Agriculture and Natural Resource Management

Agricultural Program Manager

Agricultural Program Managers lead the overall design, strategy, and implementation of agriculture and natural resource management (ANRM) programs. Programs may focus on different technical interventions depending on location and context, but, overall, managers should possess appropriate knowledge, skills, and abilities on the following key drivers: agroecological resilience, market development, improved nutrition, gender equity, and social and behavioral change.

The agricultural program manager's core competency areas include:

1. ANRM program design and development
2. Technologies to enhance agroecological resilience
3. Agriculture for improved nutrition
4. Market development
5. ANRM technical extension services
6. ANRM financial services and insurance
7. Measuring ANRM impact and using data

1. ANRM Program Design and Development
1.1 Understand and overcome barriers to change by conducting a formal barrier analysis, discovering key determinants of behavior, and developing plans to change behavior.
1.2 Conduct market analysis to better understand complex market systems within emergency and development settings.
1.3 Conduct a gender analysis of ANRM activities (e.g., ownership and management of assets, access to extension and inputs, value chain activities, agricultural labor and time expenditure) to inform gender strategies for ANRM programming.
1.4 Conduct an environmental impact assessment to measure and mitigate the impact of interventions on the environment.
1.5 Ensure more effective asset transfer (seeds, fertilizers, and tools) by using and developing local supply systems.

2. Technologies to Enhance Agroecological Resilience

2.1 Know the key elements of resilient integrated seed systems, combining formal and informal, market and non-market channels for seed system solutions.

2.2 Understand technologies for more efficient and sustainable soil and water management (including irrigation) and watershed management approaches.

2.3 Know practices of conservation agriculture, i.e., techniques that can be applied by resource-poor farmers to sustainably increase food production without further depleting soil and water resources.

2.4 Apply agroforestry techniques for increased diversity and productivity, while maintaining the natural resource base.

2.5 Understand pastoralism and enclosed livestock techniques for limited land holdings, enhancing rangeland and grassland management, and practices such as zero-grazing and fodder production.

2.6 Apply integrated pest management techniques for fruits, vegetables, and field crops.

2.7 Know sustainable integrated aquaculture-agriculture farming systems to enhance income and nutrition options.

2.8 Understand sustainable horticultural techniques for small,urban and micro gardening.

2.9 Understand how to mitigate and adapt to climate change, including techniques for increasing farmers' and farming systems' resilience to climatic change and approaches to improve the capacity of systems to sequester carbon.

3. Agriculture for Improved Nutrition

3.1 Understand key nutrition concepts; the main causes of malnutrition; impacts of dietary protein, iron, and vitamin A gaps; the impact of poor nutritional knowledge and health on agricultural production; and opportunities for streamlining nutrition education through multiple stakeholders.

3.2 Implement agricultural strategies that can improve nutritional outcomes (e.g., diversified production, bio-fortification, and nutrient-dense food value chains), ensuring they are linked to market-based opportunities.

3.3 Understand post-harvest technologies, specifically how to reduce post-harvest and nutrient losses through improved handling and storage, including reducing mycotoxins.

4. Market Development

4.1 Know how to conduct market-based engagement with the poor and to use market-based approaches (e.g., Making Markets Work for the Poor) to understand market systems and implement market development programs.

4.2 Identify the key drivers of value chain development, including nutrition-sensitive value chains, and opportunities for the poor to upgrade their positions within viable value chains.

4.3 Identify the impact of the enabling environment on value chains and options for improving it, e.g., addressing trade barriers, governance, and advocacy.

4.4 Engage more effectively with the public and private sectors to create opportunities for improved sector linkages, and identify how sector actors can be a force for sustainability.

4.5 Identify tools that help farmers with limited literature and numeracy skills to understand basic accounting, profit analysis, business planning, and marketing skills.

5. ANRM Technical Extension Services

5.1 Improve access to technical information by using different technology transfer methods, including training, visit extension, agricultural cascade education, embedded services, information and communications technology (including mobile), farmer field schools, and on-farm trials. Know proper training techniques for farmer groups and implement strategies to address gender equity.

5.2 Identify the best combinations of extension or coverage approaches.

5.3 Improve skills in group facilitation and persuasion (e.g., interacting with different groups, methodologies for adult education methods).

6. ANRM Financial Services and Insurance

6.1 Understand best practices for informal microfinance, such as village savings and loan associations.

6.2 Understand how to work with formal microfinance institutions and savings and credit cooperatives. Identify opportunities for enhancing agricultural microfinance through development of agricultural loan products.

6.3 Understand how to embed finance within value chains (e.g., sales on credit and contract farming).

6.4 Identify potential crop and livestock insurance options available to resource-poor farmers.

7. Measuring ANRM Impact and Using Data

7.1 Identify indicators and tools for measuring and monitoring ANRM results, such as income indicators, profit and loss statements, impact on nutrition and gender.

7.2 Develop monitoring systems for operational research in ANRM.

7.3 Interpret and effectively use information generated through the monitoring and evaluation system to adjust ANRM program strategies, including mitigation of negative impacts.

The Core Competency Series was developed by staff from The Technical and Operational Performance Support (TOPS) Program with significant contributions from the various task forces of the Food Security and Nutrition (FSN) Network. The series intends to provide hiring managers, program managers, and program staff with explanations of the basic skills and knowledge senior technical staff may possess to carry out their positions effectively. Official job titles, functions, and requirements may vary based on organization and program.

The Technical and Operational Performance Support (TOPS) Program is the U.S. Agency for International Development (USAID) Office of Food for Peace-funded learning initiative, bringing the highest quality information, knowledge, and promising practices in food assistance programming to implementers and donors around the world to ensure more communities and households benefit from the U.S. Government's investments to fight global hunger.

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