1. How is rural society integrated with the livestock economy in India? Explain with the help of suitable examples.

Approach:

Question is straight forward in its approach students are expected to explain the above question with the use of examples to explain the points properly.

Introduction:

Livestock sector contributes around 28% to agriculture GDP of the country which is more than food grains and 5% to overall GDP. India has world's largest no of buffalo and second largest no of cattle and goats. About 20.5 million people depend upon livestock for their livelihood. It also provides employment to about 8.8 % of the population in India. Livestock plays an important role in Indian economy. India has vast livestock resources. Livestock sector contributes 4.11% GDP and 25.6% of total Agriculture GDP.

Body:

HOW IS RURAL SOCIETY INTEGRATED WITH THE LIVESTOCK ECONOMY IN INDIA

- Livestock contributing 16% to the income of small farm households as against an average of 14% for all rural households, livestock provides livelihood to two-third of rural community. It plays crucial role in rural development as gives additional income, living banks for rural families and is also crucial in benefitting the women, illiterate and unskilled people of rural society.
- The rural women play a significant role in the rearing of livestock and are responsible for most of the operations relating to feeding, breeding, management and health care of the livestock. The rapidly increasing demand for livestock products creates opportunities for the empowerment of women.
- when 90% farmers are small and marginal, livestock as an allied activity assumes important role to provide livelihood in rural areas and drive Indian economy towards development.
- Livestock improves food and nutritional security by providing nutrient rich food products, generate income and employment and act as a cushion against crop failure, provide draught power and manure inputs to the crop subsector and contribute to foreign exchange through exports
- Diversification of income and employment portfolio is crucial for sustainable rural livelihoods. Livestock sector can play an important role in poverty alleviation, income enhancement and risk reduction for poor rural households.
- Livestock is one of the fastest-growing subsectors of agriculture and allied activities.
- Dalit or Scheduled Caste (SC) households, being at the lowest rung of social strata, is one of the most socially marginalised, resource-poor and economically vulnerable groups in India.

- Rural Poverty is largely concentrated among the landless and the marginal households comprising about 70 percent of rural population. livestock rearing has significant positive impact on equity in terms of income and employment and poverty reduction in rural areas. Livestock generates a continuous stream of income and reduces seasonality in livelihood patterns particularly of the rural poor.
- A large number of people in India being less literate and unskilled depend upon agriculture for their livelihoods but agriculture being seasonal in nature could provide employment for a maximum of 180 days in a year. The landless and small farmers having less land holdings depend upon livestock sector during lean agricultural season. Around 70 percent of the population living in rural areas depend on agriculture and allied activities for livelihood hence, there is a need for a subsidiary occupation like poultry, sheep and goat farming.

Conclusion:

Livestock helps in women empowerment and provides livelihood to many marginal farmers. Both the national economy as well as the socio-economic growth of rural India is backed by the livestock sector. So, in general we can clearly mention that the role of livestock is immortal and immense in today's scenario and in the coming future. It is going to pump up the socio- economic status of the rural families and hence secure the national food and economic security. Livestock is already catering the various employment opportunities and the day is not far when livestock will be an essential asset for every agricultural farmer.

2. Integration of food processing into the agricultural production cycle will help achieve the target of doubling farmers' income. Do you agree? Substantiate.

Approach:

Students are expected to write about how integration of food processing into agricultural production cycle will help in doubling famers income and substantiating the same with proper examples and it is also important to mention the issues in the process of integration as well.

Introduction:

Food Processing includes process under which any raw product of agriculture, dairy, animal husbandry, meat, poultry or fishing is transformed through a process (involving employees, power, machines or money) in such a way that its original physical properties undergo a change and the transformed product has commercial value and is suitable for human and animal consumption. It also includes the process of value addition to produce products through methods such as preservation, addition of food additives, drying etc. with a view to preserve food substances in an effective manner, enhance their shelf life and quality. The Indian food and grocery market is the world's sixth largest, with retail contributing 70 per cent of the sales. The Indian food processing industry accounts for 32 per cent of the country's total food market, one of the largest industries in India and is ranked fifth in terms of production, consumption, export and expected growth. It contributes around 8.80 and 8.39 per cent of Gross Value Added (GVA) in Manufacturing and Agriculture respectively, 13 per cent of India's exports and six per cent of total industrial investment. The Indian gourmet food market is currently valued at US$ 1.3 billion and is growing at a Compound Annual Growth Rate (CAGR) of 20 per cent. India's organic food market is expected to increase by four times by 2022.

Body:

Current status of food processing industry in India-

- India is the world's second largest producer of fruits & vegetables after China but hardly 2% of the produce is processed. In spite of a large production base, the level of processing is low (less than 10%). Approximately 2% of fruits and vegetables, 8% marine, 35% milk, 6% poultry are processed. Lack of adequate processable varieties continues to pose a significant challenge to this sector.
- India's livestock population is largest in the world with 50% of the world's buffaloes and 20% of cattle, but only about 1% of total meat production is converted to value added products.
- Agricultural produce is an important factor for sustaining food processing activities. Due to seasonal availability of certain crops, the sector faces delays in production resulting in low supply.

- For oil production, the majority of oilseed producers are small and marginal farmers with poor access to resource bases such as fertilizers, manure, etc. Hence, oilseeds grown by such farmers have low yield.
- Rabi crops like wheat, barley and mustard are sown around mid-November and harvested in April or May. These food grains are dependent on forces of nature, which are rather unpredictable.
- Seasonal scarcity and high cost of raw materials constitutes one of the major constraints affecting the growth of small-scale food processing enterprises. This scenario results in scarcity and higher pricing of raw materials.

How will integration help in doubling farmers income-

- Since doubling of income will warrant high growth rate of production year after year, there would a need for robust post-production activities and hence' investment in storage and transportation' inducing cold chain logistics and food processing. This will reduce post-harvest losses in high value crops such as fruits, vegetables, fish, etc. How to reduce post-harvest losses in high value crops is an important issue. Wastages in fruits, vegetables, fish, etc.need to be reduced by creating storage, cold chain, and market infrastructure.
- Farmers' inclusive growth would require a shift fromproduction-based agriculture to profit based farming. Small and marginal farmers, who constitute around 85 per cent of total farming population are last to reap the benefits of agro-based enterprises; as they end up fighting distress sale and post-harvest losses. The farm harvest price i.e. average wholesale price at which the commodity is disposed off by the producer to the trader at the village site during the specified harvest period provides us a clear picture of farmers' condition.
- Agro processing generates employment opportunities within sector and more opportunities in service sector. Agro processing centre (APC) in the production catchment has twin obvious advantages of enhanced income through value addition to the farm produce and reduction in post-harvest losses as a means to provide gainful rural employment. These APCs consist of two or more machines for processing at farm/village level. However, the requirement of machinery depends upon the crops to be processed, level of processing and scale of processing.
- Small farmers will be associated and incentivised to form commodity groups/processor companies for better earning profits. Women can be given training in the area of processing and can go for value addition through mango pulp processing, guava products processing such as guava leather, guava nectar and various carbonated and fresh fruits beverages.
- Integration of agricultural cycle with food processing industry will increase demands of agri produce thus ensure the enhanced income to farmers.
- It will also enable farmers to go for contract farming which will ensure continuous and non disrupted supply throughout the year thus will save them from fluctuating market prices.
- It will incentivise farmers to go for integrated and mixed farming approach as well because of demand for diverse agri produce thus will help in stabilizing skewed cropping pattern already existing because of implementation of MSP.

- Integration will also help in bringing end to black marketeering and hoarding of agri produce which were affecting the income of farmers very badly through lack of demand on seasonal basis examples include onion and tomato prices.

Conclusion:

Food processing has numerous advantages which are specific to Indian context. It has capacity to lift millions out of poverty and malnutrition. Government should develop industry in a way keeping in mind the interests of small scale industry along with attracting big ticket domestic and foreign investments. The entire food value chain in India is controlled by multiple ministries, departments and laws. A comprehensive policy will ensure that various initiatives across the departments are aligned to the overall goal of ensuring availability, awareness, affordability, access, quality and safety of food. The target of ensuring food security for more than a billion people requires a concerted effort by all stakeholders including government and the food processing industry. In addition to private players and government, industry bodies and academia will also have a crucial role in the success of these initiatives.

3. What role does the corporate sector play in the development of the agricultural sector? Is it possible to envisage a prosperous agrarian economy without the participation of the corporate sector? Critically comment.

Approach

The candidate needs to address the question two parts where the first part highlights the role of corporate sector could play in the development of the agricultural sector while in the second part you need to critically comment on the aspect of whether it is possible to envisage a prosperous agrarian economy without the participation of the corporate sector.

Introduction

Agriculture is the primary source of livelihood for about 58% of India's population. Gross Value Added (GVA) by agriculture, forestry and fishing was estimated at Rs. 19.48 lakh crore in FY20. The current private corporate investment in agriculture as a percentage of the total annual investment in agriculture is about 2%, which is very less and thus showing agriculture's high reliance on the Government.

Body

Recently, Prime Minister Narendra Modi called for increased participation of the private sector in agriculture, especially in research and development. In this background, the role of corporate sector in development of the agricultural sector can be seen from the following points –

- The concept of a free market in agriculture will pave the way for corporate sector and make it more efficient. The emergence of private investment is expected to revamp the sector by driving productivity, adopting new technology, and integrating supply chain "from farm to fork".
- There is a need to improve the existing underdeveloped marketing system for better access. The Dalwai committee report (2017) estimates that the country requires 10,130 agriculture markets based on population, production, and geographical area. Currently, there are 6,676 markets in the country and thereby have a space for additional 3,568 markets.
- The recent farm acts create an opportunity for the private sector to intervene and invest in separate modernised trading platforms. Further, electronic trading platforms are also as crucial as physical trading platforms.
- The private sector can also help in developing post-harvest facilities like warehouses and cold storages. Given that production cycle is limited to few months, ensuring round-the-clock supply requires sufficient inventories the whole year in cold storages and warehouses.
- In this regard, earlier, private players were reluctant to invest in post-harvest facilities due to abrupt stock limits imposed through Essential Commodities

Act. The new bill on “Essential Commodities (Amendment)” will now envisage investment in storage and warehouses by the corporate sector.

- A well-developed process of marketing along with informed cropping decisions by farmers can go a long way in reducing the price volatility and will enable transparent price discovery.
- With the entrance of private players, it is plausible that existing mandis will reinvent themselves by reducing the prevalence of licence raj, loosen the entry barriers for the traders, lowering the market fees, and investing in modern facilities.

At the same time, there are many voices for ensuring prosperity in agrarian economy without the participation of corporate sector where –

- Agriculture being the dominant sector, bringing it into the profit oriented world of corporates can prove harmful. For example, many farmers in the USA suffered after unhinged corporatisation of farm sector.
- Corporate sector involvement many a times leads to monopoly, which could be economically disastrous for the farm sector. This monopolistic tendencies are evident from the example of telecom sector.
- Further, India has millions of small farmers, who cannot be left at the mercy of corporates, who are driven by profit. This will aggravate the already grim agrarian crisis in the country.

But the experience of past several decades in the form of socialism has led to the realisation that involvement of corporate sector can have immense significance to make agriculture sustainable and profitable and making it a tool to overcome poverty. Following points can be considered in this regard –

- According to an ADB report, "growth in agriculture supports the subsequent growth of industry", not the other way round that India pursued. This clearly necessitates the need for corporate sector involvement in agrarian economy.
- India invests very little in agriculture research and education (R&E), which Prof. Gulati claimed to have the "highest impact" on agri-GDP growth and poverty alleviation. Further, India's investment in agriculture has seen a fall. Agriculture's share of gross capital formation (GCF) fell from 8.5% of the total GCF of economy in FY12 to 6.5% in FY19, mainly due to a fall in private investment - according to the Agricultural Statistics at a Glance, 2019.
- These statistics point to the limited governmental capacity in ensuring proper development of agrarian economy and need for private sector involvement.
- Also, the example of dairy and milk sector in India is a proof to the benefits of private sector involvement where farmers involved in dairy sector have seen substantial growth in income as well as made India, the largest milk producer in the world.
- The three agriculture laws brought by the government seek to create the architecture for such investment and make agriculture a success story like the

milk sector where government agencies compete with the private sector, farmers get good price and consumer also gains in the process.

- Contract farming under India's new agri laws would lead to the establishment of large farms and the development of state-of-the-art infrastructure by clubbing landholdings of small, marginal and poor farmers, who have less than five acres and constitute 86 per cent of the farmers.

Conclusion

For India to achieve the ambitious goal of doubling farm income by 2022, there is a need to bring in proper synergy between the public and private sector in agrarian economy where government has the required regulations to avoid the pitfalls of corporate sector involvement but also focusses on harnessing the benefits of corporate participation in agriculture to ensure prosperity of farmers in 'New India'

4. What are the key factors that reduce the competitiveness of India's farm produce in the global export market? Discuss. What immediate measures can be taken to address the same? Suggest.

Approach

Candidates are expected first to write about Indian agri exports and factors responsible for reducing India's competitiveness it's farm produce at global platforms. And then in second part suggest the measures that can enhance India's farm produce competitiveness.

Introduction

Agricultural export constitutes 10% of the country's exports and is the fourth-largest exported principal commodity. However in the global trade, the share of India is only close to 2%. To achieve the true potential and export a greater share of what is being produced in India, there is an immediate need to address the export challenges.

Body

Indian agri export:

- During April-August 2017, exports of agricultural and processed food products summed up to US$ 7.26 billion.
- During the period, export of cereals and animal products accounted for 45.62 per cent of the total exports, followed by livestock products (23.78 per cent), other processed foods (17.92 per cent), fresh fruits and vegetables (7.45 per cent), processed fruits and vegetables (6.25 per cent) and floriculture and seeds (1.15 per cent).
- Export surplus from the country's agricultural trade is higher than the corresponding figure achieved by the manufacturing sector.

Factors responsible that reduce India's farm produce competitiveness in global market:

- Sanitary and Phytosanitary Measures: In the year 2016, the India's share in EU's imports of fresh and processed food products was 2.9 per cent, which was lower than that of other developing countries including Brazil (7.8 per cent), China (4.9 per cent), Turkey17 (4.5 per cent) and Vietnam (3.4 per cent). Border rejections as a percentage of total notifications raised are the highest for India, when compared to other developing countries.
- Lack of synergy between the state and central government as agriculture is a state subject, while the state's role for exports is undefined.
- Low Automation and processing of food: only ~ 10% of the food is processed. This leads to lots of wastage and reduces export capacity.
- The long-distance affects the viability of export shipments due to high transport costs and quality losses. Hence, this time efforts were made for reducing the transit time by using refrigerated rail containers (freight transport that is refrigerated for the transportation of temperature-sensitive cargo).

- High Tariffs and Protectionist Policies: India has the highest average applied tariff of any G20 country and among the highest bound tariff rates in the WTO.
- The problem is that Indian industries do not invest time and money in innovation and research. There is a serious knowledge gap between Indian industries and the international market.
- The government pro-consumer bias in India's farm policy is unfair in putting export restrictions on important food items to prevent inflationary pressures in the domestic economy.
- The policy deprives farmers of higher prices in the international market and also adds an element of income uncertainty. If the government is going to impose export restrictions when international prices peak, farmers would lose part of the incentive to cultivate exportable crops.

Increasing agri – exports will help increase India's export basket and would also expand farmers' incomes and amend farm distress. Measures to make Indian farm produce globally competitive:

- This objective is achievable, provided there is a paradigm shift in policy-making from being obsessively consumer-oriented to according greater priority to farmers' interests.
- Recently, the APEDA along with Government of Andhra Pradesh has dispatched the first shipment of high-quality bananas from Anantpur to JNPT in Mumbai for exports to international markets. India government should take such case studies as reference to formulate policies.
- To boost agriculture exports, the government and business promoting agencies should focus on the use of technology and innovation, he said, adding, the government should support only those who are willing to invest in research.
- If India has to promote agri-exports, the country's policymakers must build global value-chains for some important agri-commodities in which the country has a comparative advantage.
- Stimulating agri – exports would require infrastructure and institutional support — connecting export houses directly to farmer producer organizations (FPOs), sidestepping the APMC-regulated mandis, removing stocking limits and trading restrictions.
- The country has a great potential to export fish and seafood, bovine meat, and fruits, nuts and vegetables. These are the commodities to focus on in order to stimulate agri-exports.
- On lines of the 'Make In India' campaign, the report urged the government to launch 'Grow In India' campaign aiming for substantial gains in agri-exports with a single authority to monitor India's international agricultural trade-both exports and imports.

Conclusion

A "farm-to-foreign" strategy, improving agri-trade surpluses by promoting agri-exports, and most importantly create more jobs and bring prosperity to rural areas can sure be a go ahead.

5.What are the factors responsible for food inflation in India? How does food inflation impact the farmers? Examine.

Approach- Question is straight forward. Candidate can define inflation and reasons of food inflation in first part and then discuss impact of food inflation on farmers with the way ahead.

Introduction

Food inflation is volatile. Agricultural prices tend to fluctuate because demand and supply are both inelastic and supply can vary due to the weather. However, despite the usual volatility, food prices seem to be showing a strong upward movement, reaching record highs in recent years.

Body

In India, a booming economy has GDP expanding at 9% a year. Official inflation is around 7%, but, headline food inflation is more than double at 17.8%.

Some key reasons for Inflation:

- High demand and low production or supply of multiple commodities create a demand-supply gap, which leads to a hike in prices.
- Excess circulation of money leads to inflation as money loses its purchasing power.
- With people having more money, they also tend to spend more, which causes increased demand.
- Spurt in production prices of certain commodities also causes inflation as the price of the final product increases. This is called cost-push inflation.
- Increase in the prices of goods and services is also a factor to consider as the involved labour also expects and demands more costs/wages to maintain their cost of living. This spirals to further increase in the prices of goods.

Food Inflation is a major cause of inflation in India today, reasons for inflation

- Untimely rains, drought in some regions and crop losses due to local factors did contribute to supply shocks.
- Transmission of global food prices, which have shown a rising trend in the last half-year, also is the reason for food inflation.
- The government policy of untimely imports in pulses flooded the markets and contributed to lower price realization last year. This led to lower production of pulses this year.
- The government had procured 34 million tonnes of wheat in 2019, on top of the 36 million tonnes procured in 2018. These are the highest procurement levels since 2012-13. However, it failed to distribute the wheat through the public distribution system. This has created an artificial scarcity that has led to Inflation.

How does food inflation impact farmers?

- Increasing food demand and price could be the best opportunity to lure farmers back to farms. But today there is a pressing concern, particularly for a country like India, which has the world's largest number of poor.
- Going by recent studies and anecdotal field reports, food inflation has impacted the health of the poor the most. It is an irony that while globally the fight against malnutrition is intensifying, food inflation may be impeding it within the country.
- Given that an average household in India spends nearly 50 per cent of its earning on food—the poor spend more than 60 per cent—price rise will precipitate a crisis. Going by the survey findings, the impacts will be severe in India.
- As inflation increases, prices paid by farmers for various inputs increase faster than the prices they receive for their products, thereby the terms of trade for farmers deteriorate as the rate of inflation rises.
- Farmers have flexible money incomes. Therefore, theoretically at least, they should benefit from an unanticipated increase in the rate of inflation. Empirical studies however, have not found this connection.
- On the other hand, higher marketing margins due to imperfections in the agricultural markets, stirred up by higher wages and various other marketing costs, reduce the demand for farm output at the farm level.
- Also the inflation targeting in India has adverse effect on food prices. Since food items have a large weight in the consumer price index, any effective strategy of inflation containment seeks to keep food prices low. This is sought to be achieved through measures that keep farm-gate prices low.
- These penalize the agricultural sector by leading to a reduction in subsidies and a decline in investment, both of which contribute to raising input costs. The real cost of inflation-targeting is therefore borne by farmers, who are deprived of remunerative prices.
- Though the inflation takes more out of the pocket from the common man, it does not benefit farmers much. The middlemen are the real beneficiaries.

Conclusion

With food accounting for two-thirds of household budgets, higher prices will worsen demand for non-food goods. At a time when consumption expenditure data shows rising poverty along with declining wages, climbing inflation will only lead to increased vulnerability, while making an economic recovery harder and the situation worsening for farmers.