Post Description
Associate Professional Officer (APO)

HQ/EST

1. General Information

- **Title:** Agricultural Economist/Feed Specialist/Agro-meteorologist
- **Field of competence:** Feed and Livestock Economics, Feed Supply and Demand Analysis, Livestock Productivity, Remote Sensing, Statistics, Software Development.
- **Technical Division:** Trade and Markets Division (EST)
- **Duty station:** FAO Headquarters, Rome, Italy
- **Languages required:** English

2. Supervision

- **Name and title of supervisor(s):** Mario Zappacosta, Senior Economist and Team Leader, Global Information and Early Warning System (GIEWS)
- **Description of supervisory role:** Provides technical guidance, mentorship and general support to the APO. Ensures full integration into the work of GIEWS and various GIEWS products, notably the Agricultural Stress Index System (ASIS), the Country Cereal Balance Sheets (CCBS) and the Crop and Food Security Assessment Missions (CFSAMs). Provides guidance for further skill improvement and training. Conducts annual performance evaluation of the APO, following the principles of FAO's Performance Evaluation and Monitoring System (PEMS) and its multi-rater performance management process.
- **Additional elements:** Establishes links and work integration into the Agricultural Market Information System (AMIS) as well as other related work streams such as the Food Price Monitoring and Analysis (FPMA) tool.

3. Duties, Responsibilities and Expected Achievements

Duties and responsibilities: The APO will contribute to FAO's work on building reliable data on feed inventories and feed supply/demand balances. The APO will help provide more accurate and reliable feed estimates, which constitute critical inputs for a variety of FAO information systems and databases such as GIEWS, AMIS, ASIS, CCBS and CFSAMs. The focus of the APO's work will be the development of methodologies aiming to combine traditional feed estimation approaches with more modern remote sensing techniques. The improved pasture production estimates play a critical role for enhanced feed use estimates and, by inference, more accurate food estimates.

In particular, the APO will:
- Contribute to the development of tools and methodologies to monitor pastures and compound feed availability. Use data from remote sensing, employ and develop pattern recognition algorithms (machine learning, ML). Where appropriate and available, also use ML algorithms to harness other data sources (big data) and evaluate the related information for early warning purposes.

- Collect, analyse and maintain databases on animal production, livestock productivity, and supply and demand parameters for feed.
- Analyse historical and expected weather and climate variability in their effects on feed production.
- Contribute to requests by country and resource partners in the formulation of programmes and projects focusing on feed and pasture monitoring.
- In coordination with other FAO units, develop methodology and construct feed balance sheets.
- Support relevant data branches in GIEWS, AMIS, ASIS, CCBS and collaborate with respective colleagues to improve methodology as well as data accuracy and availability.
- Contribute to relevant software development and application and help disseminate these products.
- Perform other related duties as required.

4. Expected achievements

- Draft at least one analytical paper presenting new feed assessment methods, including methodological advancements.
- Prepare country-specific capacity building materials and tools related to food and feed balance sheets.
- Help establish an improved feed balance system delivering timely and accurate feed estimates.
- Integrate new approaches to include data on pasture/feed into established systems such as ASIS, CCBS and CFSAMs.
- Create software packages for internal and external use to compile and estimate feed and food availabilities.
- Provide capacity development tools, including e-learning courses and software training.

5. Essential Qualifications and Experience

- **Educational background:** Advanced university degree in agricultural economics, development economics, agro-meteorology or related field
- **Work experience:** Three years of relevant work experience with practical exposure to feed/livestock systems. Familiarity with use of geospatial information related to agricultural production systems.
- **Computer and language skills:** Advanced computer skills, particularly programming in "R" and related GIS packages, full proficiency (Level C) in English.

6. Desirable Qualifications and Competencies (including interpersonal skills)

- Advanced university degree (preferably a PhD) in one of the relevant areas, first publications in scientific journals.
- Extent and relevance of experience and knowledge in data and methods related to livestock production, feed use and production.
- Experience in the compilation of food balance sheets.
- Extent and relevance of experience and knowledge in relevant software development and applications

- Extent and relevance of knowledge and experience in related fields such as agro-meteorology and remote sensing.
- Extent and relevance of experience in the preparation, editing and revision of technical/scientific documents and in organizing meetings and workshops
- Extent and relevance of experience in analysis of climate, environment and economic aspects as well as related geo-spatial data.
- Work experience in more than one location or area of work; field experience is highly desirable.
- Excellent written and oral communication skills, including analytical writing skills.
- Proven capacity to work effectively in a multicultural environment and teams.

7. Training and Learning Elements

- The APO will have an interesting exposure to the analytical, conceptual and operational work of Early Warning and Early Action (EWEA) systems, participate in CFSAMs and help contribute to the work of the AMIS secretariat. In particular, the APO is expected to participate in AMIS events, CCBS workshops and ASIS training courses both at FAO headquarters and in the field. Participation in external seminars is envisaged to provide further opportunities for learning.
- The assignment will have a large component of on-the-job learning through exposure both at the duty station as well as during duty travel, when technically supporting GIEWS activities at country level or in decentralized FAO offices.
- The APO will have the opportunity to attend specific capacity development courses within FAO. This includes training in the CFSAM and the CCBS methodology. The APO will be able to attend courses offered within the FAO Staff Development Programme.

8. Background Information

- **Overview of the mandate/objective and structure of the service/office and/or project:** The Trade and Markets Division monitors and analyses trends in international, regional and national agricultural commodity markets, collecting and disseminating comprehensive market and policy information concerning the major traded commodities and those important to food security. It also undertakes forward looking outlook studies. The Division analyses global issues that affect agricultural trade, including policy analysis of trade measures and agreements, and provides technical support and capacity building to member states in all these areas. Through its Global Information and Early Warning Service, the Division is also responsible for FAO's early warnings on food shortfalls. The Division houses the secretariats of the Committee on Commodity Problems (CCP), nine Intergovernmental Commodity Groups (IGGs) and the Agricultural Market Information System (AMIS). The post is located in the Global Information and Early Warning System on Food and Agriculture (GIEWS). All work will evolve in close collaboration with the related work streams in the FAO Department for Climate, Biodiversity, Land and Water (CB) as well as Strategic Programme 5.
- **Brief description of core activities:** The main area of work will be the production of accurate and reliable estimates for pasture and feed production, to be used as inputs for a variety of FAO information systems and databases. The APO will be involved into the development of methodologies aiming to combine traditional feed estimation approaches with remote sensing techniques for pasture production estimates.

- **Specific programmes/projects and activities on which the APO will be working:** Feed estimates are often unreliable and regularly based on "guesstimates". The advent of high resolution satellite imagery and related new evaluation techniques now offer new opportunities to improve existing feed estimates. The new estimates will require a verification process, "ground-truthing" and comparisons with results from traditional approaches. The final product will allow EST to undertake comprehensive assessments of pastures, roughages and grazing availabilities, initially focusing on countries and regions with otherwise limited data availability and poor data collection systems. The main task of the APO will be to contribute to improved feed information through a combination of traditional methods and new remote sensing information. The resulting information will represent a major improvement to the existing early warning systems, eventually resulting in improved food security monitoring and early warning.

9. **Living conditions at duty station**

   FAO's headquarters is based in Rome, Italy. Living conditions, schooling, security and health services in Rome are very good.