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GUEST EDITORIAL

The science and economics of family farms

The scientific and economic rationale of small family farms has been explained in the early 20th century itself. If Alexander Chayanov unravelled the nature and rationality of Russian peasantry, later on, Georescue Roegen analysed and confirmed it. Hayami and Ellis, among others, proved its modernization potential, while Kumara-rappa and Scott highlighted the social and ecological value of moral economy prevalent in small holder-dominated agriculture. Of late, the discourse on food sovereignty and agroecology is bringing back the focus on small holder family farms. Despite such developments, mainstream policies and academics seem to gloss over the value of small family farms. They still hover around the conventional business intention of scaling up both the size and capital intensity of agriculture. This focus is explicitly and implicitly justified from both the angles of improving food security and farm livelihoods.

There seems to be a perceivable lack of confidence in the potential of – or indifference to the cause of – family farms, among policy makers, bureaucrats, academics and the media. Their common concern seems to be about the joint potential of small holder farms, and agro-ecological methods to feed the world and meet the development needs. This concern is despite a lack of clear evidence regarding capability of industrial agriculture and technology to meet the same objectives, in the long term. It is also regardless of the existing evidence for the primary role played by food wastage, agro-ecologically incompatible consumer demands and lopsided food distribution, in breeding food insecurity.

Economic growth and urbanization have come to stay as the driver and image respectively, of development. A fast-growing economy and urban population need land, water and labour as well as industrial raw materials, minerals and food supply, for both their expansion as well as continued maintenance. These are generally appropriated from rural landscapes and communities. Rural India is supposed to give way for an ever-expanding economy and urbanization, while continuing to produce what is needed to sustain them. This contradiction in expecting a continually increasing provision of services from an endangered landscape and society is reinforced by the current reality of rural deprivation. Farming, particularly

small-scale family farming in which majority of Indian farmers are engaged is unable to support families even in meeting their basic needs, let alone help their aspirations to match urban lifestyles. Absence of non-farm rural or even reliable urban employment opportunities ensures that their needs and aspirations remain unmet.

Thus, in the backdrop of a grossly inadequate non-farm employment scene, rural compulsions and development objectives converge in the on-going alienation of agro-ecological skills and resources, de-peasantization and depopulation in rural areas. Can urban landscapes offer secure livelihoods and access to safe and healthy food and environment for all? If not, how legitimate and prudent is the on-going neglect of rural landscape and society? why can't there be a development model that synergises what the rural landscapes and communities can offer towards urbanization, than one that completely dispossess the two? The role of knowledge institutions in such an urban-centric development process is an important consideration for a conscientious scientific community.

Compared to most other countries, Indian agriculture and agrarian community showcase many unique features. Foremost among them is the coexistence of more than 125 million small holders in diverse production ecologies, alongside more than a billion consumers. This co-existence should have logically ensured a robustly intertwined supply and demand force for diverse agricultural products. If expanding urbanism (non-rural landscapes and consumerist population) offered market for diverse products from our production landscapes and provided supplementary non-farm jobs to small holders, how is it that rural distress continues to be pervasive and persisting? Several and diverse factors responsible for this apparently illogical outcome have been identified in the literature. Nevertheless, the need here is to join the dots and look at the way out.

The one emerging overarching solution is to tackle food, health, livelihood and climate crises, together in a joint and integrative effort. Rather than tackling each crisis in a disconnected and saddled manner, resulting in a treadmill of trade-offs at the grassroots, this effort is capable of addressing nearly half of the 17 sustainable development goals, targeting poverty, inequality, hunger,

health, water, land, climate and production; prescribed to transform our world. The challenges in coming up with such a wholesome step promise exciting new arena for scientific exploration.

The absence of such an integrative connectedness in policy and scientific mediation and the resultant irrationally lopsided rural–urban relationship mentioned above, are exemplified in many piecemeal interventions. One such intervention is found in the immediate and substantial response to a prospective slowdown in the manufacturing and service sectors of the economy. All media, academic discourses, policy dialogues and political arguments, everything converged on how to, by whatever means, increase the rate of growth of the economy. Conversely, the large-scale and longstanding slow down and lay-off in farming trigger ad-hoc populist measures like loan waivers or income supplements. Any substantial measure to reinstate the legitimate role of agrarian community in a progressive economy and society is conspicuously absent. It is an accepted nationwide strategy to formally support growth-enhancing sectors like construction, automobile manufacture, etc. and implicitly discourage agriculture, especially small-scale family farms.

The nudge to trade-off the farmer identity, security and agro-ecological know-how for the uncertain and monotonous jobs in the non-farm informal sector, is quite palpable. Instead of acknowledging this implicit but widespread push, the common tendency is to find fault with the diseconomies and slow diffusion of capital and technology in small farms. The above accusation of unviability of the persisting smallness of farm holdings then paves way for furthering the quest for capitalization of agriculture. This quest in turn throws up many challenges that are more complex than allowing the small farms to be viable. Prominent among these are the unsustainable and unsafe production of unsafe and unhealthy food, degradation of soil, water and biodiversity, as well as that of erasing the identity, agro-ecological know-how and reliability attached to agriculture as a livelihood option. Meanwhile, we continue to chase unequal and unhealthy society and economy, and simultaneously critique it in advocacy circles.

It is no surprise that the usual development indicators in access to food, water, education and life expectancy favour urbanization. This skewness is reflected in academic pursuits too. With 62% of our universities located in urban areas and research funds driven by economic power houses, even academics appears to favour the mainstream nexus between growth and urbanization, than the one between progress and sustainability. Anything not aligning with modern capital-centric processes seems to fall outside the purview of scientific pursuit. Unmindful of the need for an integrative science mentioned above, that connects food, health, livelihoods and ecological

crises, academic pursuits in the Global South still emulate those in distant landscapes and society. Thus, the content and geographies of higher education and employment (formal and informal) have been urbanized, as a norm. Society seems to be oblivious of the fact that science and economy are severing the roots of human civilization anchored in the topsoil. This lackadaisical strategy is rupturing the social–ecological fabric of Indian society, aborting the potential adaptive cycles needed for climate resilience. Obviously, the argument is not about keeping the urban and rural societies distinct and divergent – but about synchronizing life and livelihoods in the landscapes that lie in a continuum.

Capital and technological intensification and neo-liberal corporatization of food and farming are slowly prompting Polanyian counter movements in natural/sustainable/organic practices in our family farms. Only time can tell if these small and scattered movements will turn out to be the saving grace, or the swansong of our civilization. That will be decided by the extent to which we reconcile the divergence between vernacular and centralized or exogenous origins of science emerging from the Global South. This reconciliation can connect the now divergent streams of alien technology transfers and adaptive decentralized know-how. Such socio-ecologically informed science, technology, economy and policy-making alone can turn the tide towards speaking to the interlinked crises of food, health, livelihoods and climate.

The above interlinking will then reveal the crucial role of family farms. If there is an economic entity that has to simultaneously face the intertwined crises repeatedly mentioned here (food and farm prices, health impacts, livelihood insecurity and ecological changes), and which is also capable of significantly contributing to mitigating these crises, it is the small family farms. Family farms also present a socio-economic entity that has enough pliability to host the multiple dichotomies of modern life: rural–urban; consumer–producer and farm–non farm realities. Science can groom them to address these multiple and interlinked crises, while teasing out new regional circular economies from this collaboration.

If so, science and family farms together will be able to not just keep hunger at bay, but even realize nutritional security along with equitable progress. Only that institutions, society and governance processes should recognize the science of agro-ecology and the potential of regional economies woven around family farms.

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