

## THE PROGRESS AND CHALLENGES IN PROVIDING AGRICULTURAL INPUTS VIA RYTHU BHAROSA KENDRALU IN ANDHRA PRADESH: AN EMPIRICAL ANALYSIS

**Boya Mahesh<sup>1</sup>, Muddammagari Ravindra<sup>2</sup>, Boya Sreenivasulu<sup>3</sup>**

<sup>1</sup>Department of Political Science, Jamia Millia Islamia, New Delhi

<sup>2</sup>Department of Agriculture, Acharya N. G. Ranga Agricultural University, A. P

<sup>3</sup>Department of Business Administration, Dr. B.R. Ambedkar Open University, Telangana

### **Corresponding Author**

Boya Mahesh

Email: [maheshboya3777@gmail.com](mailto:maheshboya3777@gmail.com)

### **Abstract**

The purpose of the study is to evaluate the state of the delivery of different agricultural inputs and the difficulties encountered in demonstrating the same. It takes place in one of agriculturally underdeveloped mandals of Kurnool District, Andhra Pradesh. The Rythu Bharosa Kendram (RBK) was founded by the Andhra Pradesh government to promote knowledge and give farmers agricultural inputs. The distribution of seven agricultural inputs—fertilizers, seeds, machinery and equipment for agriculture, crop insurance, financial aid, energy, and irrigation—was surveyed for this study.

The respondents were chosen through the use of random sampling techniques. Both in-person interviews and structured questionnaires were used to gather the data. Out of eight topics, respondents were asked about 24 factors, and they were requested to mark their answers on the survey form. IBM SPSS was used as the statistical program for data analysis.

It's interesting to note that the respondents had high levels of satisfaction with the financial aid, quality of the fertilizer, and enrolment procedure. In a similar vein, respondents expressed dissatisfaction with the cost of seeds and fertilizers, the availability of variety seeds, irrigation infrastructure, and government assistance in the development of irrigation systems.

**Keywords:** Rythu Bharosa Kendram (RBK), Financial Assistance, Custom Hiring Centre, Crop Insurance, Agriculture Equipment and Machinery.

### **Introduction**

Under an organization known as "Rythu Bharosa Kendralu (RBKs)," the Andhra Pradesh government provides agricultural inputs such as agricultural machinery and tools, improved seed, inorganic fertilizers, financial support, crop insurance, electricity, and infrastructure for irrigation. RBKs are the centers of village-level facilitators for farmers, offering full range of agriculture services from seed to sale.

Every village in the state has a Rythu Bharosa Kendram established by the government, one RBK for every 2000 inhabitants. In each Rythu Bharosa Kendram, the government appointed a village official known as a "Village Agriculture Assistant," who serves as the liaison between the Mandal Agriculture Office and the farmers. For the farmer, the village agriculture assistant serves as a companion, mentor, and advisor. He or she handles all matters pertaining to agriculture, from registering a farmer for a certain program to addressing the complaints of farmers.

Providing farmers with tested and certified agricultural inputs at the right price and time is the primary objective of the Rythu Bharosa Kendralu. Farmers were wasting precious time and resources traveling from their villages to Mandal headquarters in order to obtain certified seeds and other agricultural inputs prior to the establishment of the Rythu Bharosa Kendralu. Throughout the study area, it was common practice to sell counterfeit seeds, out-of-date inorganic fertilizers, as well as over prescribe micronutrients at retail stores. In addition, agricultural inputs have a big influence on the population's living standards, food security, and agricultural GDP (Reddy & Dutta, 2018). Research indicates that subsidies given to farmers for inputs increases their yield by 18%, which increases farming households' income by 16 percent (Nguyen, Russ, & Triyana, 2023). Therefore, it is indisputable that for agriculture to thrive, farm inputs must be readily available, reasonably priced, easily accessible, and of high quality (Belt, et al., 2015). Large companies have a monopoly on the giant agriculture input market. These companies occasionally produce contaminated and counterfeit fertilizers as well as counterfeit seeds, and causing distortions in the market (Gautam, Choudhary, & Rahut, 2022).

In addition to destroying the environment, these counterfeit fertilizers and seeds gradually weaken plants and increase their susceptibility to pests. In the long run, this could result in lower crop yields and farmer suicides. Furthermore, marginal and small farmers lack the resources to build permanent irrigation systems and buy expensive agricultural machinery and equipment.

In order to give farmers access to high-quality and reasonably priced agricultural inputs, the Andhra Pradesh government came up with the plan to open Rythu Bharosa Kendralu, or agri-input shops, in every village (Reddy, 2020).

### **Agriculture Equipment and Machinery**

Historically, farmers have tilled, sown, ploughed, shredded, and trashed the crop utilizing both human and animal energy. But in addition to giving the farmer a drudgery, it is also inefficient because it takes a long time and uses a lot of energy (Mistary, 2022). Farm mechanization, increases the productivity and efficiency of farming operations. It lessens farmers' labour-intensive tasks and boosts farmland productivity by enabling the successive cultivation of several crops on a single piece of land through the wise use of labor, resources, and time.

In terms of agricultural equipment and machinery, Rythu Bharosa Kendralu functions as a customized hiring hub. Through customs hiring centers, a group of farmers can obtain government subsidies for the purchase of farm equipment. All of the purchased agricultural machinery and equipment is kept in the Rythu Bharosa Kendram's custom hiring centers. On a first-come, first-served basis, the farmer organization is renting out this farm machinery to other farmers. This is one of the best ways to get farm machinery into the hands of small and marginal farmers.

## Seeds

The most important and basic ingredient in agriculture is seed. Better seeds are beneficial by boosting a nation's GDP, food security, and per capita income. Higher-quality seeds will boost overall productivity by 45 percent over typical crops when combined with effective use of other inputs.

Farmers use both formal and informal ways to collect seed (Nabuuma, et al., 2022). Informally, certain farmers borrow seeds from their neighbors and family, and others keep part of their harvest as seeds for next seasons. It's doubtful that these seeds will germinate, though. Officially, farmers purchase seeds from market-based retail seed dealers; these seeds are made by the corporate and private sectors. In the region we studied, between 5 and 80 percent of farmers bought seeds from the market.

Farmers in Andhra Pradesh continue to receive a significant supply of seeds from private and corporate multinational corporations. To boost their profit margins, these businesses are expressing interest in manufacturing high-value, low-volume seeds like cotton (Department of Agriculture and Farmers Welfare, 2023). On the other hand, some private businesses are manufacturing phony and genetically engineered seeds without evaluating their impacts on biotic and abiotic organisms or their rate of germination. Furthermore, these seeds are pricey and may not be appropriate for every environmental condition in the specific region (Vernooy, Rana, Otieno, Mbozi, & Shrestha, 2022).

To ensure maximum agricultural yield and production, farmers must receive high-quality and upgraded seeds. The Andhra Pradesh government is delivering certified and tested seeds from the public sector seed corporation through Rythu Bharosa Kendralu at the right time and quality in order to prevent scenarios such as market distortion and counterfeit seed.

## Inorganic Fertilizers and Pesticides

One of the main inputs used in agriculture and crucial for the nourishment of the soil are inorganic fertilizers. Soil requires primary, secondary, and micronutrients to give an optimum yield (Ganeshan & Pushpavalli, 2017). These inorganic fertilizers are mostly responsible for plant development and output. To keep the plant safe from pests and other diseases, pesticides are necessary. In addition to boosting agricultural output, preserving soil fertility, and safeguarding plants, increasing the use of inorganic fertilizers and pesticides also guarantees farming's financial success (Group, 2014).

Andhra Pradesh farmers are receiving high-quality, approved inorganic fertilizers from Rythu Bharosa Kendralu. Prior to using the necessary fertilizers, the farmer must register with Rythu Bharosa Kendram. The government is providing fertilizer to farmers in villages at their doorstep to comply with the criteria.

## Crop Insurance

According to a number of studies, one of the most crucial agricultural inputs in countries like India is crop insurance. Even if a certain geographic region has defined climatic setting, the phenomena of climate change makes the microclimatic conditions of that place unpredictable.

The region under investigation for this study experiences unusual meteorological circumstances such as rainfall extremes, droughts, and monsoon delays every year as a result of climate change. Crop insurance is one of the best risk-coping strategies for reducing covariate risks such as floods, droughts, cyclones, etc., according to numerous research (Biswal & Bahinipati, 2022).

The Andhra Pradesh government has made it essential for all farmers to enrol in crop insurance in order to effectively combat the effects of unforeseen climatic circumstances, protect farmers from losses of standing crops, and other adverse conditions of crops and yield.

### **Financial Assistance**

Food security, agriculture extension, and sustainable agricultural growth will all be enhanced by public investment (W., K., & T, 2020). A farmer's ability to begin farming is primarily hampered by working capital. Small and marginal farmers rely on asset mortgages, moneylenders, and family members for operating capital instead than institutional financing because the latter requires a lengthy application process and asset mortgages. This can occasionally result in vicious cycle of indebtedness and a suicide as a consequence.

The state of Andhra Pradesh provides financial support to eligible farmers under the YSR Rythu Bharosa-PM-KISAN scheme. The assistance is payable in three installments (Rs. 7500, Rs. 4000, and Rs. 2000) prior to the commencement of the Kharif, Rabi, and Zaid cropping seasons respectively (Department, 2019).

The program assists a wide range of farmer families, including tenant farmers, RoFR and D-Patta holders, and land-holding farmer families that jointly own cultivable land of any size. The scheme's defining characteristic is the reliability of the dates on which funds are credited to beneficiary accounts. Every year in January, the state government releases a welfare calendar, and funds are promptly deposited into the beneficiary's accounts in accordance.

### **Electricity**

The electricity source that farmers utilize affects the cost of irrigation. Currently, farmers are able to power a water pump with either diesel fuel or electricity (Martin, Dorn, Melvin, Corr, & Kranz, 2011).

In Andhra Pradesh, the government supplies nine hours of high-quality, three-phase electricity. The timing of the power supply is determined by the farmers themselves. The distribution system has been completely revamped and digitalized by the government. For a group of three to five farmers, it is providing a three-phase, 25 kVA distribution transformer so they can minimize fluctuations in electricity consumption.

### **Irrigation**

Since most of the country's agricultural regions rely on the monsoon, effective irrigation management is the most crucial input. However, one of the primary sectors in India that uses the majority of water is agriculture, which uses over 80% of the country's groundwater (Jain & Kishore, 2020). However, groundwater is becoming increasingly scarce, making it an essential component of agricultural inputs.

There are few water resources in the area under research, including rivers, nearby irrigation ponds and tanks, and canals. The region is the semi-arid landscape. The groundwater resource is essential to 92% of farmers. The government is providing eligible farmers with free bore well drilling services under the "YSR Jala Kala Programme" in order to irrigate every acre of arable land. Groundwater surveys will be conducted to determine bore well locations in a scientific manner (Pradesh, 2020). Furthermore, qualifying farmers get drip and sprinkler equipment on a subsidy basis as part of the Andhra Pradesh Micro Irrigation Project (APMIP) plan.

### **Materials and Methods**

The study was carried out in 15 Gram Panchayats in Devanakonda Mandal, which is situated at 15.5333°N-77.5500°E in south-central India. Devanakonda Mandal is located in the Kurnool District of Andhra Pradesh State administratively.

The climate in Devanakonda Mandal is hot, dry, and semiarid. Every year, it receives roughly 34 wet days, or 548 mm of rainfall. This Mandal has extensively of red soils, which are good for ground nuts (Rao & Dixit, 2019). Due to the lack of a significant water supply in the Mandal and the farmers' completely reliance on rainfall, the majority of farmers plant two crops year over a period of 100–130 days each.

In this mandal, roughly 85–90% of households earn their livelihoods from agriculture, while 80–85% of the population works as farmers or otherwise engages in agriculture.

For the sake of earning money, however, farmers are moving to other areas during the off-season as agricultural labourers. In this area, this is the new normal.

### **Data Sources and Methods**

In this study, primary data was used. Random sampling procedures were employed in the survey to get samples for the study. Following the fulfillment of all inclusion and exclusion requirements for correct replies, almost 200 samples were gathered. More than ten samples were taken from each of the fifteen gram panchayats in Devanakonda Mandal, representing every socioeconomic strata of farmers. Survey forms were used to collect responses, and respondents were subjected to one-on-one, structured interviews as well. The statistical program IBM SPSS was programmed with the responses. The responses were coded, revised, examined, and finally collated.

### **Results and Discussion**

A survey comprising 24 variables from 8 inputs was undertaken by the study (Table 1). The respondents marked their answers and shared their opinions regarding the agricultural input they receive from Rythu Bharosa Kendralu.

### **Table 1**

*Analysis of Responses of farmers (Sample Size (n): 200)*

Variables	YES		NO		SOMETIMES		$\sigma$
	N	%	N	%	N	%	
<b>Official Procedures</b>							
<b>Enrolment Process</b>	200	100	0	0	0	0	0
<b>Official's Help</b>	199	99.5	0	0	1	0.5	0.141
<b>Grievance</b>	199	99.5	0	0	1	0.5	0.141
<b>Fertilizers</b>							
<b>Less than Market Price</b>	75	37.5	0	0	125	62.5	0.971
<b>Right Quantity</b>	162	81	6	3	32	16	0.742
<b>Right Time</b>	197	98.5	0	0	3	1.5	0.244
<b>Right Quality</b>	200	100	0	0	0	0	0
<b>All Varieties</b>	47	23.5	7	3.5	146	73	0.851
<b>Seeds</b>							
<b>Less than Market Price</b>	75	37.5	0	0	125	62.5	0.971
<b>Right Quantity</b>	142	71	18	9	40	20	0.808
<b>Right Time</b>	194	97	1	0.5	5	2.5	0.32
<b>Right Quality</b>	197	98.5	0	0	3	1.5	0.244
<b>All Varieties</b>	16	8	24	12	160	80	0.603
<b>Agriculture Equipment and Machinery</b>							
<b>Available All Times</b>	128	64	6	3	66	33	0.937
<b>Affordable Rent</b>	166	83	0	0	34	17	0.753
<b>Crop Insurance</b>							
<b>Enrolled</b>	200	100	0	0	0	0	0
<b>In-Time Payments</b>	176	88	4	2	20	10	0.611
<b>Financial Assistance</b>							
<b>Get Financial Assistance</b>	200	100	0	0	0	0	0
<b>Received All Installments</b>	197	98.5	0	0	3	1.5	0.244
<b>In-Time Payments</b>	200	100	0	0	0	0	0

Electricity for Pump Sets							
<b>Available All Times</b>	197	98.5	0	0	3	1.5	0.244
<b>Good Quality</b>	191	95.5	0	0	9	4.5	0.416
Irrigation Facility							
<b>Facility Available</b>	39	19.5	80	40	81	40.5	0.747
<b>Government's Help</b>	91	45.5	32	16	77	38.5	0.916

**Note:** N = No. of Responses; % = Percentage of Responses;  $\sigma$  = Standard Deviation

Regarding official procedures, the respondents said they were completely satisfied (100%) with the enrolment process for agricultural input. There are primary explanations for total contentment. Such are: (a) All agricultural land pattas, or land ownership documents, have been electronically digitized by the government and connected to the farmer's Aadhar number, which serves as an individual identification number for Indian citizens. (b) They don't have to carry around a ton of paperwork to prove their eligibility for the specific program or benefit. (c) To sign up for the program, farmers must have a mobile phone and an Aadhar number. (d) Every village has a Rythu Bharosa Kendralu, an agriculture service center, therefore visiting the Mandal headquarters is not necessary. Farmers benefit from time, cost, and energy savings. (e) The government got rid of middlemen and replaced them with a system of volunteers. The government representatives who live in the neighbourhoods of farmers and help them sign up for the program are called volunteers. (f) The creation of RBKs has totally eradicated corruption.

Slightly around 99.5 percent of farmers expressed satisfaction with the official's assistance and grievance resolution. Through Rythu Bharosa Kendralu, the government is holding review sessions at the village level to address the issues of the farmers. Every month on the first Friday, the village agriculture assistant hosts "Agri Advisory Board" meetings at the RBK level with the village's farmers. Furthermore, from 3 to 5 p.m. every day, RBK offers a unique program called the "Spandana Program" to address the problems of individual farmers. Farmers can also contact the Village Agriculture Assistant during working hours on all working days. Every farmer grievance will have a ticket raised for it with a unique number, and the ticket won't be closed until the farmer in question certifies through his or her own biometrics that the grievance has been resolved.

Regarding fertilizers, the research got mixed answers; roughly 37.5% of farmers concurred that the price at which they were obtaining fertilizers was below market value. This is due to the fact that supply and demand determine the amount that fertilizer costs. Rythu Bharosa Kendralu would never operate a fertilizer business for profit; instead, it will place orders based on farmer demand. But the price at which RBK's sells the fertilizer is set at that particular time by the national government. The quantity of fertilizer (81%), prompt delivery (98.5%), and quality (100%) all met the farmers' satisfaction. To order fertilizer, farmers should contact the Rythu Bharosa Kendram. On the basis of the needs of the farmers, the RBK itself places orders to the government. Once at least 250 bags of fertilizer have been placed from each RBK, the government will only deliver fertilizer in an amount sufficient to cover the cost of transportation. The government occasionally

provides fertilizer to multiple RBKs; in these instances, the RBKs may get less fertilizer than what was ordered. Nonetheless, the government is giving farmers access to fertilizer at the appropriate time, regardless of the amount. When they place an order, farmers receive updates about the fertilizer on their registered smartphone. It will assist in appropriately scheduling the agricultural tasks.

The data indicates that farmers are highly content with the quality of fertilizers provided by public-sector fertilizer production enterprises, which go through several quality checks. To evaluate fertilizer quality and provide guidance in other fertilizer-related areas, the government has partnered with the Central Fertilizer Quality Control and Training Institute, located in Faridabad. Of the farmers surveyed, 73% of them were disappointed with the variety of fertilizers available. Neem Coated Urea, 20:20:0:13 (N: P: K: S Proportion), and MoP (Muriate of Potash) are the main commodities that RBKs supply. Other N, P, K, and S ratios, such as 28:28:0:13, 14:35:14, and 24:24:0:13, are provided by the government based on the availability as well as supply of fertilizers, which differ from region to region in the state.

According to the survey, almost 62.5% of farmers reported that the cost of seeds is occasionally cheaper than what is charged on the market. This can be ascribed to market fluctuations in supply and demand, farmer interest, projected future rainfall, and the accessibility of water supplies for field irrigation.

A little over 71% of farmers reported that, while not always, they are receiving the necessary amount of seeds. Prior to the onset of the planting season, the government purchases the seed. Part of the quantity procured is distributed by the government to each district, mandal, and village, taking into account the estimates from the gross root level authorities from the previous season. During this process, it is possible for numerous villages to receive less seeds than required. All of the officials' efforts, nevertheless, were directed toward redistributing the stocks from surplus to deficit areas.

According to the analysis, farmers are receiving seed in good quality (98.5%) and at the appropriate time (97%) respectively. To ensure that farmers receive seed at the appropriate time to sow in the agricultural field, the Andhra Pradesh government purchases seeds well in advance of the sowing season. The government purchases seed and puts it through a number of quality and germination testing. The Andhra Pradesh State Seeds Development Corporation Limited was founded by the Andhra Pradesh government to serve this goal. To offer guidance on issues pertaining to seeds, the government has teamed up with the National Seed Research and Training Center in Varanasi.

Approximately 80% of farmers stated that while all seed varieties are occasionally accessible, but are not always. This is explained by the fact that Andhra Pradesh has several agroclimatic zones as well as lack of availability of water for crops. The government is providing groundnut in larger quantities than any other seeds, such as maize, jowar, bajra, castor, sunflower, paddy, and millets, because groundnut is the most common crop in the study region.

About 64% of farmers think that farm machinery is always available, and 83% claim that the cost of renting farm machinery is reasonable. In parallel, farmer associations are being encouraged by



the government to rent out farm machinery to farmers based on first-come, first-served basis and buy it on a subsidised basis. Even Nevertheless, marginal and small farmers still favour employing human and animal power for agricultural tasks since they cannot afford to use farm machinery.

The study's findings regarding crop insurance showed that all farmers had enrolled in it. This study area is located in a hot, dry, semi-arid region that is prone to recurrent droughts. The government has been designating this mandal as drought-hit mandal each year based on factors such as dwindled cultivation due to insufficient rainfall, limited supplies of cattle feed and drinking water, declining groundwater levels, a lack of opportunities for livelihood, and migration (Hareesh, 2023).

A hundred percent of farmers enrol in crop insurance because in the event of crop failure due to drought, the government pays the farmers the insured sum. About 88% of farmers, according to the study's findings, receive their insurance pay out on schedule. The present administration has been particularly focused on farmer concerns, making prompt payments of guaranteed amounts, and convincing private insurance companies to make generous payments without getting into specifics.

Regarding financial support, the survey indicates that all participants receive financial support to the fullest extent possible. This is explained by the program's lenient eligibility criteria. A small proportion of farmers are not enrolled in the financial assistance program for private and family reasons, such as the absence of a legal document despite farming the same land for years, disagreements within the family between brothers, fathers, and sons or daughters, paying income taxes, relocating, absentee landlords, etc.

Approximately 98.5 percent of those surveyed said they had received all of the financial assistance they needed in installments. Since October 2019, the government has disbursed fifteen installments of financial aid, three of which are released annually before to the commencement of the Kharif, Rabi, and Zaid agricultural sowing seasons. Originally, a number of factors prevented some farmers from receiving financial assistance instalments. These included living in joint families, not having any legal documentation pertaining to their agricultural land, the fact that the land was still registered in the name of the family head, the absence of any formal transfers of legal rights to offspring, etc.

Every respondent (100%) reports getting timely financial aid. Through Direct Benefit Transfer (DBT), the government is depositing funds into farmers' bank accounts. In addition, the government releases a welfare calendar each year in January that details the date on which DBT funds are released into farmers' bank accounts. As a result, the credit of aid into farmers' bank accounts is predictable and aligned with their agricultural activity planning. Despite facing a pandemic for two years, the government has not missed a single instalment crediting farmers' bank accounts since its establishment.

According to the study, 98.5 percent of participants stated that their pump sets have electricity available to run the pumps whenever needed. The majority of farmers in this semi-arid area rely on groundwater sources because there aren't many surface water resources available for agriculture. Farmers use motor pumps, which run on electricity, to extract groundwater. Ninety-

five percent of those surveyed claimed to be receiving high-quality electricity. For agricultural customers in the state, the government launched a direct benefit transfer (DBT) program. Starting in April 2021, the DBT electricity subsidy was implemented throughout the state.

Agriculture pump sets are provided with three-phase electricity by the state for nine hours per day. The power to determine when power is supplied has been granted to farmers by the state. In order to prevent power fluctuations and the ensuing failure of electric motors, the state also provides 25 kVA distribution transformers upon request to each group of three farmers.

Regarding irrigation, about 39% of respondents said their farm had irrigation, 40% said they had none at all, and 40.5% said they might have irrigation periodically. A semi-arid region, agriculture is mostly dependent on the monsoon season in the study area. There are no notable sources of surface water. Farmers only use groundwater resources and canal irrigation. Farmers use government subsidies to drill borewells as a solution to such circumstances. According to the responses, there have been cases where one agricultural field has more than three or four failed borewells. Even with the successful bore wells, the summer months cause them to dry up. During crucial periods such as the plant growth stage, the state releases a certain amount of water via irrigation canals from the closest reservoir.

Respondents' satisfaction with the state's assistance in building irrigation facilities was only moderately high (45.5%). Still, the state provides funding for bore well drilling as well as spray and drip irrigation systems. Building permanent irrigation structures, such as building dams, renovating local tanks, or constructing new irrigation canals, requires a significant investment and takes several years to complete.

### **Suggestions**

The responders have high levels of satisfaction with government processes. Through the Rythu Bharosa Kendram, the government has fully digitalized the records of land and the farmer enrolment process for agricultural subsidies. The farmer's Aadhar number and mobile number were connected to land records and other files. A farmer can sign up for a scheme using his/her biometrics and OTP (One Time Password) sent to the registered mobile number. Monthly meetings with farmers were conducted by the Rythu Bharosa Kendralu to disseminate information and resolve problems. The village officials are always ready to assist the farmers. Every one of these components makes Rythu Bharosa Kendram's processes simpler.

Establishing a separate fund for fertilizer subsidies would allow the government to supply fertilizers at more affordable prices than the market. Pesticides and micronutrients should be supplied by Rythu Bharosa Kendralu together with all the different types of fertilizers. It is recommended that the government pre-purchase fertilizer in excess of what is needed and supply it to farmers all year long.

The quantity of seeds is a major source of frustration for farmers. Rythu Bharosa Kendralu, which has its own godowns, is a good place for the government to store extra seeds as needed. By creating a dedicated fund for seeds, seeds should be sold to farmers for less than market rates.

A few of the Villages lack specialized hiring hubs for the rental of farm machinery and equipment. Government incentives for the purchase of farm machinery are fully benefited by farmer groups

with political ties. In order to prevent these kinds of scenarios, the government ought to incentivize a minimum of five to six farmer organizations to buy agricultural instruments with government subsidies.

The government should finish the crop cutting tests in one go rather than in multiple phases if the farmer wants to receive crop insurance in time. Farmers must also finish the necessary process right away.

The government ought to consider enhancing its financial aid to farmers in order to enable them to utilize the funds for the purchase of superior seed, fertilizers, and other inputs in sufficient quantities to commence farming operations prior to the onset of the planting season.

The government ought to process the applications for electric transformers and purchase them in the necessary amount. Installing 25 kVA transformers in their crops is something that farmers have been waiting months for. Additionally, farmers utilize electricity sparingly and refrain from pumping more groundwater than is necessary.

In the studied area, more long-term water resource structures are needed. Increased funding from the government is needed to build irrigation infrastructure, such as dams and canals, as well as to renovate ponds and tanks.

### **Conclusion**

The Rythu Bharosa Kendram plays an important role in the agriculture sector. Through this institution, the government of Andhra Pradesh is providing agriculture inputs to the farmers. Out of seven agriculture inputs, the government is providing crop insurance, financial assistance, and electricity at a satisfactory level. The state should purchase more seeds and fertilizers to distribute and strengthen irrigation facilities.

### **References**

- Belt, J., Kleijn, W., Chibvuma, P. A., Mudyazvivi, E., Gomo, M., Mfula, C., . . . Bofo, I. Z. (2015). Market-based solutions for input supply: making inputs accessible for smallholder farmers in Africa. Amsterdam: KIT Royal Tropical Institute.
- Biswal, D., & Bahinipati, C. S. (2022). Why are farmers not insuring crops against risks in India? A review . Progress in Disaster Science.
- Department of Agriculture and Farmers Welfare, M. o. (2023, November 10). Indian Seed Sector. Retrieved from Seednet India Portal: <https://seednet.gov.in/Material/IndianSeedSector.aspx>
- Department, A. &. (2019, 09 19). ysrrythubharosa.ap.gov.in. Retrieved from YSR Rythu Bharosa: <https://ysrrythubharosa.ap.gov.in/RBAPP/Downloads/GOMS96.pdf>
- Ganeshan, & Pushpavalli. (2017). Utilization of Agriculture Inputs and Its Outcome in Indian Agriculture. Shanlax International Journal of Economics.
- Gautam, S., Choudhary, D., & Rahut, D. B. (2022). Behavior of Private Retailers in a Regulated Input Market: An Empirical Analysis of the Fertilizer Subsidy Policy in Nepal. Asian Development Review, 175-199.
- Group, W. B. (2014). Enabling the Business of Agriculture 2015. Washington, DC: World Bank Group.

- Hareesh, P. (2023, November 2). Andhra Pradesh government declares 103 mandals drought-affected. *The New Indian Express*.
- Jain, R., & Kishore, P. (2020). Irrigation in India: Status, challenges and options. *Journal of Soil and Water Conservation*.
- Martin, D. L., Dorn, T. W., Melvin, S. R., Corr, A. J., & Kranz, W. L. (2011). Evaluating Energy Use For Pumping. *Proceedings of the 23rd Annual Central Plains Irrigation Conference*. Burlington.
- Mistary, V. S. (2022). AGRICULTURE INPUTS AND THEIR IMPORTANCE FOR PRODUCTIVITY - AN OVERVIEW. *EPRA International Journal of Agriculture and Rural Economic Research (ARER)*.
- Nabuuma, D., Reimers, C., Hoang, K. T., Stomph, T., Swaans, K., & Raneri, J. E. (2022). Impact of seed system interventions on food and nutrition security in low- and middle-income countries: A scoping review. *Global Food Security*.
- Nguyen, L., Russ, J. D., & Triyana, M. M. (2023). *The Effect of Agricultural Input Subsidies on Productivity: A Meta-Analysis*. Washington, D.C: World Bank.
- Pradesh, G. o. (2020, 12 14). GOs & Circulars. Retrieved from YSR Jala Kala: <https://ysrjalakala.ap.gov.in/YSRRB/>
- Rao, A. K., & Dixit, S. (2019). Weather based crop advisories for climate: Crop management advisories through mobile phones. *Ecologic*, 1-4.
- Reddy, D. A. (2020). RBKs of Andhra Pradesh-One Stop Solution for the Needs of Farming Community. *Vigyan Varta*, 22-24.
- Reddy, T. K., & Dutta, M. (2018). Impact of Agricultural Inputs on Agricultural GDP in Indian Economy. *Theoretical Economics Letters*, 1840-1853.
- Vernooy, R., Rana, J., Otieno, G., Mbozi, H., & Shrestha, P. (2022). Farmer-Led Seed Production: Community Seed Banks Enter the National Seed Market. *Seeds*, 164-180.
- W., G., K, C., & T, M. (2020). What is the contribution of agricultural finance to farmer livelihoods? *South African Journal of Agricultural Extension*.