

Concept Paper



National Fertilizer Quality Control Network In Afghanistan

**Concept under the
Agriculture Production and Productivity Programme
National Agriculture Development Framework**

Ministry of Agriculture, Irrigation and Livestock

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Background

Fertilisers and agrochemicals are major inputs determining agricultural productivity. The use of fertilisers is still relatively low in Afghanistan, but will increase substantially in the next few years as farmers are made aware of strategies to increase agricultural production. The Government of the Islamic Republic of Afghanistan recognizes the critical role of appropriate, effective and safe fertilisers in increasing agricultural productivity and contributing to the achievement of national food security. Increased farm productivity is expected to enhance rural employment and contribute to the overall national economy. Farmers throughout the country should have access to sources of fertilisers at reasonable cost near to their farms. The fertilisers should be appropriate for the local conditions, effective in use and according to the quality standards as per the label on the packaging.

The farmers individually are not able to assess the quality and suitability of the fertilizers and chemicals that are made available to them. It is the role of the government to ensure, as far as possible, that the fertilizers and crop protection chemicals offered to the farmer for use on his farm and on his crops are fit for the purpose stated and that adequate guidance is given to the farmer in their safe and effective use. This government role shall be taken up by technically equipped regulatory bodies within the MAIL.

The MAIL will set up a National Agro-Inputs Committee, reporting to the Minister, to coordinate the roles of the various ministries, departments of MAIL, and other agencies and stakeholders in the development and implementation of policies and strategies that will serve the needs of the farmer for appropriate, effective and safe fertilizers and crop protection chemicals. The Activities of the NAIC will be guided by the draft national Agro-Inputs Policy and Strategy (2006).

National Production

The current in-country production of fertilizer is insignificant in the context of the requirements but there is potential for private sector investment and expansion of the production. Anecdotal evidence suggests that the quality of the locally produced fertilizer does not meet the quality requirements. Any expansion of production will be according to "good manufacturing practices" with quality assurance along the production line. The products will be subject to the same quality control measures and regulations applied to imported fertilizers.

Import

The import of fertilizer and agrochemicals will only be allowed from reputable suppliers who can supply adequate guarantees as to the quality of the fertilizers and agrochemicals to be imported. All imports must be made against permits issued before the fertilizers or agrochemicals reach the borders of Afghanistan and the conditions contained in those import permits must be adhered to if the imports are to be allowed into the country.

Testing

The person(s) responsible for the imports must intimate the place where the imported goods may enter the country (unless the place is well-defined and already designated by the Govt.). The sampling will be carried out by authorized personnel at the point of entry as per the norms and procedure set out in the official notification. The samples so collected should be sent to the National Laboratory for carrying out analysis as per the notified procedures.

The specifications of fertilizer and other agro chemicals such as pesticides may need to be notified through the official gazette. The specifications may be such that it may not pose any problem in their imports as the same may be in consonance with the international standards.

Apart from the point of entry in the country, the samples need to be collected from the distribution system and godowns etc. for which also norms of sampling may be standardized and quality of such fertilizers also periodically checked. Initially, the samples from the distribution system may be checked-up with the help of Quick Fertilizer Testing Kit, which does not need an elaborate laboratory since many elaborate laboratories may not be necessary at the initial stages and only a national laboratory may be adequate supported by availability of Quick Fertilizer Testing Kits with the inspecting officials.

Facilities Required

The number of inspecting officials / inspectors and the number of samples to be collected from a defined area will depend upon the quantity and variety of fertilizers / agro chemicals to be imported. An accelerated development in fertilizer use and their promotion is desirable as the agriculture production greatly depends on the use of fertilizers. However, for this, an establishment of a network of soil testing laboratories is a pre-requisite, with the help of which the balanced fertilizer use is promoted. As the awareness about fertilizer benefit grows, more and more, fertilizer will be consumed and thus at a later stage, a network of fertilizer testing labs may be needed.

Initially, to effectively check the quality of imported fertilizers, a well-equipped testing laboratory with properly trained technicians may be adequate at the national level which may be located at a point where imported fertilizer enters the country.

To check the quality of fertilizer from the distribution system, use of Fertilizer Testing Kits may be deployed which will be highly cost-effective.

To develop a fertilizer quality control system the following facilities will be needed:

1. Appointment of quality control inspectors / technicians – both, for sample collection from imported stock and also from the local distribution system, about 16 inspectors cum technicians may be needed including two each for the provinces viz. Balgh, Herat, Kabul, Kandahar, Khost, Kunduz and Nangarhar.

In addition, four analysts may also be needed for sample analysis.

Note: Eventually, these inspectors may be used for quality check for pesticides / seeds also and may be designated as joint input Inspecting Officials.

2. To set-up the Laboratory – The Laboratory space and the equipment requirement will depend upon the analyzing capacity to be created, as per the quantity and types of fertilizers to be imported including the need of collection from the internal distribution system. However, one National laboratory with a capacity to analyze 1000 fertilizer samples per year could be setup with a requirement and expenditure as follows:

• Laboratory space – 150 Sqm @ 500 \$ per Sqm (approx.)	=	75,000	\$
• Equipment as per FAO Fertilizer & Plant Nutrition Bulletin No.19 (approx.)	=	60,000	\$
• Chemicals for three years as per Bulletin No.19 (approx.)	=	35,000	\$
• Glassware for three years as per Bulletin No.19 (approx.)	=	25,000	\$
• Training of 16 persons in a neighbouring country (approx.)	=	20,000	\$
• Study tour of the senior officials of the govt. (4 Nos.) (approx.)	=	25,000	\$
• Consultant to set up the laboratory & train technicians (approx.)	=	30,000	\$
• Misc. (approx.)	=	10,000	\$
• Total for central Laboratory unit (approx.)	=	280,000	\$
• Estimated cost for each provincial laboratory Unit= 180,000			
Total cost for 6 provincial units	=	1,080,000	\$
• Running cost of the Laboratory (Salary of manpower as added per local govt. norms)	=	To be	
Total	=	1,360,000	\$

Note: To prepare a specific estimate, the following information is crucial:

- i) Existing level of fertilizer consumption including per unit area of cultivated land.
- ii) Availability of existing source of plant nutrients even if there are some low analysis products which may be otherwise useful even if they are not as per international standards of fertilizer.

iii) Projected fertilizer consumption for the coming 5 / 10 years.

It may also be mentioned that in the project outlines received, the words fertilizers and agro chemicals/crop protection chemicals have been used simultaneously. There has to be an entirely separate facility for quality control of fertilizers and agro-chemicals i.e. for pesticides etc. Only inspecting staff can be common for fertilizers and agro-chemicals which often represent pesticides and the laboratories for the two inputs have to be separate. The present note has been prepared to indicate the facilities only for fertilizers including the number of inspecting staff etc which could be elaborated with the availability of specific information/data.