



Islamic Republic of Afghanistan

NATIONAL WHEAT POLICY



**Ministry of Agriculture, Irrigation and Livestock
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Foreword

Wheat is the major food grain that accounts for about 80 per cent of the total production of cereals in Afghanistan. It is the staple food of Afghan people and contributes over half of the population's caloric intake. The country, self-sufficient in wheat in the 1960s and 70s, witnessed a period of dramatic contraction of domestic wheat production in subsequent decades and became reliant on large-scale imports of wheat and wheat flour to meet the demand for consumption. This situation is hardly tenable for any nation seeking to lay a solid foundation of food and nutrition security for its people. Despite the significant milestones achieved in national wheat production in the past decade, average wheat yields are still lower than neighbouring countries. Growth in domestic wheat production is not catching up with growth in demand fuelled by population growth, urbanization, and per capita income growth.

I am delighted that the Ministry of Agriculture, Irrigation, and Livestock has shown the foresightedness and, with technical assistance of the Food and Agriculture Organization of the United Nations, prepared a policy for rapidly increasing wheat production in Afghanistan to turn the country again self-sufficient in wheat. The present document *National Wheat Policy of Afghanistan* provides the strategic framework for all-encompassing growth of wheat sub-sector of the country's agricultural economy.

I complement the efforts of scientists and officials of MAIL and our concerned international development partners to come up with a comprehensive road map with potential to transform the wheat subsector toward increased productivity and profitability.

I am sure the approaches and proposed strategies contained in this policy would bring a momentum in national wheat research and improve its efficiency and effectiveness.

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National Wheat Policy of Afghanistan

1. Introduction

Wheat (*Triticum aestivum* L.) is the major food grain grown in Afghanistan. It is the staple food that plays a vital role in maintaining food and nutrition security of its people. It accounts for around 70% of total cereal consumption and 60% of the total intake of calories. Per capita consumption of wheat was 186 kilograms per year averaged over the period 2002-2009.

Wheat accounted for 78.5% of annual aggregate production of cereals in Afghanistan averaged over the period 2005-2012. Wheat production in Afghanistan recorded a rapid slump in the changed political context triggered by external intervention and internal conflicts beginning in the late 1970s and early 1980s. It rebounded in the 1990s with the recovery accelerating at a faster rate over the period 2000-2010.

The major wheat growing areas are concentrated in northern (NR), north-eastern (NER), western (WR), and south-western (SWR) regions of the country. Averaged over the period 2005-2012, the NR accounted for 35.9%, NER 23.3%, WR 14.4% and SWR 8.4% of total cultivated area under wheat. Irrigated wheat areas were more concentrated in the northern region accounting for 45.9% and north-eastern 29.5% of the total irrigated wheat area.

Of all wheat area in Afghanistan, 45% is irrigated and 55% rainfed. But there are substantial annual fluctuations of wheat area depending on the amount and timing of rainfall the country receives. Wheat production in Afghanistan remains extremely sensitive to variations in precipitation and the aggregate annual production of wheat in any given year depends on the performance of the rainfed crop. While irrigated wheat is expected to produce a reasonable yield, the fate of the rainfed crop depends entirely on rainfall and the exposure of critical crop growth stages to extreme temperatures.

Both winter- and spring-type wheat crops are grown in Afghanistan. Sowing of winter wheat is typically spread through the autumn (September-December) and harvested in late spring to early summer (May-June). Spring wheat is sown in spring (April-May) and harvested in summer (July-August). Spring wheat accounts for about 80% of wheat cultivation by area, while winter wheat accounts for the remainder.

Despite the recent successes achieved in making breakthroughs in wheat cultivation, growth in domestic production lagged much behind growth in consumer demand for wheat and wheat flour. Commercial imports both by the government and private traders and food assistance by international organizations made up the shortfall between supply and demand of wheat.

However, performance of wheat crop affects the overall growth rate in agricultural sector and import bill of the country. Although, attainment of self-sufficiency in wheat production has always remained one of the major objectives of agricultural policy of the all successive governments, country is still far away to meet its wheat demand from domestic production. Among many factors behind it, low productivity of wheat varieties and inadequate quality seed production and distribution are considered to be the two major reasons, among others. Added to these are more and more emerging factors like climate change, new pest and diseases, and global market volatility which has been making both production and productivity more vulnerable and unstable.

Development of more productive wheat sector through value chain approach and in integrated and comprehensive way, crucial for country's food security, has been suffering from lack of policy direction. This policy document is an effort to chart a pathway for stimulating and sustaining growth in the wheat sub-sector and strengthening food security in Afghanistan.

2. Agricultural governance in Afghanistan

The role of the state in governance of the agriculture sector is executed by the central ministry of Agriculture, Irrigation and Livestock (MAIL) headed by a Minister. At the provincial level, this role is implemented by the Departments of Agriculture, Irrigation and Livestock (DAIL). Other central government ministries with responsibilities cross-cutting agriculture are the Ministry of Energy and Water (MEW), the Ministry of Rural Rehabilitation and Development (MRRD), the Ministry of Commerce, and the Ministry of Counter-Narcotics (MCN). Public administration of agricultural research and extension is organized as separate directorate under MAIL. The Agricultural Research Institute of Afghanistan (ARIA), under the administrative control of MAIL, is the key public sector institution for conducting and coordinating agricultural research in the country.

Both public and private sector institutions are engaged in provision of farmers' advisory services and distribution of production inputs. The governance of the formal seed sector is executed by the National Seed Board (NSB) on behalf of MAIL. Of the four classes of wheat seed, ARIA research stations produce the breeder seed. The Improved Seed Enterprise (ISE), a semi-autonomous unit affiliated with MAIL, produces foundation and registered seeds. Small-scale village-based private seed enterprises (PSEs) produce certified seeds. PSEs are affiliated with the Afghanistan National Seed Organization (ANSOR), an association of commercial seed producers in the country established in 2008. Currently there are 105 PSEs operating under ANSOR. These enterprises have a combined production capacity of about 50,000 tonnes of seed.

The non-state sector plays a vastly important role in agricultural governance of Afghanistan through influencing national policymaking, institutional capacity building, and directly

subsidizing government's development budget. This includes development arms of major donor countries involved in Afghanistan's post-war stabilization and reconstruction (USAID, JICA, CIDA, DFID, AusAID/ACIAR, European Commission), international agricultural research centers (ICARDA, CIMMYT), UN agencies (FAO, UNDP, WFP), multilateral financial institutions (ADB, IMF, WB, IFAD), and national and international non-government organizations. The NGO sector is represented by Afghan aid, Joint Development Associates International (JDA), Solidarities International (SI), Norwegian Project Office/Rural Rehabilitation Association for Afghanistan (NPO/RRAA) and the Afghan Women's Resource Centre (AWRC). In the private sector, Afghanistan Research and Evaluation Unit (AREU) and Afghanistan Public Policy Research Organization (APPRO) are two major institutions engaged in policy-related research including issues affecting agricultural and rural development of the country.

The involvement and active participation of many institutional stakeholders in the country's agriculture sector brings to the fore the challenge of improving governance of this sector so that public goods and services they provide can be delivered more effectively and efficiently and the benefits reach intended beneficiaries; growth and development is inclusive and equitable, and no parts of the country are left behind. It is all the more important as the national authorities prepare for assuming the lead role in directing and coordinating development efforts in Afghanistan. This would require significant capacity building in public administration to tackle the issues that would emerge, particularly in the context when the state's role will be more in creating an enabling environment rather than dictating as it was in the past.

Improved managerial and technical competence and skills at the decision-making level in public administration will be needed to forge and manage complex partnerships, collaboration and cooperation among stakeholders. More nuanced negotiating skills will be needed to set the development agenda so that stakeholder collaboration remains focused on broad national development goals and objectives rather than narrow organizational perspectives. Suitable institutional mechanisms should be in place to make public officials accountable, to ensure transparency of procedures and participation of beneficiaries. Improvement in governance, therefore, will be a vital prerequisite for effective implementation of the national wheat policy.

3. Objective of the National Wheat Policy (NWP)

3.1 Overall objective

The broad objective of the NWP is to re-emphasize government's intention for planning long-term comprehensive development of the wheat sector and provide strategic guidance to designing and implementing programme interventions aimed at increasing production and

productivity of wheat in the present context of ensuring food security through both horizontal and vertical growth backed by strong national and international cooperation.

3.2 Specific objectives:

1. To strengthen the country's wheat research system by enhancing capacity in undertaking location-specific varietal development and release through utilization of modern tools and techniques of plant breeding including molecular breeding and biotechnology.
2. To develop facilities in order to promote both public and private sector extension services to ensure speedy adoption of newly released varieties and other associated technologies.
3. To develop institutional capacities within shortest possible time to maximize research and extension outputs for the benefit of farmers and wheat producers.
4. To ensure availability of required inputs in time, mainly supply of quality seeds to the door step of producers in uninterrupted ways.
5. To assist smallholder wheat producers participate in both domestic and international markets.
6. To develop strategic grain reserve (SGR) in order to boost wheat production, meet emergency need during periods of food crisis period, and to keep local market prices stabilized.
7. To promote value chain approach to increase income and generate more employment predominantly in the rural sector.

4. Strategy for wheat sector development

To achieve the above objectives, the following strategies, among others, are to be followed:

- Strengthen institutional and human capacities of public sector entities as well as support capacity development of private sector agencies engaged in Afghanistan's wheat sector development programmes.
- Assist development of location-specific modern wheat varieties through utilization of modern tools and techniques of biotechnologies in national breeding programmes.

- Diversify seed production systems through increased involvement of the private sector and farmers’ organizations under public-private-farmers partnerships.
- Develop resource conservation technologies through pluralistic approaches suitable for different agro-ecological zones of the country.
- Enhance outreach research activities with the support of public and private extension services including NGOs, farmers cooperatives and individuals.
- Ensure stability and sustainability of wheat production and consumption systems by promoting value chain approach.

5. Scope of the policy

This policy applies to all issues affecting development of the wheat sub-sector of Afghanistan’s agricultural economy.

6. Administration of the policy

The responsibility for administration of the policy will rest with the General Directorate Policy and Planning (GDPP), Ministry of Agriculture, Irrigation, and Livestock (MAIL), Islamic Republic of Afghanistan.

7. Components of the National Wheat Policy

7.1 Research: varietal development and release

The country’s existing wheat research program is primarily oriented to introduction of elite lines and improved germplasm, bred externally, through international assistance (CIMMYT/ICARDA/USDA/USAID/JICA), evaluation of introduced genotypes in multi-location trials, and release of best-yielding and disease resistant ones as varieties. A home-grown breeding programme was initiated in 2011-12 season with identification of donors for yield components, adaptation and disease resistance and making more than 200 crossings (Sharma R. *et al.* 2012).

The introduction of new varieties produced visible impact on wheat production in Afghanistan. The average national yield of wheat has increased from 1.54 t/ha in 2002 to 1.97 t/ha in 2009 and 1.99 t/ha in 2012. The yield of irrigated wheat, 2.96 t/ha, harvested in 2012 closely approached the global average at around 3.0 t/ha, but the yield of rainfed wheat lagged much behind at 1.18

t/ha. In 2011, the yield of irrigated wheat fell to 2.65 t/ha, but in rainfed areas yield reduction due to drought was most severe with average yields down to only 0.3 t/ha. This illustrates the fragility of rainfed wheat cultivation and its vulnerability to unfavourable weather conditions, one that occurred in the 2011 cropping season. The Variety Release Committee (VRC) affiliated with the National Seed Board is the authority that decides which varieties should be kept or deleted from the official list of varieties.

The major constraints in wheat research and variety development are: inadequate staff and capacity, inconsistent adhoc plans, inadequate infrastructural and material support, overwhelming dependence on externally-bred elite lines and germplasm; limited number of improved varieties suitable for rainfed cultivation; lack of coordination in phasing out of susceptible varieties from multiplication; delay in activating the seed certification agency, lack of plant quarantine in the borders, and lack of credit for seed production.

Policy objective:

Alleviate the constraints in improving productivity and production of wheat by breeding and adopting modern wheat varieties and by developing natural resource management technologies.

The following steps will be taken to address the issues that constrain wheat research, variety development and release:

Wheat germplasm development and exchange

- A national gene bank will be established for collection, conservation, utilization, and diversification of the pool of wheat genetic resources in Afghanistan available for use in breeding. The gene bank will have an integrated germplasm enhancement policy.
- A strong germplasm exchange programmes with concerned international agencies will be pursued.
- The Government will provide support to wheat germplasm collection, conservation and utilization to enable optimum use and preservation of Afghanistan's rich indigenous wheat germplasm.

Research

- The status of the Agricultural Research Institute (ARI) will be upgraded to an autonomous organization, affiliated with the Ministry of Agriculture, Irrigation, and Livestock, led by its own governing council/board of management, with broad authority for administration and finance including programme planning, research coordination and priority setting, allocation of budgets, recruitment of personnel, and procurement systems.

- A technical board will be constituted by the top policymaking body of ARIA to conduct periodic review of the institute's scientific research programmes to ensure they are relevant and adequate to address specific issues.
- Wheat growing environments in Afghanistan will be delineated on the basis of agro-ecological zoning (AEZ) to develop varieties and production technologies tailored to agro-ecological requirements of specific AEZs and facilitate their adoption by farmers.
- Testing, evaluation and identification of best wheat breeding lines will be conducted under both irrigated and rainfed conditions for different AEZs.
- An important aspect of testing and evaluation will be physicochemical and rheological characteristics that define grain quality. Necessary laboratory facilities for grain quality testing will be created at ARIA to ensure that adequate physicochemical data are available to assess end product quality of candidate varieties.
- All categories of research – basic, applied, adaptive, and farmer-participatory – will be undertaken to create a strong indigenous capacity for scientific innovations and appropriate technology development. This approach will guide efforts to create a strong domestic pre-breeding capacity to curtail dependence on elite germplasm and advanced lines, bred elsewhere, for varietal release.
- The foremost technology that is going to be the driver of wheat research in future is the molecular marker assisted selection (MAS), wheat transgenic and wheat hybrid. MAIL's effort in this direction will be focused on development of necessary infrastructure, trained scientific human resources, and regulatory framework for biotechnological applications.
- Specific approaches and efforts will be undertaken to develop improved crop management technologies: integrated pest management (IPM) including pest survey and surveillance systems, reduction of post-harvest losses, establishment of agronomical trials, conduct of supplemental and raised-bed irrigation trials, establishment of dry land farming practices, diversification of wheat production through farming systems approach, technologies for rainfed wheat cultivation, socio-economical studies of adaptive research
- Farmers' access to quality seeds of improved wheat varieties will be broadened through production of adequate amounts of nucleus and breeder seeds, construction of strategic stores for early generation seeds.
- The national wheat development programme will be boosted by forging strong linkages with the Atomic Energy Commission, NGOs and international NGOs, international collaborative programmes.
- Adequate measures will be undertaken to streamline international collaboration in wheat research and development by avoiding duplication of programmes and activities by development partners.

Varietal development and release

- Variety development will be for specific zones: N, E, C, SW and culture habit – winter wheat, spring wheat, rainfed wheat
- New suitable varieties of wheat will be introduced for cultivation in limited irrigation areas
- Varieties will be registered and their characteristics recorded after approval by the Variety Release Committee (VRC).
- Local simple nomenclature for naming new varieties will be followed to help farmers understand easily.
- Adequate amounts of breeder seeds will be made available for accelerated seed production.
- National Wheat Catalogue will be updated regularly.
- Standard procedures will be followed for varietal release – at least three years testing (last two years in specific zones), resistant to Ug99, 10% superior to latest release or yield at par, but with different basis of resistance, and trials to have latest release, national and long-term check varieties.

7.2 Extension

Agriculture extension is a key element of the National Wheat Policy because of its vital role in disseminating knowledge and information about improved production practices and facilitating access to inputs. It is also one of the weakest links in the country's institutional setup for agricultural development. Only 4% of farming community benefits from existing services. The extension messages are insufficient and sometimes unreliably sourced.

This necessitate the need for revitalizing agricultural extension so that farmers have access to timely and quality extension advice and support services that would enable them to adopt improved technologies for wheat cultivation.

Policy objective

Develop a pluralistic extension system in order to facilitate speedy adoption of modern wheat varieties and associated technologies and create an atmosphere of increased involvement of different stakeholders working in this field.

The following steps will be taken to address the existing deficiencies and upgrade the capacity and quality of the national extension services:

- Demonstration plots showcasing new technologies and innovative practices will be established in farmers' fields. Extension officials should use these plots as a venue for hosting training for farmers.

- Multiple extension approaches such as field day, farmers' rally, and farmers' field visit will be widely practiced to facilitate rapid transfer of agricultural production technologies. Visits to demonstration farms and interaction with the farmers by the extension workers at an important time of the wheat growing season will be strengthened.
- Programmes on Integrated Pest Management (IPM) based on the Farmer Field School (FFS) concept will be expanded and strengthened within a sustainable management and funding mechanism of MAIL.
- Agricultural research-extension linkage will be strengthened for rapid transfer of new technologies. Apart from the public sector extension service providers, this linkage will be broadened to include private sector service providers, NGOs and farmers.
- The use of extension literature and public mass media such as wheat production manual, brochures, factsheets, TV, and radio programmes will be promoted for rapid diffusion of new technologies and their adoption by farmers. In this connection, small-scale agricultural information centers will be established in each district.
- The physical infrastructure and logistics of the national extension service will be upgraded by constructing office facilities for district-level units and improving mobility of extension staff in rural areas by providing motor bikes.
- Capacity building for the national extension service will also entail training for extension workers for technical and managerial competence; organization of seminars, workshops, and dialogue meetings for the extension workers. Steps will be taken to hire adequate number of trained extension personnel.
- Capacity building of wheat farmers in using improved technologies will be accorded a top priority.
- National extension services will be made client-oriented and accountable to stakeholders by introducing a pluralistic approach of extension service provision including the public sector, private sector, cooperatives, and NGOs.
- Agricultural Knowledge and Information System (AKIS) will be established that would link people and institutions to promote learning in support of agricultural livelihoods.

7.3 Institutional capacity development

The issues related to institutional and technical capacity development of scientists engaged in research are very crucial to ensuring the visibility of research outcomes. These two issues determine the success of the research systems. Unfortunately both institutional capacity and human resources developed in the later part of the last century were either completely destroyed or eroded. Discontinuation in the process of human resource development due to a variety of

reasons has also been reflected in the research outcomes. Existing research institutes are under staffed.

Policy objective

Develop human resources to enhance scientific and technical capacity of scientists and extension staff engaged in wheat research and extension.

Major aspects of institutional capacity development will be as follows:

- Strengthening technical and institutional capacity of the Agricultural Research Institute of Afghanistan (ARIA) to undertake applied and adaptive research in wheat
- Upgrading ARIA's provincial facilities to decentralize and effectively coordinate location-specific breeding research
- Human resource development through academic training and skills training
- The government will allocate adequate resources for scientific human resources capacity building in wheat R and D including training for advanced academic degrees – M.Sc. and Ph.D.

7.4 Seed sector development

Seed is the single most important input in crop production because it encapsulates the genetic yield potential of the variety. The genetic contribution to increased grain output from the improved varieties in Afghanistan, and particularly those introduced in the last ten years, is estimated at about 10%. This means the formal seed system now accounts for more than 10% of the total annual demand of wheat seed, while the remainder is supplied by the informal system comprising seed saved on-farm and shared or traded locally. Late distribution of seeds and absence of buffer seed stocks are other major constraints to seed supply.

The existing seed regulatory framework is set by the Seed Law passed in 2009 and the revised National Seeds Policy adopted in November 2012. Seed Rules are being drafted under FAO's supervision. MAIL will undertake actions, mobilize and devote resources, as appropriate and adequate, to ensure all stakeholders in the formal seed system play by the rules and regulations stipulated in this framework.

Policy objective

The main policy objective is to strengthen public sector capacity to rapidly multiply breeder and foundation seeds and increase the involvement of private sector to produce certified seeds in order to ensure quality seeds of newly developed varieties to the producers within shortest possible time.

In pursuance of this objective, the following steps will be taken to create a favourable policy environment for increasing market supply and availability of wheat seed:

- The capacity of seed enterprises to produce and supply certified seeds of wheat will be increased. Such increase should take into account the present and projected demand of seeds of improved varieties particularly those that have been introduced relatively recently and are preferred by farmers.
- Efforts for establishment of Seed Certification Agency (SCA), as provided for in the Seed Law (2009), will be stepped up to create a national organization with an institutional setup, and administrative and financial authority that ensures its competence for exercising scientific, technical, and regulatory oversight of certified seed production in Afghanistan.
- Measures will be taken to involve seed enterprises in the extension of seeds.
- Capacity of seed suppliers will be built through providing training to improve their technical and managerial competence and also on-the-job training.
- Private seed enterprises will be encouraged to improve their commercial operations and business management so that seed production becomes cost-effective.
- Extension services will be strengthened with programmes to create greater awareness among farmers about quality seeds and improved varieties.
- Measures will be taken to engage the private sector and expand its role in provision of extension services.
- Adequate government support will be provided for institutional and technical capacity building in the informal seed system, including farmers' training on improved seed production technologies and development of village-based organizations for seed production and local trade.
- Region-specific seed systems will be developed for ensured supply of quality seed of varieties suitable for different agro-ecological regions for achieving increased productivity.

7.5 Wheat marketing and trade

Marketing is one of weakest links in the ministry's existing policies and programmes designed at keeping supplies of wheat in domestic markets at adequate levels and at prices that consumers can afford to buy in sufficient amounts to satisfy their food needs. In Afghanistan, only a small share of domestically produced wheat is sold in the market; most of it is consumed by farm households, used to pay land rents or repay debts, shared with landlords, or bartered.

Policy objective

The policy objective is to support in developing proper and efficient marketing and trade of wheat and wheat products that will lead to higher profitability for the producers through the realization of optimum prices and thus reducing adverse impacts on farmers' willingness to plant wheat.

The government will undertake the following measures to improve wheat marketing and trade systems:

- MAIL, in concert with other government ministries and agencies, will continue to take a range of administrative and economic measures aimed at stabilization of wheat prices in internal markets, which remain volatile due to shortfalls in domestic production. A key policy measure will be to ensure internal wheat markets remain sufficiently connected with international markets to facilitate commercial imports of wheat grain with lower costs.
- The government will mobilize domestic resources and seek international cooperation to make strategic investments in road and rail transportation and other ancillary infrastructure to improve its connectivity, particularly in northern areas, with the goal of developing a range of efficient and commercially viable alternative transportation and communication links with Central Asian markets and lessening overwhelming dependence on the neighboring country in the east for access to supplies.
- MAIL will undertake adequate measures to improve marketing infrastructure and distribution network with emphasis on development of storage facilities.
- To ensure fair prices to wheat growers for their produce, the government will adopt appropriate price support policies including large-scale procurement of wheat grain at administered prices and subsidizing cost of imports in emergency situations as a means of lowering consumer prices and supporting consumption of wheat at usual levels.
- The supply chain of wheat and flour in different regions of the country will be reviewed and inefficiencies and missing links identified in efforts to curb the influence of intermediaries that impacts on consumer prices.
- MAIL will monitor annual wheat demand and supply situations in the country and update on the outlook of wheat production and change in trade policies in the neighboring countries to forecast and plan import of wheat grain and flour to meet domestic production shortfalls.
- Government will scrutinize periodically import duties and tariffs to provide incentives to private sector for conducting trade through formal channels.
- MAIL's policy department in cooperation with the ministry of commerce will periodically review import and export policies to simplify procedures for import.

7.6 Strategic grain reserve (SGR)

An important aspect of the NWP is to fortify national food security by providing access to reliable and adequate supplies of wheat in internal markets through increasing domestic production of wheat. This can be supported by government procurement of grain and developing reserves in strategic locations of the country. MAIL, under the proposed Food for Life Program, envisaged SGR as a tool for stepping up food security and emergency response and set the target of elevating SGR capacity to 200,000 t by 2015 and 300,000 t by 2024.

Policy objective

The objective is to create wheat reserves both at households and national levels in order to accommodate the increase in wheat production as a result of the introduction of the new modern varieties; to cater the emergency need of the Afghan people during production losses; and also to encourage farmers to grow more wheat through price support.

In the light of these developments, the government will undertake the following measures in respect of SGR.

- MAIL will take all necessary steps toward building storage capacity for a modest SGR of 200,000 t, targeted for emergency food support, by completing rehabilitation of the four existing grain silos with a combined storage capacity of 150,000 t and renovation of warehouses that would give additional storage capacity of 50,000 t of bagged wheat.
- The government, in the medium term, would expand the SGR by building smaller warehouses with capacities of 500 t or less at district levels and turning them over to farmers' cooperatives. The expanded SGR involving farmers' communities would contribute to strengthening wheat value chain through improved quality of grain handling and post-harvest storage.
- The Strategic Reserve Directorate will formulate policies regarding domestic procurement, building up, maintenance, and use of the SGR.

7.7 Wheat value chain development

Wheat value chain (WVC) is the sequence of steps at which value is added to the wheat grain as it is transformed into flour and other processed wheat-based products. In Afghanistan, typical WVC consists of the following: Farmers – wholesalers (grain) – wholesalers (flour) – retailers (flour) and retailers (*Naan* bread). Wholesalers also sell flour to wholesalers (bakery) who then sale to retail bakeries. A portion of flour at wholesale level also finds it way to further processing into pasta and cereal. The flour miller adds 66% to the value of wheat during the milling process. The highest value added process in the value chain is the production of baked goods and pasta and cereal products.

Wheat is typically milled on a very small scale with grinding stones powered by water or by small diesel-powered motors. Little cleaning or sieving of wheat is done prior to milling, so the flour is discolored and of poor quality. There are about 5,000 such grinding mills in Afghanistan that collectively grind 3.3 million tons of wheat per year. There are 5 relatively modern flour mills in Afghanistan with an estimated combined capacity of 600t/day, but utilized capacity is about 400t/day due to poor state of equipment repair, limited availability of electrical power, and lack of expertise. There are about 3200 small bakeries nationwide with about 1200 producing cookies and cakes, and 2000 producing afghan bred.

Policy objective

The policy objective is to promote incentives and enhance profitability of the wheat growers by promoting value chain development approach which will also lead to reducing the cost of production on one hand and creation of more employment on the other.

The following policies will be adopted with regard to improvement of wheat value chain:

- The government will direct efforts at capacity building harnessing public-private collaborations, wherever possible, along the value chain – farmers, input suppliers, wholesale and retail traders, transporters, processors, and lending institutions.
- Modern wheat processing technologies - post-harvest handling and storage, grain milling, baking, packing and packaging - will be introduced to improve the quality of domestically produced wheat flour and baked products and thus increase the contribution of the wheat value chain to the country's GDP.
- MAIL will devote adequate resources to research and extension on improved wheat post-harvest technology and on-farm storage.
- Efforts will be directed at developing sustainable market linkages with a focus on eliminating bottlenecks in transportation and terminal market access tailored to smallholder farmers.
- Support for small-scale village-based seed enterprises
- The government will facilitate private enterprise development in grain handling, distribution, and storage
- Priority will be given to enterprise development in wheat processing including grain milling with improved quality attributes and baking

8. Implementation and monitoring of the policy

The Ministry of Agriculture, Irrigation, and Livestock (MAIL) will be responsible for implementing this policy. It will coordinate with other Ministries in matters of mutual concern such as the Ministry of Energy and Water, and the Ministry of Commerce and Industries.

Wheat Coordination Committee, established at MAIL and chaired by Technical Deputy Minister, will be responsible for monitoring and implementation of this policy.