Inspirational thoughts can drive a positive behavioural change: The perceived benefits of *Mann Ki Baat* (Inner thoughts) messages amongst the smallholder Indian farmers

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ABSTRACT

Farmers are convinced if the message has trustworthiness and is from credible communication sources. In this context, we considered the Mann Ki Baat programme narrated by the Hon'ble Prime Minister as a key motivational factor in shaping the smallholder farmers' perception vis-a-vis the importance of innovative learning, mobilization, and better access and adoption of the institutional resources (e.g. agri-inputs, agro-advisories, skill development etc.) as efficient means to adapt to the emerging challenges. This study was carried out to draw insights and lessons on the pattern and frequency of listening to the various Mann Ki Baat topics by the smallholder farmers, and how this led to a behavioural change for the sustainable management of agri-food systems. The observations recorded from 1,364 farmers from various states of India revealed that natural farming, conservation of natural resources and willingness to adopt the integrated farming systems (diversification) were the most preferred topics of Mann Ki Baat by the smallholder farmers. Notwithstanding their relatively poor adaptive capacity, a majority of the sample farmers agreed that ideas communicated through Mann Ki Baat were easily implementable on their farms. The perceived trickle-down effect of Mann Ki Baat was also instrumental in mobilizing the farmers to better access the institutional resources, facilitated by an enabling networking with the KVKs and other institutions. This process of change may augur well for enhanced reciprocal learning, enabling the smallholder farmers to better cope up with suit of stresses. It also emerged that mass scale awareness programmes such as Mann Ki Baat by the Hon'ble Prime Minister of India were seen as credible sources of inspiration, paving the way for sustainable agricultural production and entrepreneurial development in the rural hinterlands of India.

Keywords: Agricultural messages, new ideas, Inner thoughts, Preferred agricultural topics, Smallholder farmers' perception and motivation

It is known that motivational messages play a profound role in technology adoption by the farmers (Antwi-Agyei et al. 2021) which can further be strengthened by a social networking approach for better access to the institutional technologies (Abegunde et al. 2020). The adoption process for a particular technology and/or other institutional resources is often significantly influenced by farmers' perception of the thoughts originating from different sources (Moyo and Salawu 2018, Antwi-Agyei et al. 2021), it remains a challenging task to convince the farmers about

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the trustworthiness of credible (interactive) communication sources (Nguyen and Drakou 2021). This issue can be addressed by using some popular sources of communication (e.g., Radio and Television) through which the public figures act as the trust builders (Cohen and Uphoff 1980, Frank et al. 2011). Taking insights from these studies, we considered the Mann Ki Baat (inner thoughts) programme narrated by the Hon'ble Prime Minister as a key motivational factor in shaping the smallholder farmers' perception vis-a-vis the importance of innovative learning, mobilization, and better access to and adoption of the institutional resources (e.g. agri-inputs, agro-advisories, skill development etc.) as efficient means to adapt to the looming risks (Knickel et al. 2009). The programme name Mann Ki Baat has been used frequently in this paper, which carry the meaning inner thoughts literally. Evidently, the access of scientific knowledge and technologies by the farmers is further determined by its distributional nature (Campbell 1980), their compatibility with the bio-physical conditions of the agro-ecosystems and the rapidly changing needs (Knickel et al. 2009). Accumulating evidence shows that radio talks (Coldevin 2003) delivered by the knowledgeable and trustworthy community leaders (Singh et al. 2022) result in enhanced mobilization of the farmers in general and the material resource poor farmers in particular (Antwi-Agyei et al. 2021). Taking insight from Moyo and Salawu (2018), we considered the inspirational messages by the Hon'ble Prime Minister through Mann Ki Baat as the winds of change: a leap forward to making farming a sustainable and rewarding activity.

According to Schatzki (2001 a,b), social practice theory deals with action of an individual which becomes day-dayday life. Any intentional behaviour that becomes a routine in the daily life is treated as the social practice (Hudson et al. 2016). Accordingly, we treated the messages delivered through Mann Ki Baat to be relevant and influential for the management of their farms and the daily chores by the smallholder farmers. As such farmers are mostly highly vulnerable to a range of external shocks emanating from the climatic, ecological, socio-economic and institutional realms (Singh et al. 2020, Asfaw et al. 2021), we considered the Mann Ki Baat messages as a well thought-out plan of action for the holistic development of the smallholder farms (Ayanlade et al. 2017, Jha and Gupta V 2021). Therefore, we applied an integrated framework considering farmers' perception, and their social and livelihood enriching practices as components to achieve the aims of this study.

MATERIALS AND METHODS

Sampling framework and method of data collection: In order to make the generalizations pan-India, a total of 2,310 smallholder farmers (with operational area less than 2.0 ha) were selected for the study from 232 KVKs across the country. However, we retained finally 1,364 respondents on account of their proper responses to the questionnaire prepared for recording observation on various aspects of Mann Ki Baat. Selection of states and districts was purposive, based on the extent of facilitation of the Mann Ki Baat by concerned KVKs. From the farmers who listened to the Mann Ki Baat (facilitated by KVKs), respondents were chosen randomly. Simultaneously, content analysis of all the episodes was done, and cross-checked by an independent team to avoid any chances of missing the contents and story captured in Mann Ki Baat episodes. Covering all the episodes, a total of 22 major topics on agriculture were observed those presented by Hon'ble Prime Minister of India, and aired by the All India Radio to make farmers aware, motivate and mobilize them. For example; *Topic-1*: Need to increase production of oilseeds and pulses; Topic-2: Technology must move from lab to land (technology application at common man); Topic-3: Building capacities for resilience against natural calamities and climate change; *Topic-4*: Trying and undertaking organic methods of cultivation and innovations; Topic-5: Reducing the burning of crops or the straw. It is everyone's concern and responsibility too; Topic-6: Farmers and farm women need

to adopt integrated farming system approach of agriculture, which may include animal husbandry, horticulture, and fisheries; Topic-7: Using modern technologies, such as drip irrigation and solar pumps, to increase their productivity and income; Topic-8: India's agriculture sector requires innovation, modernization, and incorporation of new technologies. Make use of government schemes such as agri-infrastructure funds, farm credit targets, soil health cards, micro-irrigation projects, crop insurance schemes, and PM KisanYojana. Awareness generated and trickled down to number of farmers; Topic-9: Ensuring Geographical Indications for unique agricultural commodities; Topic-10: Need to work on sweet revolution. Bee keeping can contribute to the rural empowerment; Topic-11: Let us increase the agri-exports with quality production; *Topic-12*: Focusing on crops with diet precautions and Ayurveda/ Ayush startups; Topic-13: Water conservation methods to be undertaken. Lets make clean lakes; Topic-14: Waste to wealth (working towards crop waste management, animal/ fish waste management); Topic-15: Self-reliant farmer, selfreliant India through natural farming; Topic-16: International year of millets: Increased millet farming, value addition and millet-premiership; Topic-17: G 20 Path ahead and rise of India's drone industry: Making use of agricultural drone technology at farmers level; Topic-18: Indigenous Technical Knowledge must be validated and utilized; Topic-19: Solar energy revolution (Modehra-Indias first Surya Gram); Topic-20: PM-Kusum Jai Anusandhan Tripura's Bio-village 2.0 and climate change; *Topic-21*: Modernizing Agri sector is need of the hour, all our methods of farming be modernized; Topic-22: Emphasis on organic farming-beneficial for soil health, consumer health, and the environment, and help in promoting sustainable agriculture methods.

Followed by the aforementioned exercise, an interview schedule was developed, containing closed and open-ended questions, in consultation with few key farmers who listened Mann Ki Baat. Additionally, a total of 11 Agriculture Professionals (Directors of Agriculture Application and Research Institute) and 10 senior-level Scientists from Krishi Vigyan Kendras, frequently facilitated Mann Ki Baat, were consulted to assess the relevance and types of questions finalized in the interview schedule. The interview schedule was pilot tested with a non-sampled population, and ambiguous questions were omitted. The interview schedule was filled in face-to-face mode with farmers, and on an average, each interview schedule took ~45-50 min. Data were collected into two phases, in the first-wave the data were collected using a semi-structured questionnaire. In the second phase, general perception of farmers on the agricultural messages captured into Mann Ki Baat, its utility and likely effects were gathered. These insights generated in the second-wave of data collection were further complemented with the first-wave data. Therefore, farmers were interviewed for more of qualitative data supported with some quantitative information.

Focus group discussion: The Focus Group Discussions (FGDs) were also carried out in some of the selected villages

to enrich the study findings and insights. This also enabled the study farmers' to recall with their memories on some of the key agricultural issues highlighted in the *Mann Ki Baat* episodes. The insights generated during these FGDs were also highly useful in refining the questionnaire schedule; while ambiguous questions were omitted, some relevant points were included for improving the accuracy of the information recorded through the questionnaire.

Transect walk and event ecology: The transect walks were carried out in some of the selected villages where farmers, based on inspirations gained from various Mann Ki Baat episodes, were excited to switch over to some innovative agricultural practices including the natural and organic farming. This exercise also helped us in understanding the bio-physical variability amongst the agroecosystems and how this might influence the application of new technologies and practices. The event ecology method is one of the pragmatic approaches to explain the abductive reasoning on the change process that involves constructing causal chains intricately linked to socio-economic, institutional and bio-physical events (Lewis 1986, Walters and Vayda 2009). Taking insights from Walters and Vayda (2009) and Thorn et al. (2015), we applied this approach to engage with the farmers and gather their experiences and responses subsequent to listening various Mann Ki Baat episodes (each episode was treated as one event) and simultaneously accessing the related information from other sources. This helped us to learn as how farmers perceived the messages in various Mann Ki Baat events and moved forward for trying the new ideas and practices.

Data analysis: After collection, the data were entered into spread sheets. Before analysis, the data were thoroughly examined, and the ambiguous or incomplete observations were discarded. Then, to fulfill the objectives of study, commonly used qualitative descriptive statistics including mean, percentage and frequency were used to depict with the help of suitable visualization tools such as pi-chart, bar chart, etc.

RESULTS AND DISCUSSION

Frequency of listening of agricultural messages under Mann Ki Baat: The majority of our study farmers (Mann Ki Baat listeners) were of ~45 years in age, having on average

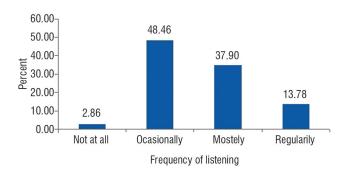


Fig 1 Frequency and extent of listening of agricultural messages under *Mann Ki Baat*.

6 family members, and over 84.0% of them were the males. Likewise, a majority of our study respondents (47.4%) were educated up to secondary and higher secondary levels, and the remaining (22.5%) were above higher secondary level. At the national level, the smallholder farmers listened to messages on diverse agricultural issues under Mann Ki Baat either occasionally (48.46) or mostly (34.90) (Fig 1). Taken together, a little over 83.0% of the smallholder farmers were found to be drawing inspirations from the Mann Ki Baat. Of the 7 episodes (directly relating to agriculture), the listening of 38.0% was facilitated by the Krishi Vigyan Kendras (KVKs) while farmers chose other arrangements for remaining episodes (62.0%). Interestingly, of the 7 episodes dedicated to agriculture, the listening of every 3rd episode was facilitated by the KVKs. This showed that despite limited human and logistic resources, the KVKs could make their considerable reach in facilitating the Mann Ki Baat broadcast for the smallholder farmers.

Farmers perceived effects on motivation and actions

Pattern in top most topics covered in Mann Ki Baat episodes: While assessing the farmers' perception about the relevance of Mann Ki Baat messages to their farming practices, it emerged that different topics (out of 22 directly and indirectly relating to agriculture) were perceived to be relevant and in motivating the smallholder farmers (Fig 2). At the country level, topic-6 (score: 3.79) on integrated farming systems, followed by topic-22 (score: 3.68) on organic farming and related dimensions (natural resources, human health and sustainability), topic-16 (3.64) on International Year of Millets (increased millet farming, value-addition and millet-preneurship), and topic-8 (score: 0.63) on strengthening the agriculture sector in India (strengthening innovation, modernization; greater coverage of government schemes, such as agri-infrastructure funds, farm credit targets, soil health cards, micro-irrigation projects, crop insurance schemes, and PM Kisan Yojana) were perceived to be considerably relevant and inspirational for the smallholder farmers (Fig 2). The remaining topics broadcasted under Mann Ki Baat, and listened by the smallholder farmers followed three different trends, and for which a majority of the topics were perceived to be relevant and motivating, exhibited scores (higher to lower) ranging between 3.58 to 3.51, followed by 3.46 to 3.31 and 3.16 to 3.10.

At the state level, with the highest score 5.0, the Lakshadweep farmers outperformed others in assimilating the ideas relating to organic methods of cultivation (topic-4) (Fig 3). Similarly, the farmers from Ladakh and Nagaland perceived the topic-6 (scores 4.73 and 4.63, respectively), which stressed on the adoption of integrated farming systems for developing resilient and profitable agri-food systems, as highly relevant and motivational for them. Likewise, the smallholder farmers from the states of Jharkhand (score 4.31), Bihar (score 4.30) and Uttarakhand (score 4.30)- though having strikingly similar scores on perceived relevance and motivation- differed from the preceding ones in attaching importance to different topics. While the

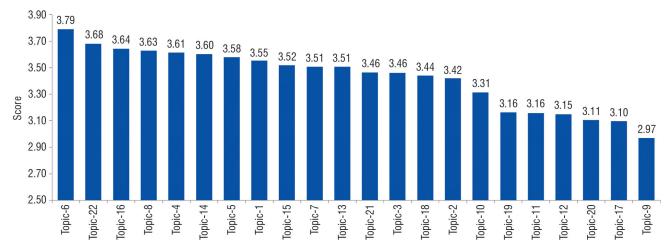


Fig 2 Pattern of top most topics (indicated with scoring) covered in *Mann Ki Baat* episodes perceived to be motivational for farmers. Topic details are given under Materials and Methods.

Jharkhand farmers found topic-6 (adoption of integrated farming systems) to be highly suited to their needs, those from Bihar and Uttarakhand were more interested in the topic-5 (reducing the burning of crop residues) and topic-22 (organic farming- for increased soil resilience, better human health, and ecological sustainability), respectively. A similar trend of scores but on different topics, perceived to be relevant and motivational, for the smallholder farmers from Goa, Manipur and Himachal Pradesh (Fig 3).

Most liked key themes of *Mann Ki Baat*: The three themes of *Mann Ki Baat* most preferred by the smallholder

farmers were natural farming (30.47%), conservation of natural resources (soil, water, plant and animal biodiversity) (16.54%), and the adoption of integrated farming systems (crops, livestock, horticulture etc.) (15.07%) (Fig 4). Interestingly, the topic on entrepreneurship development (9.66%) emerged as the fourth most preferred theme amongst the farmers, exhorting them to manage and run their farms as business entities. The additional themes most liked by the farmers related to various relevant topics were diversification, government support schemes such as PM Kisan Samman Nidhi, PM Kusum and agriculture

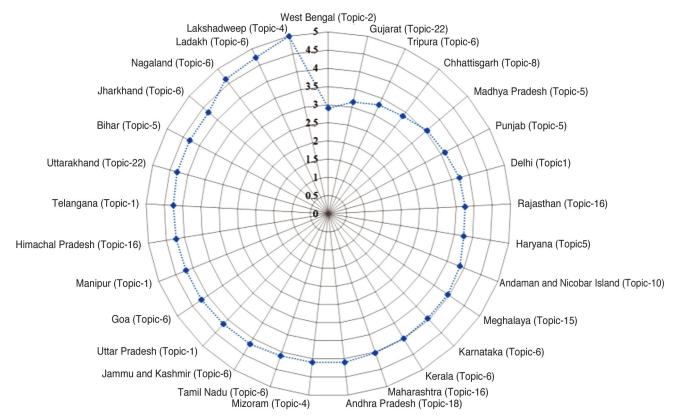


Fig 3 State-wise trend of top most topics (covered in *Mann Ki Baat* episodes) perceived to be helpful in motivation for farmers. Topic details are given under Materials and Methods.

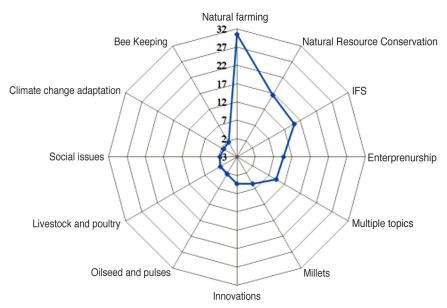


Fig 4 Most liked key themes of Mann Ki Baat.

modernization among other (9.34%), and the promotion of millet farming.

Perception of farmers on natural farming and their willingness to adopt: In recent years, concerted efforts have been made to enhance the resilience of Indian agriculture to a suit of stressors. In this context, the Government of India has placed a critical emphasis on promoting the natural and organic farming; two ideas exclusively communicated to the farmers through various Mann Ki Baat episodes. While assessing the farmers' perception on this topic, we learned that an overwhelming percentage (80.43%) of them were highly interested in these practices and expressed their willingness to adopt natural and organic practices in different choice of crops in the foreseeable future (Fig 5). Further analysis suggested that out of the smallholder farmers willing to adopt these practices, 27.0% were keen to apply these practices in vegetable crops. given their seasonal nature and a short growing season. A fair proportion of such farmers (20.0%) also perceived that adoption of these

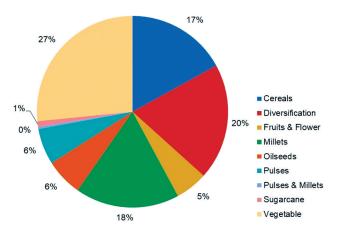


Fig 5 Farmers' willingness in preferred areas of agriculture (%) to apply natural/organic farming practices.

practices can help them better adapt to the multiple stresses (climate change, land degradation, water depletion and socioeconomic issues), and may also accelerate farm diversification through pulses and oilseeds, millets, horticultural crops and livestock. We also noted that almost an equal proportion of the farmers (18.0%) was willing to apply natural and organic practices in millet crops including bajra (Pennisetum flexuosum), ragi or mandua (Eleusine coracana), kodo (Paspalum scrobiculatum) kutki (Panicum flexuosum), etc., according to the regional preferences and compatibility with their agroecosystems, and in other cereals (17.0%) as well.

The willingness of farmers on millet farming: We observed that an

overwhelming majority (~80.0%) of the farmers was highly inspired by the *Mann Ki Baat* messages for the cultivation and consumption of millets (*Sri Anna*). Such farmers opined that they will shortly start growing millets and the selection of a particular millet crop will be based on the regional preferences, socio-economic needs, and the market facilities. These may include jowar, bajra, foxtail millet, little millet, ragi and mandua. Notably, some of the farmers were already growing millets and became sensitized about their vast potential after listening to the relevant episodes of *Mann Ki Baat*. Moreover, a considerable proportion (>50.0%) of our study farmers perceived that there would be better market opportunities for the organically grown millets and their products in the near future and that this would spur further interest in millet farming.

Trialability of ideas communicated: Perceived benefits and institutional innovations: The results of this study indicated that in spite of their relatively poor adaptive capacity (Singh et al. 2020), a strong majority of the study farmers (92.23%) were highly convinced that the ideas and inspirations communicated to them through Mann Ki Baat were easily implementable on their farms, and had a tremendous potential to address some of the pressing problems facing smallholder farmers (Fig 6a). The Mann Ki Baat messages broadcasted on All India Radio instilled a sense of confidence amongst a majority of the listener farmers (72.65%) who also shared and discussed such ideas with their fellow farmers. Subsequently, about 35.56% of the interested smallholder farmers approached the KVKs, while 21.18% formed the knowledge networks and farmers' interest groups. This trickle-down impact of the Mann Ki Baat messages further motivated the farmers, mobilizing them to access the agricultural information (41.0%), and obtain the benefits under various schemes and programmes (33.0%) (Fig 6b). Interestingly, owing to the networking with the KVKs, such farmers were now in a better position to

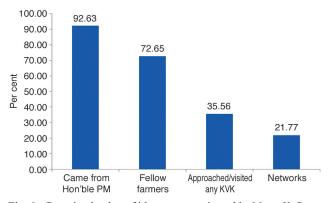


Fig 6a. Perceived value of ideas communicated in *Mann Ki Baat*, institutional innovations emerged (data in percentage).

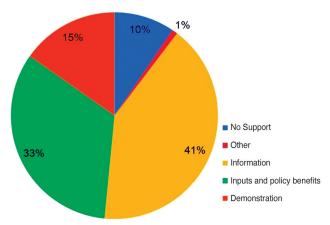


Fig 6b. Perceived diverse benefits drawn by farmers through institutional networks created by KVKs, and their partners.

obtain the benefits on innovative demonstrations (improved crop varieties and high yielding seeds, quality planting material of horticultural crops, and similar others) (15.0%). This innovation-led demonstration has likely enhanced their adaptive capacity by facilitating reciprocal learning opportunities with other stakeholders through which they gained new knowledge and ideas.

Enabling environment developed by institutions: On the country level, a total of 1,710 on-campus Mann Ki Baat events with the participation of 54,840 male and 22,591 female farmers were organized and listened. Similarly, in off-campus events of Mann Ki Baat messages relevant to agriculture, there were 1411 events witnessing the participation of 92,900 male and 36,019 female farmers. The average distance covered to participate in these events facilitated by KVKs for the farmers/participants was 18.58 km. Therefore, a total of 206,350 farmers/participants actively listened the Mann Ki Baat messages which were directly or indirectly facilitated by the KVKs. Such events on Mann Ki Baat were further strengthened and expanded through the institutional networks comprising of different stakeholders. For example, the collective participation of stakeholders including the Farmers Interest Groups, Self Help Groups (SHGs) and Commodity Interest Groups was the highest (16,162) followed by the participation of individual progressive or innovative farmers (8,987). Several democratic and community organizations such as Village Panchayat (led by the Village Sarpanch or Pradhan), Hon'ble Members of Legislative Assembly (MLAs) and Ward Members also took an active part in appreciable numbers (3,857) during the events facilitated by the KVKs. This process of organizing the *Mann Ki Baat* events on various agricultural topics created an enabling environment through which the farmers got a better opportunity to learn and access the resources from the scientific and developmental institutions.

Conclusion and policy implications: This learning opportunity through Mann Ki Baat was found to have a considerable influence on the smallholder farmers' perception vis-a-vis the innovative ideas and solutions for revitalizing the farms, turning them into productive, sustainable and profitable assets. We found that various Mann Ki Baat episodes on agriculture were helpful in sensitizing the farmers about impending threats and how a shift from business-as-usual was inevitable to ensuring sustainable profits and resilient livelihoods. We found that Hon'ble Prime Ministers' emphasis on integrated farming systems, natural and organic farming practices, millet cultivation, natural resource conservation and climate change adaptation were particularly highly appealing to the farmers across regions and states. Another major outcome of the inspirational Mann Ki Baat messages was that farmers were now more sensitized about the significance of cooperation and collective actions. A sense of cooperation and collective action is expected to enable the smallholder farmers in better accessing the resources from various public and private organizations. We learned that organization of Mann Ki Baat event also created an opportunity for the farmers to have active linkages with the KVKs and other institutions. This would probably also enable the farmers for the early adoption of innovative farm technologies and to access the institutional resources. A key finding was that mass-scale awareness programmes such as Mann Ki Baat could be a leap forward in motivating the farmers for adopting the best management practices for better incomes, household nutritional security and sustainable livelihoods.

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Ethical statements: Farmers, those who took part in this study, were explained the purpose of probable

outcomes of study in terms of using that as educational and learning resources. Consent of these farmers was sought for their participation. They expressed their willingness to take part, however, preferred to remain anonymous while reporting their perception, motivational information and other reported practices, except only on disclosure of geographical locations.

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