42
Delhi	-	-	-
Goa	0.02	0.02	0.94
Gujarat	28.32	28.22	1,130.78
Haryana	9.42	9.36	375.60
Himachal Pradesh	4.75	4.38	182.60
Jammu and Kashmir	4.97	4.60	191.36
Jharkhand	4.70	-	94.06
Karnataka	3.21	2.32	110.51
Kerala	9.36	9.32	373.49
Lakshadweep	-	-	-
Madhya Pradesh	0.09	-	1.86
Maharashtra	21.29	14.18	709.45
Manipur	0.07	-	1.46
Meghalaya*	0.00	-	0.02
Mizoram	0.24	0.12	7.27
Nagaland	0.34	0.30	12.80
Odisha	9.62	7.99	352.28
Puducherry	0.04	-	0.84
Punjab	12.75	11.45	484.02
Rajasthan	14.93	-	298.60
Sikkim	-	-	-
Tamil Nadu	21.49	20.63	842.34
Telangana	21.11	18.58	793.82
Tripura	1.51	1.51	60.43
Uttar Pradesh	111.69	108.49	4,403.60
Uttarakhand	3.97	3.27	144.82
West Bengal	-	-	-
All India	333.15	289.59	12,454.79

Note: '-' indicates data not available yet or scheme not implemented. *First instalment beneficiaries: Chandigarh (13) and Meghalaya (76).
Sources: Lok Sabha Unstarred Question No. 542, Ministry of Agriculture and Farmers' Welfare, June 25, 2019, <http://164.100.24.220/loksabhaquestions/annex/171/AU542.pdf>; PRS.