DVARA Research

Know Your Kisan

A Peak into the Financial Lives of Indian Farmers through the NAFIS Survey 2021-22

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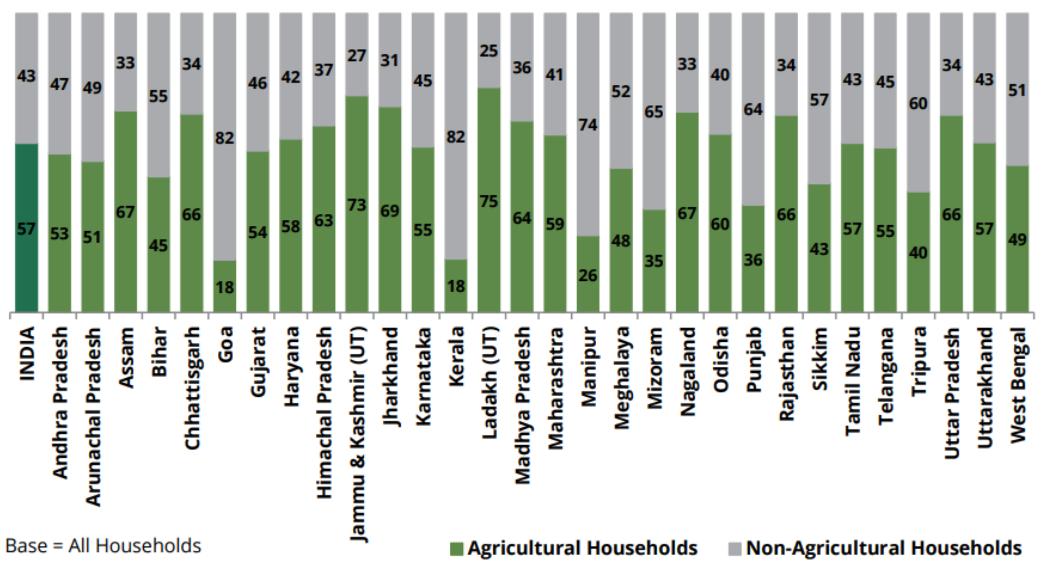
1. Are most rural households agricultural?

The share of agricultural households in rural populations across states varies widely, from 18% in Kerala to 75% in Ladakh.

Around 18% of households in Kerala and Goa are agricultural. In comparison, 73% of households in J&K, 75% in Ladakh, and 67% each in Assam and Nagaland are agricultural households. Similarly, states like Uttar Pradesh, Rajasthan, and Chhattisgarh each have a 66% share of agricultural households in rural geography. These variations in the proportion of agricultural households among different states point to differences in sectoral transformation among states. States with a higher share of agricultural households are more vulnerable to climate adversities and livelihood shocks.

Fig 1: Share of Agricultural Households among rural households across Indian states



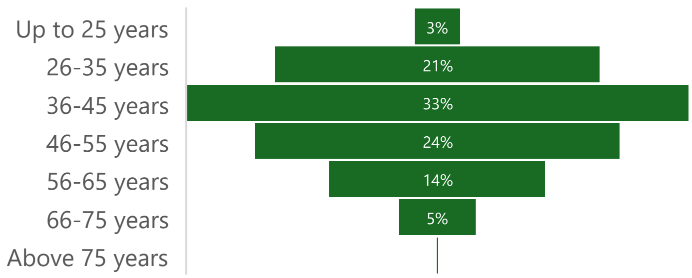
Source: NABARD NAFIS Report 2021-22

2. **Who heads agricultural households, thereby exerting considerable influence over their farming and non-farming decisions?**

The head of the agricultural household is, on average, 45 years old. Here, 22.5% of them are illiterate, while another 7.3% are only literate with no formal education.

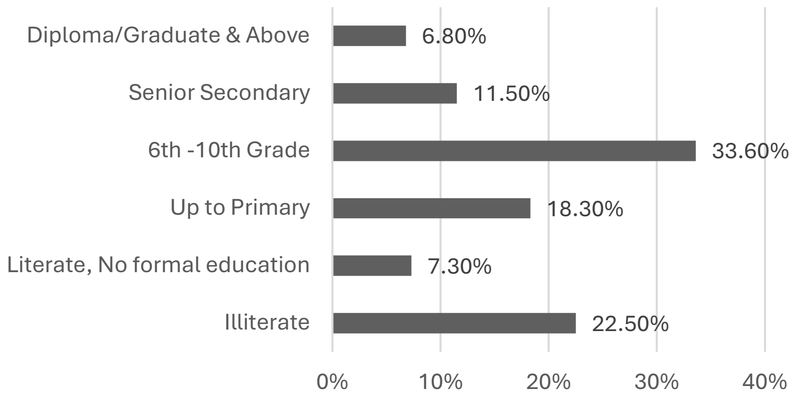
The educational and age profile of members of agricultural households influences their perception towards and participation in formal financial markets as well as in new organisational and technological solutions for farmers like Ag-Techs and Farmer Producer Organisations (FPOs). It is pertinent to note that while the share of heads of households with education above 10th grade is over 24% among non-agricultural households, it is only around 18% for agricultural households. Heads of most agricultural households, therefore, have had educational attainment less than that of 10th grade.

Fig 2: Age Distribution of Heads of Agricultural Households by Age



Data Source: NABARD NAFIS 2021-22

Fig 3: Distribution of Educational Status of Heads of Agricultural Households



Data Source: NABARD NAFIS 2021-22

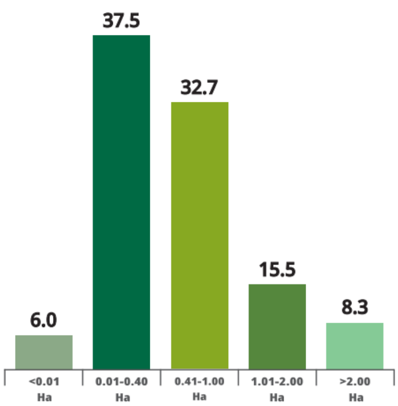
3. How much land do agricultural households own?

More than two-thirds of agricultural households have landholdings of less than 1 ha, making them marginal farmers. The average landholding among agricultural households is 0.7 ha. This includes cultivable land, orchids and plantations, homestead land, other barren land, pasture lands, and water bodies.

The average size of landholding varies widely between states, with sizes of 0.29 ha, 0.33 ha, and 0.35 ha in states like Bihar, Uttarakhand, and West Bengal, respectively, to landholdings of 1.34 ha in Maharashtra and 1.32 ha in Rajasthan. When disaggregated across different size classes, it is seen that the majority of agricultural households are marginal farmer households owning between 0.01 ha to 1 ha of land, i.e., 36.3% of households own between 0.01 ha to 0.04 ha, while another 33.9% of households own between 0.41 ha to 1 ha. Only 15.5% of households can be considered as small farmer households who own land between 1 ha and 2 ha, and a smaller 7.4% of households own greater than 2 ha of land, making them large farmer households.

It is noteworthy that on average, non-agricultural households in rural areas also own around 0.06 ha of land, which probably indicates the average holding of homesteads and other such land.

Fig 4: Distribution of Agricultural Households by Size-Class of Land Owned



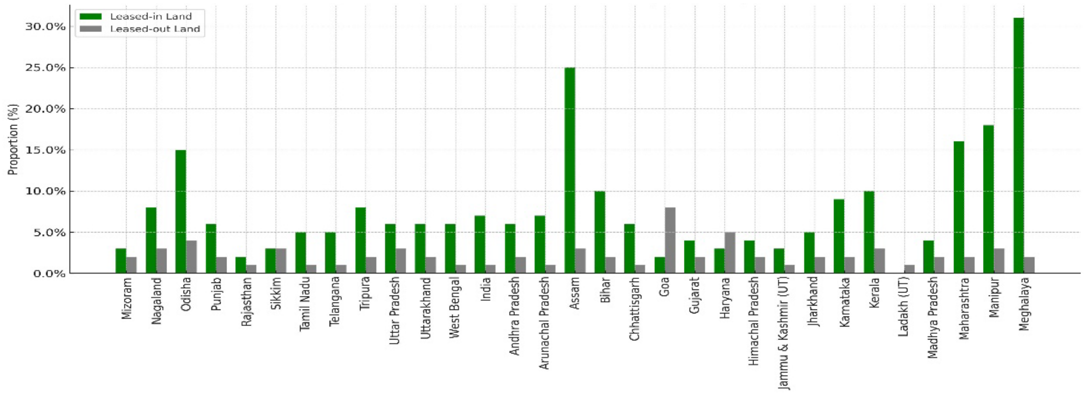
Source: NABARD NAFIS Report 2021-22

4. How are agricultural households consolidating land through lease contracts?

About 7.9% of agricultural households lease-in land, while a smaller 2.1% lease-out land.

Participation in leasing varies from state to state – from 31.1% and 24.8% in Meghalaya and Bihar, to 0.3% and 0.4% in Uttarakhand and Goa. Most leasing contracts are informal, and apart from legal and institutional factors, social norms also influence the proclivity to participate in leasing. By adding leased-in land (and other land possessed by agricultural households like encroached land) to own land, we see that the average possessed landholding size among agricultural households increases minimally to 0.74 ha. This points to the inability of existing land contract frameworks to consolidate land parcels effectively.

Fig 5: State-wise Proportion of Agricultural Households Reporting Leased-in and Leased-out Land



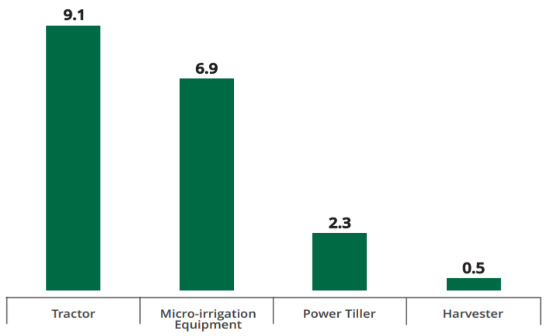
Data Source: NABARD NAFIS 2021-22

5. How are farmers taking up agricultural technology, particularly equipment?

Tractors are the most common high-value agricultural asset, with ownership among 9.1% of agricultural households. This is followed by 4.6% of agri-households owning Sprinklers and another 3.9% owning drip irrigation. 2.3% of agri-households own a power tiller, while a negligible 0.5% own a harvester.

The small percentage of agricultural households adopting modern agricultural technology points to a prevalence of manual and traditional methods of cultivation. This is unsurprising since capital investments in high-value equipment or irrigation technology by small landholdings might, in fact, be unproductive. This points to the need for a vast network of equipment rentals that farmers can have timely access to (especially in peak season when demand surges). Further, this also highlights the need for community-based investments in better micro-irrigation facilities (including installation and maintenance) that might spread the cost of adopting better technology among many smallholders.

Fig 6: Proportion of Agricultural Households Reporting Ownership of Agricultural Assets



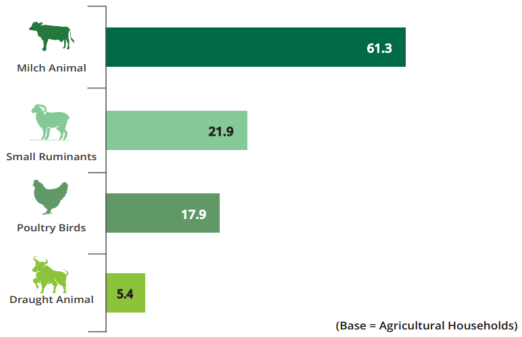
Source: NABARD NAFIS Report 2021-22

6. How do agricultural households integrate livestock farming with crop cultivation?

Around 61% of agricultural households report owning milch animals. Further, 22% own small ruminants, 18% own poultry birds, and a little over 5% own draught animals.

The large participation by agricultural households in milk production points to the close interdependence between crop and livestock farming. Livestock farming, apart from providing an additional source of income, also reduces the overall riskiness of the household's livelihood by mitigating some of the instability of agricultural output (and earnings) with a relatively more stable income from animal farming.

Fig 7: Proportion of Agricultural Households Reporting Ownership of Livestock



Source: NABARD NAFIS Report 2021-22

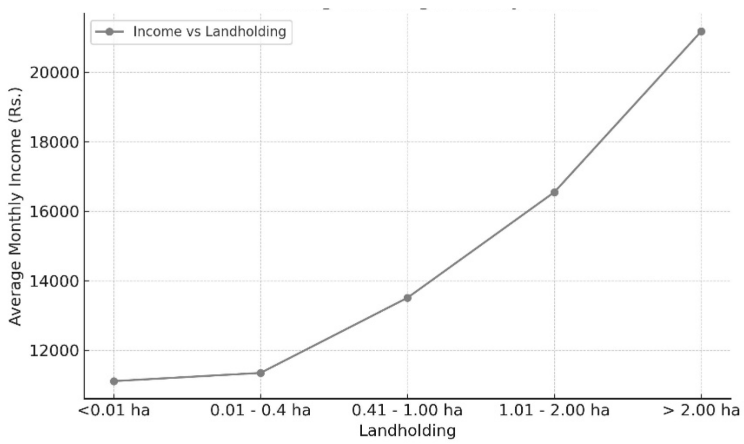
7. What does the monthly income of agricultural households look like?

The monthly income for agricultural households increases with increasing landholding from Rs. 11,110 on average for those owning less than 0.01 ha to around Rs. 21,000 among those owning greater than 2 ha.

These monthly income figures are averaged from seasonal and regular income of agricultural households from various sources. It is pertinent here to note that while expenses remain constant for agricultural households, their incomes are seasonal and lumpy and arrive at harvest times. Therefore, turning lumps of income into flows of liquidity for regular usage is particularly important for agricultural households to manage their day-to-day agriculture and other household operations.

Of particular interest is the notable differences in average income among different landholding classes. While the two lowest landholding classes earn about the same income on average, there is a 19% increase for those with 0.41 to 1 ha of land. When moving to a higher holding of 1.01 to 2.00 ha, the average income increases further by 22%. Large landowners with greater than 2 ha of land earn 28% more than small landowners in the previous landholding class. This pattern highlights the importance of not aggregating all farmers into a single category and tailoring policies specifically for marginal, small and large farmers in line with their needs.

Fig 8: Average Monthly Income of Agricultural Households by Size-Class of Land Holding



Data Source: NABARD NAFIS 2021-22

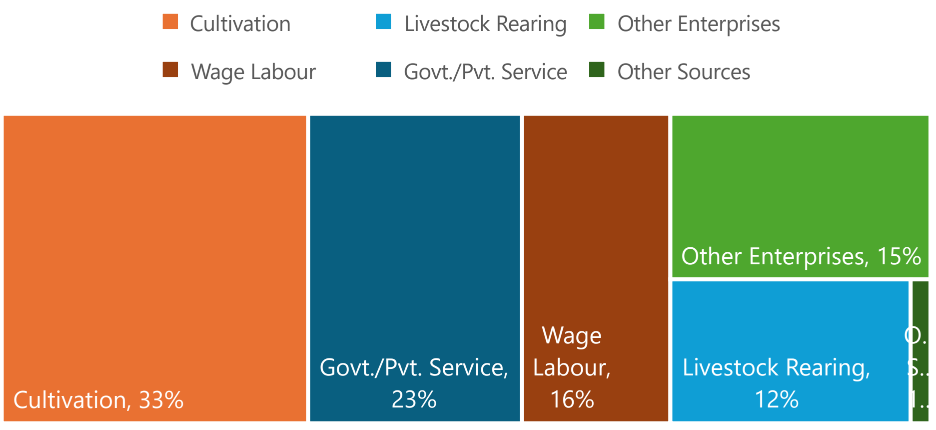
8. How diversified are the sources of income for agricultural families?

Only 33% of income for agricultural families comes from crop cultivation. A substantial 23% comes from government or private service, 16% from wage labour, 15% from other enterprises, and 12% from livestock rearing.

A cumulative 45% of income comes from crop and livestock cultivation, while the rest is garnered from ancillary sources of income. When disaggregated by landholding, the share of income from cultivation comes down even further. Marginal farmers having relatively higher landholding in their class are also seen to earn less than 35% of their incomes from cultivation. This goes up to 42% when livestock farming is also considered. Therefore, for the vast majority of farming households (representing about two-thirds of agricultural households), income from crop and animal farming hardly provides one-third of their incomes, highlighting the importance of off-farm work for a large section of agricultural families.

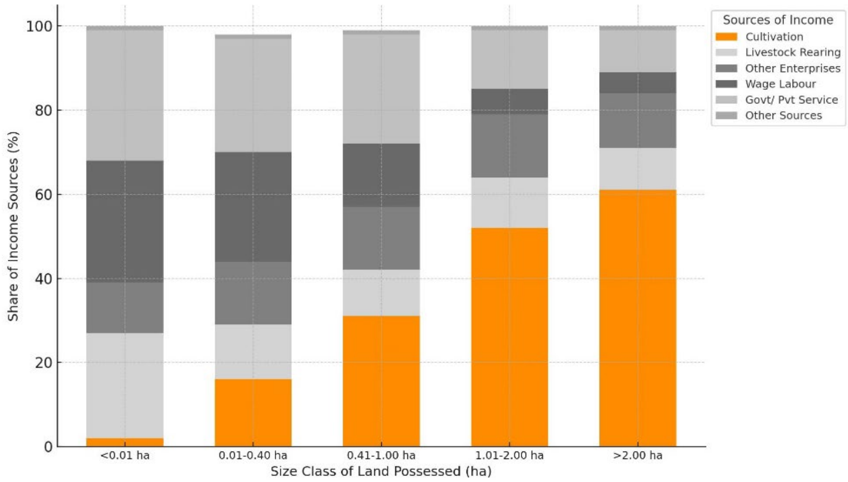
Agricultural households are also seen to rely on multiple sources of income to meet needs that are left unmet from income from just cultivation. Most of these households have two to three sources of income, up to even four sources in 18% of agricultural households, unlike non-agricultural households, which predominantly rely on only one source of income. Moreover, unlike in the case of non-agricultural households, where the gains from another source of income drop after the third source, for agricultural households, income increases with each additional source of income, pointing to the productivity-enhancing potential of off-farm labour opportunities.

Fig 9: Share of Different Sources of Income for Agricultural Households



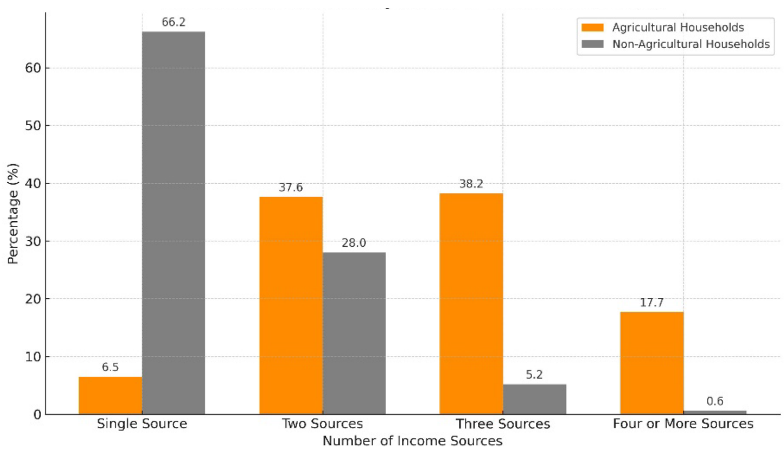
Data Source: NABARD NAFIS 2021-22

Fig 10: Share of Income from Different Sources by Size-Class of Landholding



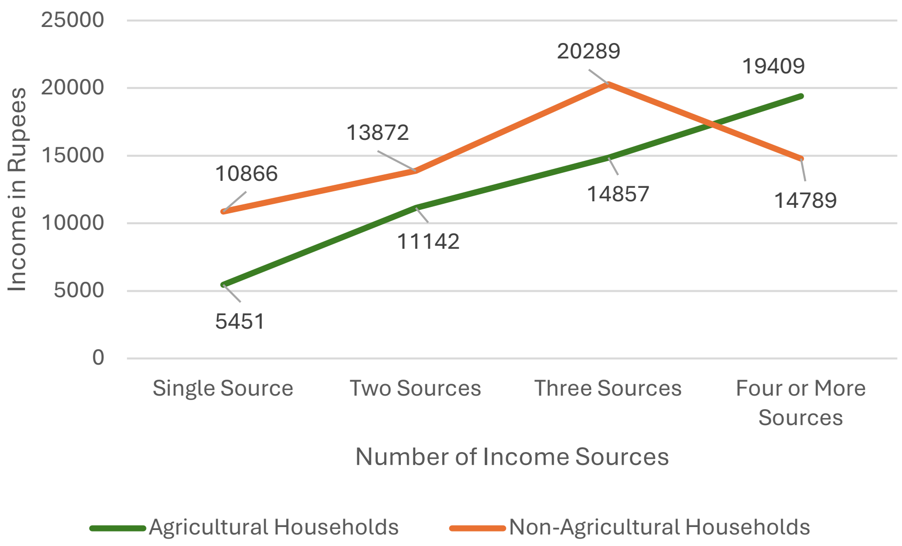
Data Source: NABARD NAFIS 2021-22

Fig 11: Distribution of Agricultural Households by Number of Sources of Income



Data Source: NABARD NAFIS 2021-22

Fig 12: Income of Agricultural and Non-Agricultural Households by Number of Income Sources



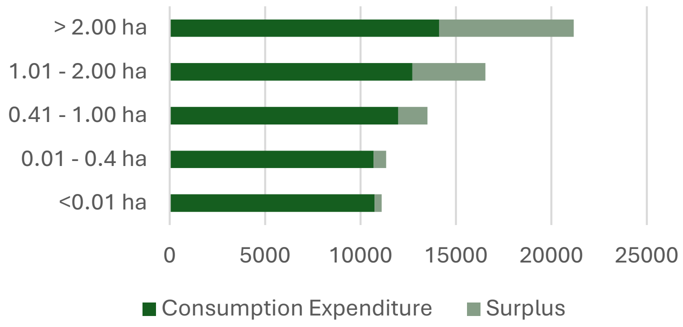
Data Source: NABARD NAFIS 2021-22

9. How much income gets expended towards consumption expenditure by agricultural households, and how much surplus are they able to generate?

Among marginal farmer households owning land up to 1 ha, almost all of the household's income goes towards consumption expenditure. Only households with more than 1 ha of land are able to accrue some surplus.

This points to the narrow financial space available to marginal farmers owning less than 1 ha of land to tide over adverse shocks, make capital investments, or even risk experimenting with new farming practices. This meagre surplus also highlights the dire need for appropriate social security for marginal farmers to enable them the opportunity to safeguard and sustain their livelihood during adverse events. Further, such a small surplus also has a bearing on the ability of marginal farmers to invest in FPOs and other collectives to benefit from their purported economies of scale.

Fig 13: Consumption Expenditure Among Agricultural Households by Size-Class of Landholding



Data Source: NABARD NAFIS 2021-22

10. How prevalent are distress events among agricultural households, and how do they deal with such events?

29.7% of agricultural households reported crop failure or decline due to rainfall aberrations and pest infestations. Fall in market prices was the next common distress event, followed by loss of livestock and inability to sell produce. Households are seen resorting to personal savings or loans to tide over such events.

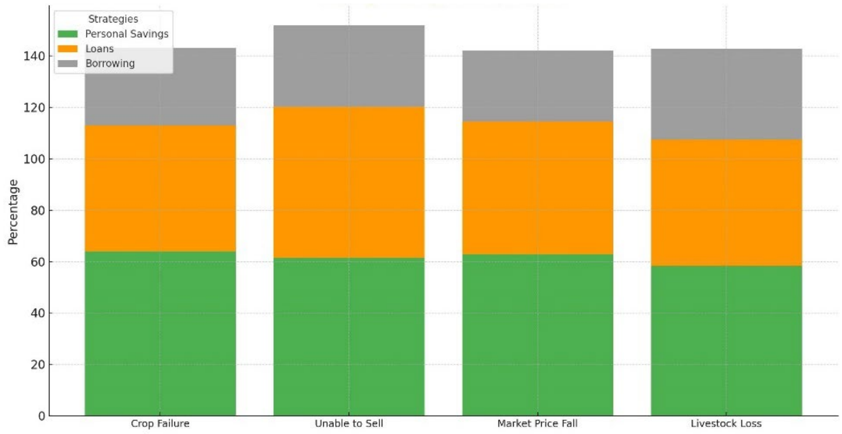
It is pertinent to note that "loans" and "borrowing from friends and family" cannot be neatly categorised as formal and informal strategies since the "loans" category could also include borrowings from informal money lenders and supply chain actors. Further, "personal savings" could take the form of formal savings with banks or informal relational savings where money is parked with a savings group or with friends and family.

With a substantial section of agricultural households reporting distress events and using loans or savings rather than insurance to deal with such events, the inability of currently available insurance products to meet the needs of agricultural households stands evident. While innovating on novel and relevant insurance products is crucial, there is also a dire need for suitable and affordable emergency loans and tailor-made savings products.

Fig 14: Proportion of Agricultural Households Facing Distress Events Connected to their Livelihood

Data Source: NABARD NAFIS 2021-22

Fig 15: Coping Strategies Adopted by Agricultural Households by Distress Event



Data Source: NABARD NAFIS 2021-22

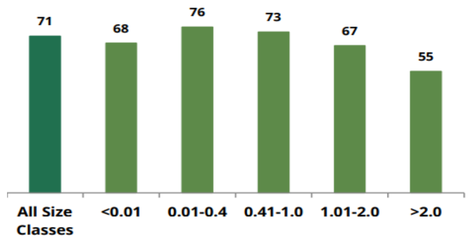
11. Are agricultural households saving more since they are significantly more exposed to adverse events?

71% of agricultural households are savings, as opposed to only 58% of non-agricultural households. This is more prevalent among marginal and small landholding agricultural households.

Despite the higher proclivity among farming households to save, particularly formally, not many products are currently available for farmers to shape their seasonal incomes to match their regular expenses and still apportion certain funds for emergency or long-term investment needs. While Jan Dhan accounts act as transactional accounts and SHGs enable small group savings, there is a gap in the market for intuitive, cheap and contextually relevant savings products for agricultural households to funnel their irregular incomes into steady flows of necessary expenditure and multiple corpora of fungible savings.

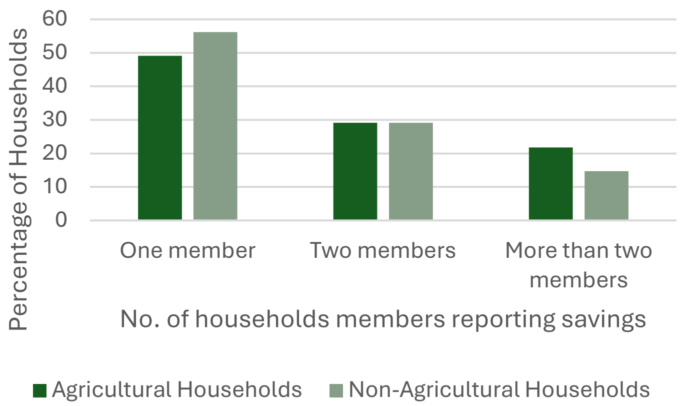
Interestingly, agricultural households also have more members saving with formal institutions and better participation of women in institutional savings. Agricultural households report saving through bank accounts (78%), SHGs (13%) and Post Office Accounts (6%) in the year leading up to the survey. Around 16% of agricultural households also report saving at home. This highlights the opportunity for financial service providers to innovate so that agricultural families can save and better manage their cash flows.

Fig 16: Proportion of Agricultural Households Reporting Savings by Size-Class of Landholding



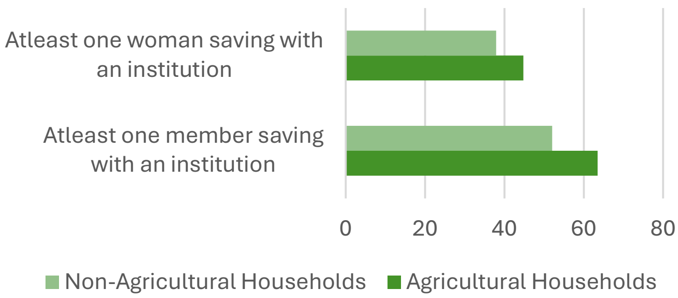
Source: NABARD NAFIS Report 2021-22

Fig 17: Number of Household Members Saving Among Agricultural Households



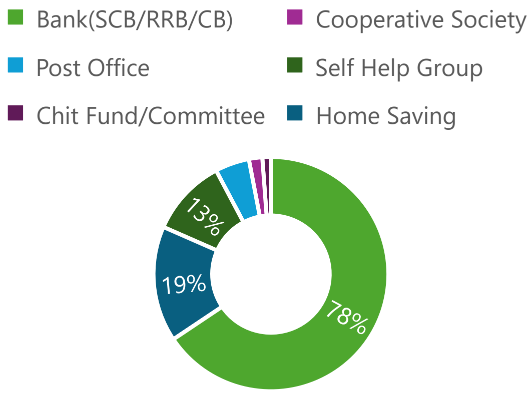
Data Source: NABARD NAFIS 2021-22

Fig 18: Institutional Savings Made by Agricultural Households and Women from Agricultural Households



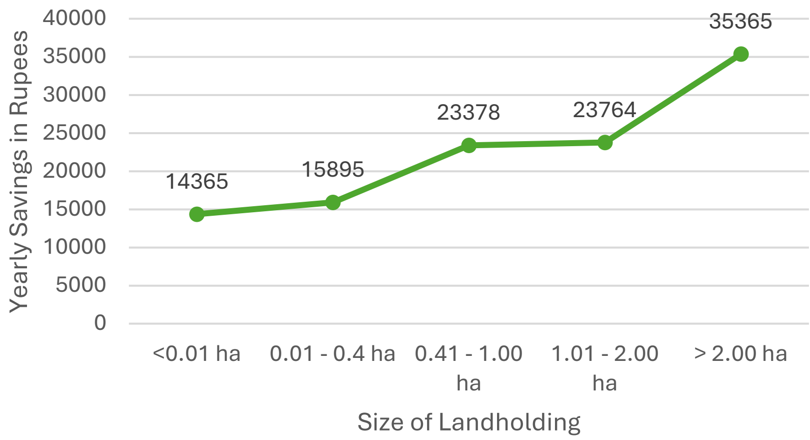
Data Source: NABARD NAFIS 2021-22

Fig 19: Proportion of Agricultural Households Making Savings Through Different Channels



Data Source: NABARD NAFIS 2021-22

Fig 20: Reported Annual Savings by Agricultural Households for the year 2021-22 by Size-Class of Landholding



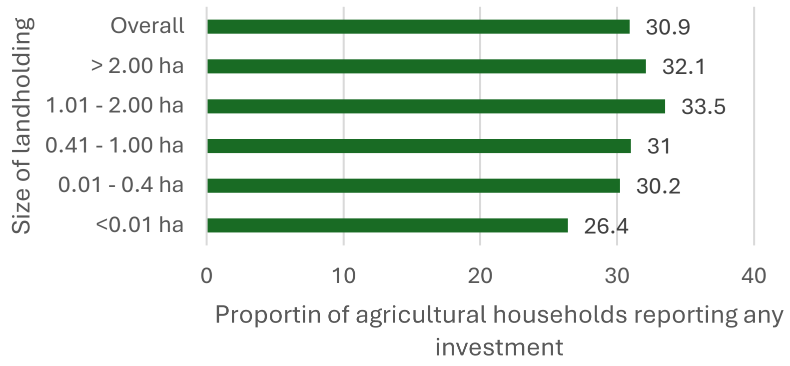
Data Source: NABARD NAFIS 2021-22

12. Apart from savings, do agricultural households invest? What kind of investments are they undertaking?

31% of agricultural households reported investing, compared to 23% of non-agricultural households. Most of these investments are in physical assets.

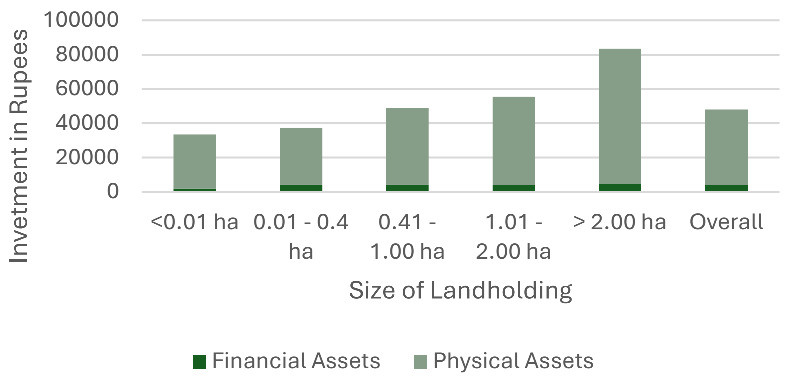
Around 30% of agricultural households of all land size classes report making investments. However, the quantum of investment increases with increasing land ownership. Interestingly, agricultural families across all land size classes report negligible investments in financial assets. Even large farmers with considerable income, surplus, and stability are seen to prefer physical assets to financial assets, pointing to the inability of financial products that are currently available in the market to meet the needs of farming households.

Fig 21: Proportion of Agricultural Households Reporting Any Investment by Size-Class of Landholding



Data Source: NABARD NAFIS 2021-22

Fig 22: Investment by Agricultural Households into Physical and Financial Assets by Size-Class of Landholding



Data Source: NABARD NAFIS 2021-22

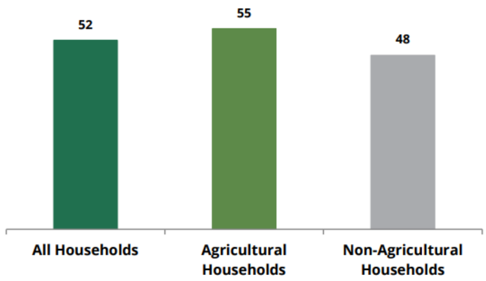
13. How do agricultural households borrow, and who do they borrow from?

55% of agricultural households report being indebted. Most of them borrow from institutional sources, with lower landholding classes borrowing marginally more from non-institutional sources. Friends and family are the largest non-institutional sources of funds.

With over two-thirds of agricultural households borrowing only from institutional sources, financial inclusion is well-penetrated among this segment. Another 24% report borrowing only from non-institutional sources, pointing to their unwillingness or inability to engage with formal credit products. Interestingly, the loan source for those households availing non-institutional credit is predominantly friends and family, both in proportion to households and loan value. Money lenders are seen to be the choice of only 1.6% of agricultural households and represent only about 1.3% of non-institutional loan value. This brings out the significance of social networks in the financial lives of agricultural households. Formalisation has indeed replaced moneylenders to a great extent. The share of non-institutional credit that still remains comes predominantly from friends and family due to the social, cultural and contextual relevance of these loans.

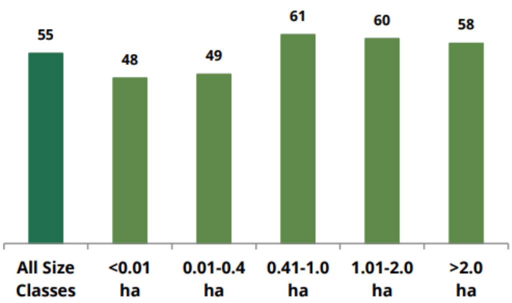
As for institutional loans, the largest share of agricultural households (32%) report loans from scheduled commercial banks, which constitute the majority of loan value (55%). This is followed by NBFCs, SHGs/JLGs, Regional Rural Banks (RRBs), and Cooperative Societies. In absolute value, agricultural households are seen to be borrowing more than non-agricultural households. The debt service ratio (DSR) for agricultural households, calculated as a ratio of debt obligations to disposable income, stands at 2.15, i.e., the average debt obligation of an agricultural household is 2.15 times the average income[1].

Fig 23: Share of Households Reporting Indebtedness



Source: NABARD NAFIS Report 2021-22

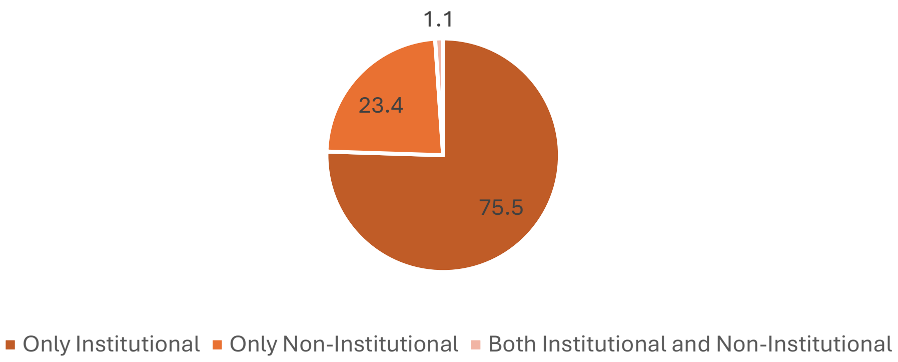
Fig 24: Share of Agricultural Households Reporting Indebtedness by Size-Class of Landholding



Source: NABARD NAFIS Report 2021-22

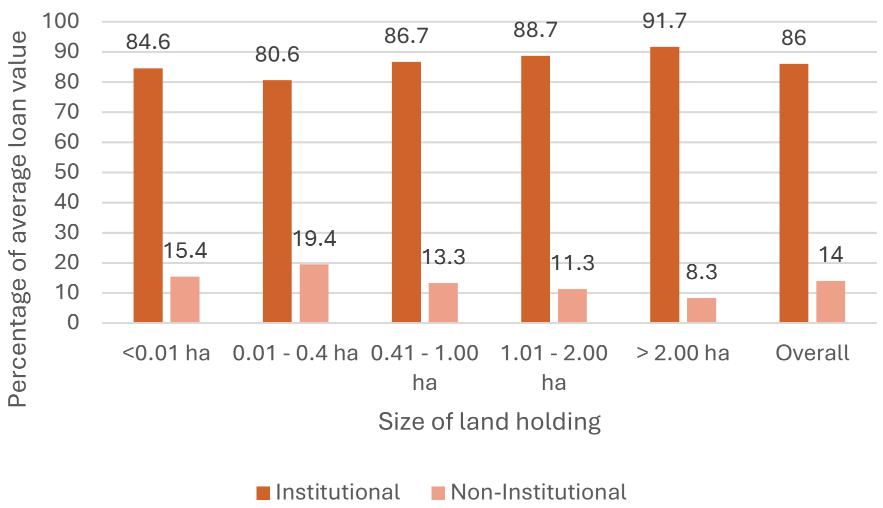
[1] The DSR here is calculated using the average outstanding across all agricultural households. When considering the average outstanding for only indebted agricultural households, the DSR increases to 3.89, i.e., on average, agricultural households with loans have an outstanding debt that is 3.89 times the average annual disposal income. Here, average disposable income is calculated as the average income left over after the reported average consumption expenditure by agricultural households is deducted. Typically, a DSR less than 1 is considered ideal.

Fig 25: Loan Source for Agricultural Households which Reported Any Loan in 2021-22



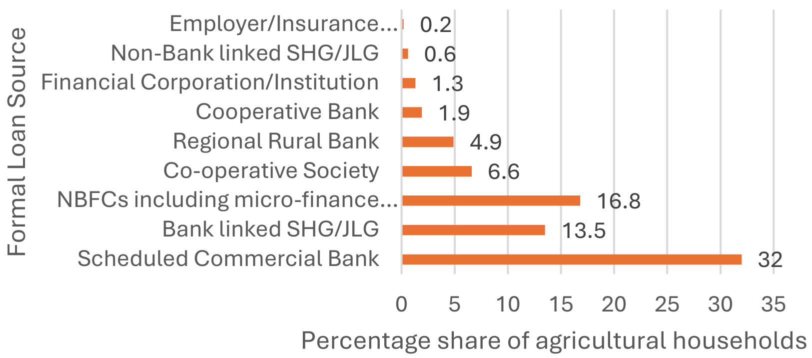
Data Source: NABARD NAFIS 2021-22

Fig 26: Share of Loan Value from Institutional and Non-Institutional Sources for Agri-Households with Loan in 2021-22



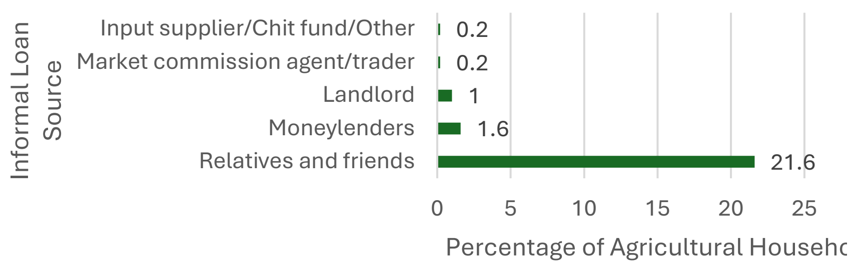
Data Source: NABARD NAFIS 2021-22

Fig 27: Proportion of Agricultural Households Availing Institutional Loans by Loan Sources



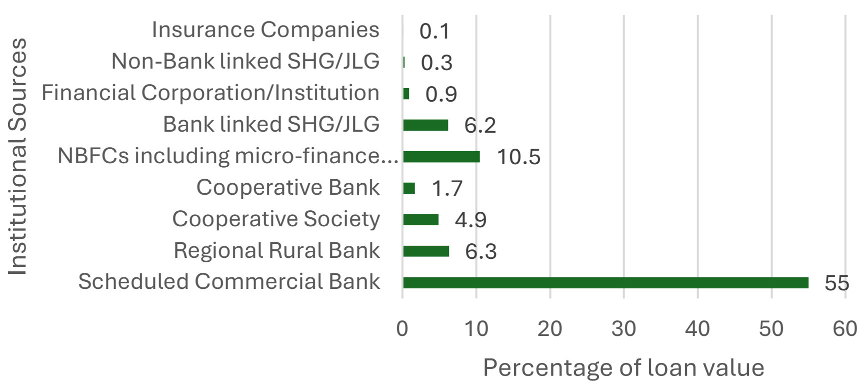
Data Source: NABARD NAFIS 2021-22

Fig 28: Proportion of Agricultural Households Availing Non-Institutional Loans by Loan Sources



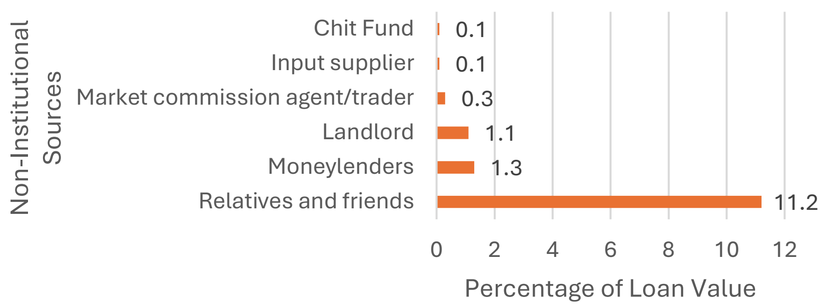
Data Source: NABARD NAFIS 2021-22

Fig 29: Proportion of Loan Value by Loan Sources for Institutional Loans taken by Agricultural Households



Data Source: NABARD NAFIS 2021-22

Fig 30: Proportion of Loan Value by Loan Sources for Non-Institutional Loans taken by Agricultural Households



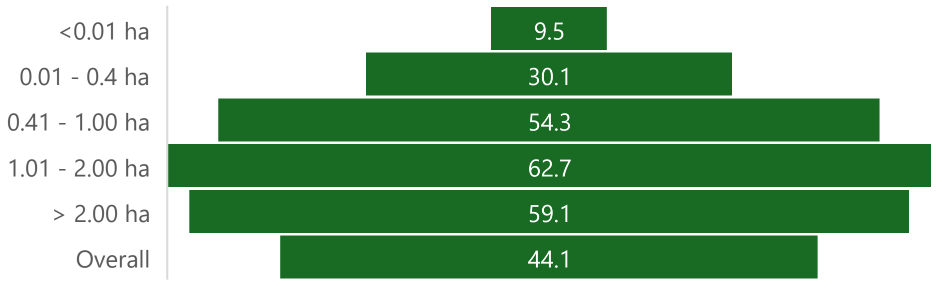
Data Source: NABARD NAFIS 2021-22

14. What is the prevalence of KCC among agricultural households?

KCC has the highest penetration among small (63%) and large (59%) farmers. The proportion of agricultural households with KCC is the lowest among households with less than 0.40 ha of land (around 9% to 30%) and increases substantially to 54% for those with 0.41 to 1 ha of land.

The availability of valid KCC among agricultural households has seen an increase from 10.5% of households in 2016-17 to 44% in 2021-22. The fair proportion of agricultural households with KCC points to its relevance for agricultural households. The low proportion of KCC ownership among the lower landholding class (<0.4 ha land) points to the product's inability to provide truly collateral-free loans to those who need it the most. Innovations in KCC for this class of borrowers, by taking due cognisance of their differentiated context, could engender better penetration and usage.

Fig 31: Proportion of Agricultural Households with KCC by landholding



Data Source: NABARD NAFIS 2021-22

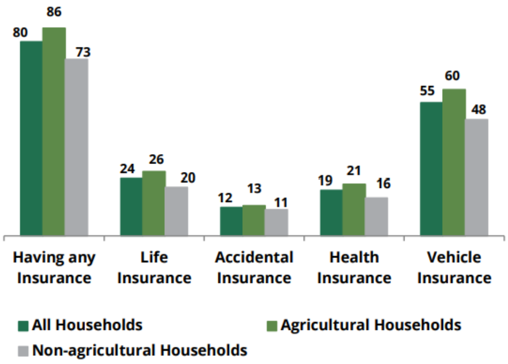
15. How amenable are agricultural households to formal insurance products?

More agricultural households are seen to hold insurance of all sorts than non-agricultural households. Insured agricultural households are seen to be making more claims than non-agricultural households and having better success with their claims.

The difference between agricultural and non-agricultural households in insurance ownership is particularly stark for life insurance and vehicle insurance. The proportion of agricultural households making claims on their insurance products is higher than that of non-agricultural households. They also report higher success with claims (either on-time or delayed) and lower issues with non-settlement of claims. This points to their overall awareness of and engagement with insurance products.

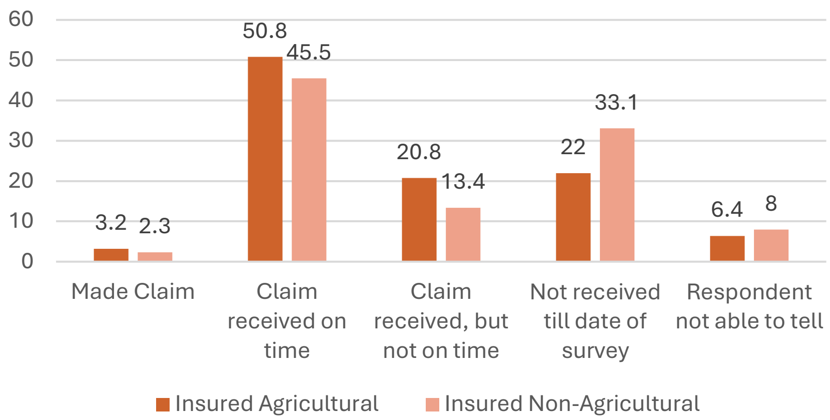
The proportion of agricultural households with crop insurance increases with increasing land ownership. However, livestock ownership is highest among the higher rung of marginal farmers owning between 0.41 to 1 ha of land and is the lowest among large farmers.

Fig 32: Proportion of Agricultural Households Owning Different Types of Insurance



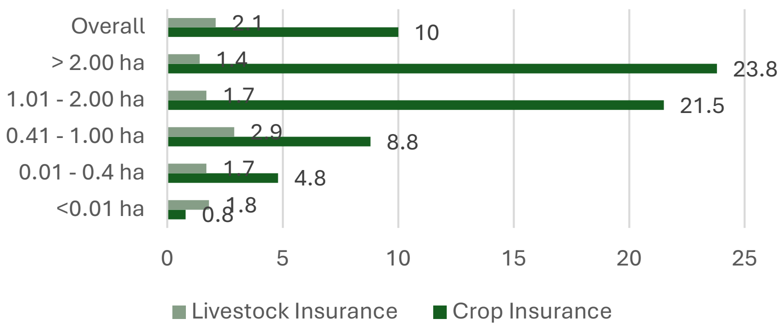
Source: NABARD NAFIS Report 2021-22

Fig 33: Claim Status Among Agri and Non-Agri Households That Made Any Claim



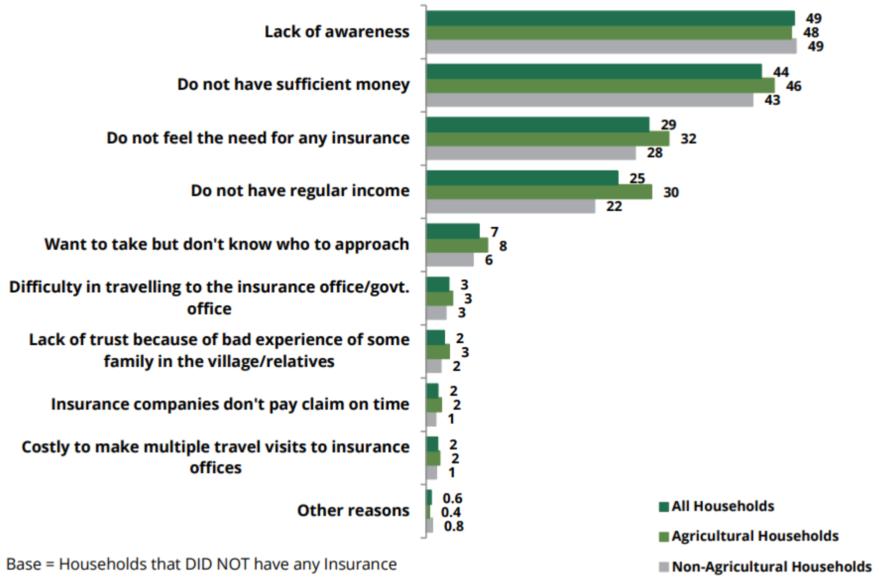
Data Source: NABARD NAFIS 2021-22

Fig 34: Proportion of Agricultural Households Having Crop and Livestock Insurance by Landholding



Data Source: NABARD NAFIS 2021-22

Fig 35: Proportion of Households Without Insurance by Reason for Not Taking An Insurance



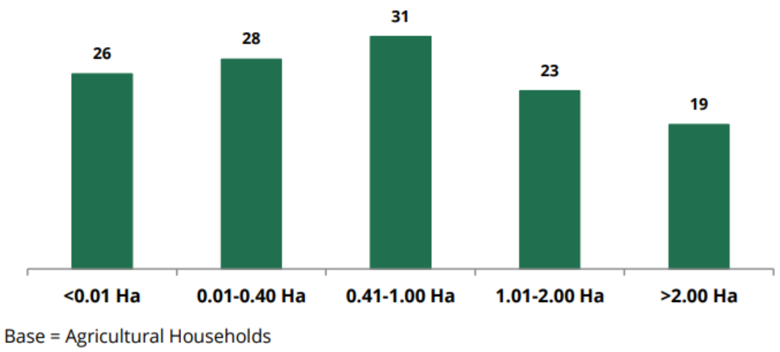
Source: NABARD NAFIS Report 2021-22

16. How do agricultural households engage with community-led groups like SHGs and JLGs?

Participation in community-led groups like Self Help Groups (SHGs) and Joint Liability Groups (JLGs) is comparatively the largest among the lower land-holding classes. SHGs have far greater participation than JLGs.

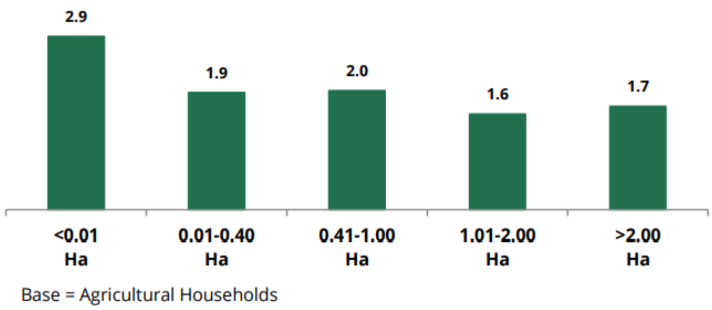
It is interesting to note that while the proportion of agricultural households reporting membership in SHG is highest for the higher rung of marginal farmers owning between 0.41 to 1 ha land, JLG participation is highest for the lowest rung of marginal farmers owning less than 0.1 ha land.

Fig 36: Proportion of Agricultural Households with Membership in a SHG by Size-Class of Landholding



Source: NABARD NAFIS Report 2021-22

Fig 37: Proportion of Agricultural Households with Membership in a JLG by Size-Class of Landholding



Source: NABARD NAFIS Report 2021-22

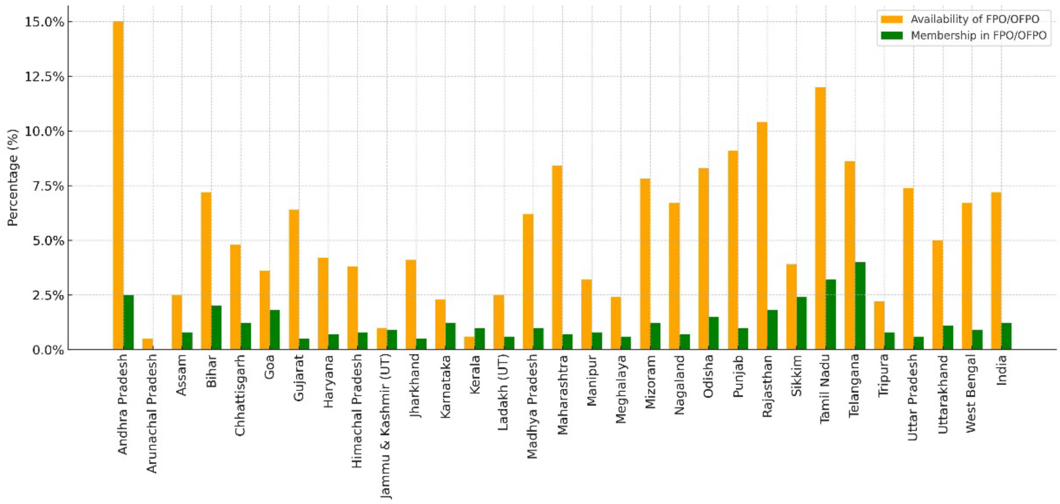
17. How are agricultural households engaging with collectives like Farmer Producer Organisations (FPOs)?

The proportion of agricultural households reporting the availability of and membership in FPOs varies widely across states. Training and capacity building are the most common activities undertaken by FPOs, while market access is reported to be the most common benefit accruing from FPOs.

Membership varies between states where higher levels of reported availability in some states have not translated into membership, while lower availability in other states has nevertheless ensured more significant membership. This points to institutional and other contextual factors influencing the success of FPO mobilisation in some states.

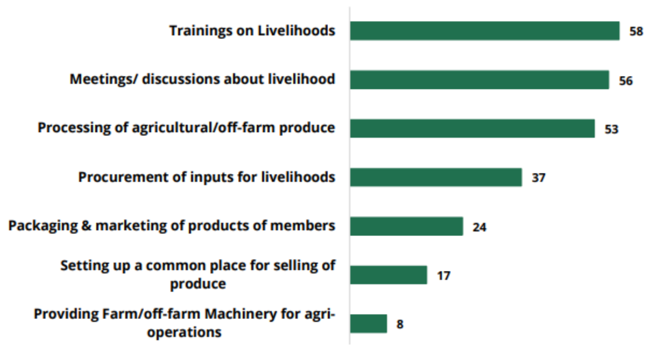
The top three reported benefits of FPOs are improved access to markets, inputs and credit, pointing to the existing fragmentation of the agricultural value chain and the ability of collectives to solve such disconnect.

Fig 38: Proportion of Agricultural Households Reporting Availability of Membership into FPOs/OFPOs by State



Data Source: NABARD NAFIS 2021-22

Fig 39: Usual Activities Undertaken by FPOs/OFPOs As Reported by Households Reporting Availability of FPOs/OFPOs



Source: NABARD NAFIS Report 2021-22

Fig 40: Benefits Offered by FPOs/OFPOs To Their Members As Reported by Households Reporting Availability of FPOs/OFPOs

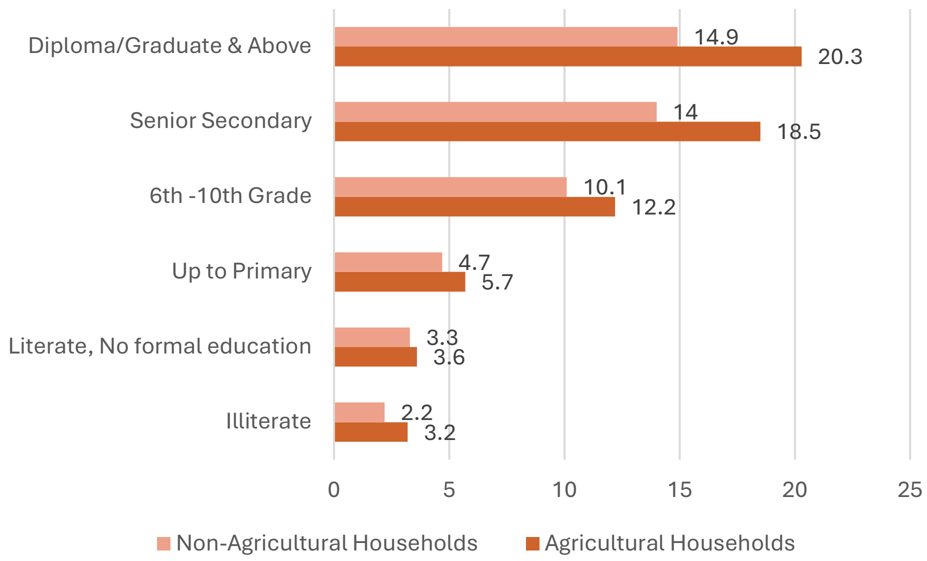
Source: NABARD NAFIS Report 2021-22

18.Are agricultural households open to change?

A significantly higher percentage of agricultural households report an interest in learning a new skill than non-agricultural households across all levels of educational attainment.

This trend is particularly significant among those with senior secondary education or above. This eagerness points to an opportunity to learn and adopt ecologically more sensible modes of cultivation and engage with ag-techs and other such new players trying to solve a myriad of problems facing the agricultural sector.

Fig 41: Proportion of Households Keen to Learn New Skills by Educational Status



Data Source: NABARD NAFIS 2021-22