



# **Agricultural Review: Regional Command Southwest**

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## Abstract

The economies of Helmand and Nimroz are driven by agriculture; making up roughly 80-85% of all economic activity. This fact makes agriculture an attractive target for both Coalition Forces and the Taliban. The Taliban actively seeks opportunities to disrupt business and delegitimize GIROA efforts while CF seeks positive COIN effects through economic development. The end state of Regional Command (RC) Southwest (SW) agricultural strategy is to enable GIROA and Afghan farmers to achieve economic independence. Therefore, RC(SW) agricultural strategy must be focused and coordinated in order to maximize effects while minimizing disruptions.

## Guiding Principles

Below are guiding principles which should be considered when implementing any agricultural initiative:

- The primary motive for any agricultural program is its ability to strengthen markets for licit agriculture while increasing the per capita income and standard of living within RC (SW)'s AO.
- Programs should enhance GIROA's efforts and in particular the services of the Provincial and District Directors of Agriculture, Irrigation and Livestock (DAIL). The transition end state for Helmand and Nimroz is for DAIL directors to manage complex agriculture policies and programs as well as their ability to impart knowledge and skills through training.
- Targeting the entire value chain by *improving communication between all market participants* will illuminate opportunities for profitable ventures.
- RC(SW) should focus on the positives; from security gains to cultural strengths, and continue to develop them. Creating a comparative advantage for Local Nationals (LNs) to compete in both national and international markets is the ultimate goal.
- All initiatives should be demand driven, especially where there is an identifiable and realistic market opportunity that is typically reflective of existing production capabilities.
- Most importantly, agriculture strategy is long term, patient and consistent. Administrators must be introspective, identifying both shortfalls and best practices in order to obtain sustainable improvement in agricultural productivity and incomes.
- Programs and agendas should be based on current capacity and the realization that smaller initiatives will be more effective than larger projects. The sum of the parts will exceed that of the whole.

## Products and Value Chains

- Cereal Crops (wheat, oats, and barley)  
These winter crops are essential to food security and most viable short-term alternative to poppy. Recent Food Zone Programs represent excellent examples of successful policy of augmenting cereal crop inputs.
- Horticultural (pomegranate, grape/raisins, apricots, and almonds)  
The region has enormous potential but is hindered by nearly phase of the value chain. A long term program, possibly commercially out sourced, is needed to coordinate recovery efforts. Low-cost grading and marketing facilities will create an immediate positive impact on local markets.
- Livestock and poultry  
Animals are a measure of a family's real wealth. Processing facilities, and pilot projects (such as Bost Poultry Farm) are viable opportunities. Training programs that teach animal husbandry techniques should be initiated by DAIL staff. Para-veterinary services are needed in every district and should receive support from the Ministry of Agriculture, Irrigation, and Livestock.
- Industrial Crops (cotton, soy, peanuts)  
These crops are intrinsically tied into the livestock value chain because they are an important protein source. Increased yields will occur due to the improved the health of livestock herds and increase the per capita income of the region. These crops also produce cooking oils which are in extremely high demand by the Afghan population. Limited industrial facilities for cotton exist, but gaps are remaining in all industrial crop value chains. Small expellers could be used as stop gap measures in bazaars until larger, commercial sized operations can be established.
- Value Chains  
“The *value chain* describes the full range of activities which are required to bring a product or service from conception, through the different phases of production, delivery to final consumers, and final disposal after use.”<sup>1</sup> In RC (SW) the value chain

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<sup>1</sup>Kaplinsky, R., and Morris, M., A Handbook for Value Chain Research, Pg 4

includes implementers (seed and sapling producers), farmers, co-operatives/associations/unions, grading and packing, wholesalers, and vendors. The strength of a market will only rise to the level of a value chain's weakest link. A viable strategy would be to investigate the value chains of a product (following an item in reverse from bazaar to the implementer) and make improvements to the weakest links.

## **Enabling Factors**

Poor security is the primary hindrance to economic growth and activity. Eliminating this obstacle is at the forefront of ISAF and GIROA strategy and is the paramount objective of RC(SW). Without improving security all development projects are nullified. Furthermore, the enabling factors found below operate simultaneously in a synergistic relationship. One improvement without another will lead to asymmetric and unsustainable growth.

- Communication Chains  
There is a large communication void, within RC(SW) AO, concerning agricultural production data. Filling this gap is crucial for tying together value chains. Improved communication alleviates ambiguity within individual markets and incorporates more knowledgeable participants. Communication improvements require GIROA participation and CF involvement to ensure sustainable development.
- Infrastructure  
On-going road improvements will create an economic corridor but future small scale investments in agribusiness infrastructure are essential to long-term sustainability. Limited and uncertain water resources are another concern to long-term growth. Small and large scale improvements in water delivery must be accomplished to assure risk averse producers and support critical food and fiber production. RC(SW) must continue to press the Helmand Argandahb Valley Authority, GIROA, USAID, DFID, and the PRT to effectively coordinate water and irrigation systems. Water quality (salinity issues) is a problem in many districts and further evaluation of the magnitude is required. Water is the most critical resource concern of the battle space and should be accorded the appropriate priority.

- Public Policy  
GIROA needs to develop their ability to govern and advocate for their constituent's economic advancement. This advocacy will promote entrepreneurial efforts with non-restrictive regulations and policies. Efficient government is crucial to sustainability. Privatization of state owned enterprises should be a primary objective where disruption of market structures will be minimal. Fostering investments, both domestic and international, should be aggressively pursued.
- Education and Training  
Many farmers within RC (SW) employ antiquated farming techniques. Their cultural techniques suffice for short-term sustenance farming but do not offer the tools for long-term food security and economic development. The economies of scale dictate that small producers will not move into higher technologies. Extension programs are needed to change their cultural habits with concern to water use, technology, farming techniques and various other limiting habits. MAIL and NGOs must develop aggressive educational and demonstration opportunities through university supported extension for small and large producers to grasp improved production concepts.
- Foreign Investment  
Improvements in security, productivity increases, and effective public policy will hopefully entice international business to invest in the region. Multi-national corporations must be solicited to procure long term contracts for agriculture products. Sustained agreements will absorb increases in commodity production and mitigate risk in market volatility.

## **Recommendations**

RC (SW) must delineate tasks and responsibilities and improve coordination amongst all parties operating in Helmand and Nimroz. At this time there are redundant efforts, tasks uncompleted and information management shortfalls. The major development partners(RC(SW), PRT, NGOs and Division assets) must be assigned certain areas of focus with emphasis on the strategic(long-term) and tactical(short-term). By nature RC (SW) and PRT should focus on strategic projects as well as contracting NGOs and private contractors to perform on-the-ground tasks. Conversely, Division (GCE) assets must focus on tactical short-term items as well as assisting others with resource shortfalls.

- Strategic  
Build MAIL/DAIL and HAVA capacity for public policy and resource management to include solidifying water rights and resource conservation for increased agricultural production. Improving major infrastructure components such as roads and pilot marketing facilities must be ongoing. Evaluation of value-chains and development of efficient communication networks in order for value chain links to communicate is fundamental to agricultural economic success. All donors in the community need to be in synch to insure coordination of efforts. Focused energy should be applied to the central producing districts along the Helmand River with emphasis on core, established agricultural commodities.
  
- Tactical  
RC(SW) should endeavor to deliver small, local projects that provide sustainable growth impacts (marketing centers, horticultural enhancement programs, increased industrial crops, and improved seed stocks). Large projects become ends to their own means and the effects on the population become diluted by the size. Road maintenance and canal improvements must be ongoing objectives in partnership with the appropriate GIROA agencies. Farmer training and co-operative management through MAIL and NGO extension programs are extraordinarily important in the process of agricultural development. Concurrently, improvements in water management should be a goal through capacity building of the mirabs and district governance staff.
  
- Implications  
Incomes potentially could be disparate in the distribution of opportunities from district to district and village to village. RC(SW) and the PRT/DSTs must ensure that GIROA will assume more leadership responsibilities to preclude wide dispersions. In that regard, GIROA capacity must improve with increased agricultural and economic potential.
  
- Build on Strengths and Known Abilities  
The Helmandi farmer is conservative and highly risk adverse by nature with regards to licit crops. His first concern is feeding his family while his second is earning as much income as possible. His techniques are bonded by established farming techniques and therefore rapid innovation in products and methods is highly unlikely. The way ahead with this cultural dynamic is

to focus on what the individual farming communities do well. For example, Now Zad efficiently produces pomegranates and almonds, while Garmsir and Marjah are very productive in cotton, corn and wheat. Therefore the advocated strategy strives to increase the productivity of Now Zad's pomegranates and almonds as well as Marjah and Garmsir's wheat and corn crop. The tactical strategy should focus on expanding production based on a region's strength and potential, while the strategic focus is on improving farming techniques, possible industrial crops, and resource conservation.

- Consumer Demand Driven Approach

When a Afghan consumer purchases a product from the bazaar it has reached the final destination. All Afghans desire certain products and these wants then create a market. The priority to improving value chains, from the producer to the consumer's hand, should be in the high demand products. This approach eliminates risking novelty products and will allow scarce resources to be spent in traditionally high demand markets. Without this rational, it is unlikely that any associated growth will be sustainable: "build it and they will come" is not an appropriate cliché for the RC(SW) AO. The approach will require specialists to track a product backwards through the value chain. The action will begin at the bazaar and end in the farmers' fields. This evaluation will then indentify links in the value chain requiring improvement and any gaps in the supply not meeting demand (cooking oil). The goal is to provide increased food security under the management of the Ministry of Agriculture, Irrigation and Livestock professionals.

- Building Public Sector Capacity

Government departments at national, provincial and district levels suffer from lack of skills and resources. Local communities through RC(SW) are skeptical of the capabilities of GIROA (MAIL/DAIL). This concept is changing with capable MAIL directors and staff existing in several key districts. The value chain is only as strong as its weakest link and GIROA should not assume that status during improvements in market sectors. This same critique applies to the public sector. The public sector urgently needs to attain greater coordination with MAIL and farm groups. Farmer associations are the venues to build effective communication and training opportunities. Village and community elders should also be incorporated in the process. The responsibility of forming unions, associations, and cooperatives

should be by MAIL staff with support from the PRT, DSTs, implementing partners, and NGOs.

RC(SW) and the coalition governments are providing infrastructure investments across the region and these investments are highly visible and represent economic development. However, the real substantial aspect of economic development in the region is human networking. Agricultural shuras representing all farmers should be encouraged on regular occasions. Encouraging producers to participate in the process of planning and development will enhance their understanding and investment in projects. Farmers in the region are fiscally and culturally conservative. This cultural characteristic will require a long term institutional investment in order to propagate real change. The objective of this investment will be to improve government and public sector capacity. Inclusive in the investment will include education and training, market building, and management of resources. These improvements are not necessarily expensive on the front end but will require a long term revenue stream for continuous funding. Higher level headquarters will need to incur the responsibility of insuring that this inevitability is understood and supported.

Properly positioned and supported; the agricultural economy of RC(SW) area can sustain momentum toward a licit and constantly improving state. A few large projects such as refined flour milling, industrial crop oil mills, and another cotton gin should be the peripheral components of the system. The preponderance of the effort should be oriented toward small, but cumulative value added projects that have stakeholder investment and acceptance.

## **Building Alternative Agricultural Opportunities in RC/SW**

### Food Zone Program

Governor Mangal's Food Zone program, now in its third year, is an Afghan-led four part CN strategy designed to reduce opium cultivation and to reduce the significance of narcotics on governance, economy and security. At present, Helmand PRT are supporting the distribution of certified wheat seed and fertilizer, in addition to vegetable and forage seeds to up to 48,000 farmers across the province. This includes distribution to 60% of farmers in the kinetic areas of Musa Qala, Sangin, Nahre Saraj, Marjeh and Garmsir, and to 35% of farmers in Now Zad, Nad-e Ali, Lashkar Gar, Nawa and Khan-e Shin. Farmers are able to purchase the seed and fertilizer at a 65% reduction in price. This decrease in expense will add to the farmer's profitability.

Additionally, by providing a source of certified seed and high quality fertilizer; farmers are achieving higher yields which will enhance their bottom line.

In addition to assisting farmers make the transition to the licit economy, the alternative livelihoods program has enabled the government to deliver tangible consent winning benefits in the aftermath of kinetic operations, for example in Nad-e Ali and Marjeh following the clear phase of Operation Moshtarak. Delivery of the program has also enhanced Governmental outreach. District Governors and MAIL representatives are overseeing the registration process; MAIL representatives are present at the issuing of inputs and the Governor is undertaking a series of CN shuras across the province.

#### Grading and Marketing Facilities

A need was recognized by RC Southwest to assist larger producers in aggregating fruits and vegetables in a central facility that could provide hydro-cooling, grading, packing and distribution. A design has been developed to meet this requirement and sites are in the process of being selected for construction. The initial pilot site has been proposed to exist in northern Marjah adjacent to Camp Hill. This site was selected to augment the AVIPA plus initiative of distributing 3,000 packages of fall vegetables and to provide the citizens of Marjah with a sense of assistance from GIROA. The facility is intended for wholesale distribution and the value added process should create greater profitability. CERP funding will be leveraged in the construction of the facilities.

#### Forage and Vegetable Seed Distribution

Alfalfa seed distribution by AVIPA plus (and the Food Zone program) will encourage producers to recognize the importance of good nutrition in animal husbandry. The perennial also will displace land for any possible illicit production. Alfalfa is a legume which does not require nitrogen, which is another positive in both reduction of farm expenses and potential use of illegal ammonium nitrate.

Vegetable seed distribution (particularly fall planted vegetables such as: cauliflower, radishes, onions, carrots, and turnips) incentivizes farmers to try other crops that will compete season wise with poppy. These crops also are very nutritious and provide good dietary balance at a time of year that fresh food is generally not available.

#### Alternative Agriculture Education and Pilot Center

Bolan Farms, a GIROA Research and Education facility in Lashkah Gar, is designating a portion of the farm to an Alternative Agriculture

program that will pilot new crops and provide educational plots for more traditional crops that are have not been widely produced. New pilot crop programs will include saffron, dates, rapeseed, and other winter grown commodities as determined. Winter vegetable plots featuring onions, carrots, turnips, cauliflower, radishes, and winter peas will be planted as an educational platform for producers that are new to vegetable production. Perennial fruits such as grapes, apricots, and pomegranates are already in production at the farm, but will be augmented with increased varietal trials.

The Farm is well recognized throughout the region and is accepted by farmers as a legitimate site for evaluation and learning. High value crops such as saffron and dates could augment large and small farms incomes to some degree should the pilots prove to be successful in this region. The work will be a GIROA led program and will have CERP support.

#### Wheat Storage Facility Rehabilitation

Major work is currently underway to rehabilitate the GIROA wheat reserve warehouse facility. This facility has been used by the government and the World Food Program in the past to maintain a strategic wheat reserve for the country. CERP funds are supporting new walls, roof repair, and other structural renovations. A functional storage facility will assist the government's efforts to provide food stability and also absorb the wheat production in Helmand which is greater than the demand in the province. Farmers will benefit from the availability of the storage and the possibility of price enhancement due to the government or World Food Zone purchases. This work could reinforce wheat as a standard choice for producers as the main cultivated crop in the winter which is a direct alternative to poppy.

#### Cotton (Spinzar - White Gold)

The Bost Cotton Gin and Oil Mill reopened for production in early October 2010. Current cotton lint prices are at a 15 year high which will provide a significant opportunity for profit to the producer. Cotton can be planted in April superseding a winter crop such as poppy. The gin and mill could potentially employ up to 400 and the products generated would be in excess of \$5 M. This type of value added performance for an agricultural commodity creates economic growth and a choice for farmers to grow a licit crop for an acceptable profit with good risk management options. Cotton performs well in the environment; is tolerant to high saline soils and is very drought tolerant. The crop is not perishable and is in demand. Marketing and production expertise is being provided to the factory by the Regional Platform. CERP funds will provide critical repair parts that will insure the operational capacity of the gin and oil mill. The factory

produces quality lint for spinning, cotton seed oil for cooking, soap, and cotton seed cake which is a high quality livestock protein feed used for dairy animals.

### Peanut and Soybean

Legumes are plants that have the ability to fix nitrogen through rhizobium activity in the soil. This precludes the need to apply nitrogen for plant development. As a bonus, the plants actually produce more nitrogen than required for growth and a residual amount of plant available nitrogen is left in the soil. Planting wheat after peanuts or soybeans reduces the amount of nitrogen needed by the wheat crop by as much as 50%. Any reduction in nutritional inputs will provide greater profitability in the crop being produced. Both peanuts and soybeans can be crushed (milled) to produce valuable cooking oils (in great demand) and a high protein meal by-product that is an excellent supplement for livestock. Soy and peanuts can also be utilized to make flour that can be incorporated with wheat flour to fortify the end product. Higher protein commodities will significantly improve the dietary characteristics of the population.

## **RC(SW) DISTRICT AGRICULTURAL ASSESSMENTS**

### **DELARAM**

Delaram is situated in the far Northeast corner of Nirmoz province. The Ring Road splits the district and the road from Zaranj-Delaram forms a key intersection with the Ring Road at Delaram DC. The area is not a major agricultural production zone but does have the following crops: wheat, mung beans, corn, alfalfa, almonds, apricots, and some pomegranates. Livestock production is family/community oriented with limited commercial trade. MAIL has little or no presence due to the distance from Zaranj to Delaram. The federal lines of authority are difficult to situate in remote locations. This precludes the opportunity to organize farmers into cooperatives and associations as well as agricultural shuras for business opportunities. Water is a key issue that will require attention in the future if further agricultural development is to be achieved. The Kash Rud River, wells, and karezes are sources that are currently used but are considered to be inadequate.

Potential agricultural projects:  
Grading and Marketing Facility  
Distribution Center  
Agricultural Equipment Repair

Irrigation development programs  
Census of larger farming operations (>20 Hectares)

Delaram is a major transportation hub that should be targeted for the distribution capacity that could be realized. Although the actual production in the area is not considerable, agricultural contributions will be necessary to sustain the anticipated growth of the district once the transportation infrastructure begins to expand. It will be incumbent upon GIROA to fill the MAIL tashkiel for the District in order to effectively move Delaram agriculture forward.

### **GARMSIR**

Garmsir is a strong diversified agricultural area. A vocational agricultural high school is being re-built and will provide valuable training in the future. GIROA is supporting agriculture with an adequate MAIL presence that is currently stable and capable. Major distribution of agricultural implements, tractors, pumps, and input items have been ongoing by USAID through implementing partners that have established a facility adjacent to the agricultural high school that also supports the demonstration farm area. A strong cooperative structure exists as evidenced by the amount of pumps, tractors, and implements distributed by AVIPA+ (USAID). Commodities produced in the district include: wheat, corn, mung beans, cotton, vegetables, grapes, other fruits, and alfalfa. Livestock production is limited to individual family herds with little commercial effort. Water is the limiting factor with canal and river irrigation as primary sources.

#### Potential agricultural projects

- Oil expeller for corn and oilseeds
- Grading and Marketing Facility - collection point
- Improve the demonstration farm in conjunction with Ag Vo-Tech
- Canal improvements with structural repairs
- Horticulture enhancement programs
- Agricultural shuras for business and commodities (cotton)
- Census of larger farming operations (>20 Hectares)

Garmsir is a very stable district with good GIROA leadership that sets a foundation for long term development. The educational programming will certainly reinforce efforts to grow the agricultural economy. District MAIL staff will be exceptionally important in the future as organizers and technical supporters for the agricultural economy.

## **KHANESHIN**

Khaneshin is a very difficult agricultural production area due to the lack of viable irrigation with respect to quantity and quality of water. Desertification is a serious problem in the district that is compounded by high salinity presence in the Helmand River that flows through the area providing water for irrigation canals. Large scale agricultural production of grain and oilseed crops will not be viable. Currently the following crops are produced: wheat, corn, mung beans, vegetables, and fruits. Livestock production is family centered with some Kuchi in the area.

### **Potential agricultural projects**

- High value crops with available water (Horticulture Enhancement)
- Grapes, spices, specialty vegetables
- Irrigation wells - if feasible
- Family poultry projects
- Agricultural shuras to develop local markets

GIROA has only provided superficial governmental support as Khaneshin is not considered a top tier district. This creates major gaps in potential progress as the lack of MAIL staff will compound a very challenging area for agricultural development. Higher value crops will require training and continuous support from the government. It is apparent that NGOs will not expend significant energy to support the area, so it is incumbent on GIROA and the Provincial government to implement supporting programs.

## **LASHKAR GAH**

Lashkar Gah is the municipal center and provincial capital. Transportation connections are sufficient but not a strong asset. MAIL presence is good with Bolan Farms as a prime demonstration and education center. Major funding is supporting security, irrigation system improvements, and internal roads. Bolan Poultry Farm continues to place chicks, but at a huge commitment from donors for funding. The Bost Cotton Gin and Oil Mill is back up and operational. A conceptual agricultural industrial park is still on the drawing board, but not imminent. Crops produced include: Wheat, corn, cotton, fruits and vegetables, and nursery plants. Livestock is limited to household production.

### **Potential agricultural projects**

- Support Bost Cotton Gin and Oil Mill with parts

Refined wheat flour mill

Create Lashkah Gar Agribusiness Council:

Brokers, Coop Leaders, MAIL representatives, Farm Supply Dealers  
Census of larger farming operations (>20 Hectares)

Lashkah Gar actually produces a significant amount of agricultural commodities which needs to be recognized. The labor pool of skilled workers will be much greater in Lash than elsewhere, which would support more technically challenging agricultural projects. The municipality should become the center for agricultural education, extension, and research. This aspect will be critical for the overall agricultural development of the province.

### **MARJAH**

The Boghra canal feeds the extensive irrigation system throughout Marjah and Sistani. If water is dispersed equitably, the opportunity for double cropping (winter and summer crops on same land) is a critical component of future development. North Marjah has had greater opportunities to realize increased profitability as compared to southern parts of the zone due to insufficient water in the summer. Equalizing the standard will enhance the GIROA's favorability with the population and provide avenues for more alternative agricultural enterprises.

Marjah produces wheat, cotton, mung beans, peanuts, alfalfa, vegetables, melons, grapes, and plums. The soil microbe dynamics appear to support rhizobium bacteria that fix nitrogen in legume plant root nodes. This means high value protein crops such as peanut and soybean can be produced effectively. Crop rotation will occur at a greater extent as farmers take advantage of the residual nitrogen left in the soil from the legume crop.

Potential agricultural projects

Grading and Marketing Facility (possible collection point for  
wheat and cotton  
Demonstration farms

Cotton bale press - association of small gins, enhances the  
efficiency of movement of light cotton

Canal and irrigation system renovations and upgrades  
Census of larger farming operations (>20 Hectares)

Marjah has the greatest potential of a major agricultural production zone if its resources are managed correctly. This will require major support from MAIL to adequately staff the department with extension personnel, cooperative/association trainers, and veterinarian assistance.

### **MUSA QALA**

Musa Qala has a relatively strong agricultural base that is diversified between traditional crops like wheat, corn, and beans; and horticultural crops including grapes, apricots, pomegranates and almonds. Cooperatives and associations are not well known and probably require further development for viability. A complete assessment of Musa Qala should be accomplished in order to ascertain the maturity of the agricultural economy and farmer willingness to move markets forward. Livestock production in the district is apparently limited to sustainment with insignificant commercial marketing of meats and hides.

Potential agricultural projects

- Grading and Marketing Facility

- Horticultural Enhancement Program (Trellising, education, saplings, demonstration, nursery)

- Irrigation upgrades

- Farmer association development

- Agricultural shura on cotton production

- Census of larger farming operations (>20 Hectares)

This district will need strong support from GIROA MAIL to achieve sustainable growth and development from the agricultural production system currently established. A quality District MAIL staff could expedite Musa Qala's move toward a sustainable and expanding agricultural economy.

### **NAD-E ALI**

Nad-e Ali is well positioned to accomplish agricultural economic growth. The system of coops and associations has worked well in the past few years to assimilate development and distribution inputs from AVIPA+ and other programs. The crop mix is well diversified and supported by an extensive canal irrigation system emanating from the Boghra Canal. Commodities produced include: wheat, cotton, peanuts, corn, beans, melons, vegetables, fruits, and nuts. Livestock production is not commercially oriented. Water will continue to be the

driving issue of the future as the canal system will require constant attention and work through the Helmand Argandahb Valley Authority. Nad-e Ali's proximity to Lashkar Gah should be exploited to the maximum capacity in agricultural market delivery. A connection should be established between the two areas.

#### Potential agricultural projects

- Grading and Marketing Facility

- Canal system upgrades

- Continued farmer association training and development

- Agricultural shuras on agribusiness development (cotton/peanuts)

- Encourage District MAIL to form an Agribusiness Council/Shura

- Census of larger farming operations (>20 Hectares)

The district will require increased support from GIROA MAIL to keep the momentum it has attained. MAIL staffing has been adequate, but as Nad-e Ali grows the agricultural economy; it will require increased training and organization skills by the members. Failure to place high priority on the MAIL department will result in a sluggish move forward.

### **NAHRE-SARAJ**

The location of Gareshk on the Ring Road should create possibilities for agricultural business development for this district. Although, it is not a large production district, it does have enough size to warrant additional infrastructure that can be supported both by indigenous producers and outside the district producers.

Crops produced in the Nahre-Saraj district include: wheat, cotton, peanuts, corn, vegetables, fruits and nuts.

The accessibility of the Ring Road should be considered in agribusiness development planning. The construction of a cotton gin by the UK is an example of the concept of linking transportation corridors with goods. Unfortunately, the gin was damaged by the military operations in 2001 and is not functional. However, the site is exploitable and possibilities exist with the scope of production.

#### Potential agricultural projects

- Wheat flour mill - refined

- Rebuild cotton gin

- Produce distribution center

- Canal and irrigation system repair and upgrade

Farm equipment sales and service  
Grading and Marketing Facility  
Census of larger farming operations (>20 Hectares)

The proximity of Gareshk to Lashkah Gar and Kandahar should be capitalized upon with aggressive agribusiness development. The economic impact for the province would be substantial in jobs and flow of cash.

### **NAW ZAD**

Naw Zad is in the northern section of Helmand Province and it suffered greatly in the last three decades from war. The Russian occupation was especially damaging for many orchards and karezes. Water is the limiting factor, currently, for any significant increase in agricultural production. Kareze rehabilitation has been ongoing with FIRUP programming, but the drought will need to cease over the winter so that snowmelt will recharge the channels. The area has historically produced diversified grain and horticultural crops. These include: wheat, oats, corn, beans, alfalfa, almonds, pomegranates, and apricots. Livestock consists mainly of sheep, goats, and some cattle.

Potential agricultural projects

Continued Kareze rehabilitation  
Possible deep well irrigation projects  
Renovation of orchards and new area plantings of perennials  
Horticultural Enhancement Program (Trellising, education, saplings, demonstration, nursery)  
Grading and Marketing Facility  
Farmer association development  
Census of larger farming operations (>20 Hectares)

Naw Zad will require a coordinated effort from GIROA and donors to attain a suitable level of economic benefit from agriculture. Water projects will need to be extensively employed to supply required irrigation. Applying appropriate technologies to the irrigation regimes, such as modified drip systems, may provide needed conservation.

### **NAWA**

This district is well placed to progress at an expedited pace due to the strength of GIROA presence in governance and MAIL support. The

district has a MAIL run nursery that will be critical to the expansion of perennials in the province. Cooperatives are well regulated and appear to be effectively organized. The proximity of Nawa to Lashkar Gah is an advantage that needs to be exploited with respect to greater market potential for all agricultural commodities. Nawa has a base of diversity that includes: wheat, corn, cotton, alfalfa, beans, fruits, nuts, and vegetables. Livestock production is mainly for individual family sustainment with some commercial sales. Water is the critical component of the capability of expanded production in Nawa.

#### Potential agricultural projects

- Canal maintenance and structural repair
- Enhancement of the MAIL nursery production/training/demonstration
- Grading and Marketing Facility
- Oil expeller for corn and other commodities
- Demonstration farm for general crop production
- Encourage District MAIL to form an Agribusiness Council/Shura to coordinate with Lash Council on trade
- Census of larger farming operations (>20 Hectares)

Nawa has all the potential to move forward expeditiously to a value added farm economy due to its benign security profile and geographic location. The support provided by GIROA is absolutely essential to sustain the momentum. Recruitment of additional NGO commitments would significantly augment the USAID programs that have already distributed massive quantities of farm equipment and input items.

### **SANGIN**

Agriculturally, Sangin is the beneficiary of the Helmand River which forms the Upper and Lower Sangin Valley 'green zones'. The Nahre Saraj canal off take is just north of Sangin District Center (DC) which provides for extensive irrigation in the lower Sangin Valley as the water moves to Gareshk. Agricultural shuras are basically nonexistent due to lack of MAIL representation. Only a well qualified District MAIL Director would be acceptable. A network of farmer associations existed in the past from Kajaki to Sangin DC that supported storage facilities and after adequate accumulation large trucks transported to markets or the cotton gin.

The lower Sangin Valley is predominately grain and cotton farmers with considerable livestock (beef and dairy cattle, goats, and sheep). The Upper Sangin Valley region also produces grain, but diversifies into fruits (pomegranates, apricots, and plums) and vegetables (mainly summer planted). Livestock complements their diversity in the form of

cattle, sheep, and goats. Farmers tend an average of 2-3 hectares. Irrigation is being supplied either from the Helmand River or the Nahre Saraj canal. Farmers are mechanized with tractors and implements and show signs of significant equity in their operations.

A Grading and Marketing Facility near the District Center was considered, but the area around Sangin City was primarily grain and cotton oriented and therefore a Grading and Marketing Facility would not fit in this vicinity. The Grain Market adjacent to the Sangin bazaar should be supported with some rehabilitation of current structures and rebuilding of the damaged portion of the market which would be more than adequate in providing storage thought to be needed. The origination of the grain in the market (corn, wheat, and oats) comes from within the district. Buyers come from as far as Herat, Kandahar, and Pakistan.

#### Potential agricultural projects

- Rehabilitate the Sangin Grain Market (with drinking water well)
- Grading and Marketing Facility for produce in Upper Sangin Valley
- Canal and river irrigation maintenance and structure repair
- Flood control structures
- Cooperative creation and development/training
- Organization of the Grain Market dealers/farmers
- Shura for cotton production
- Census of larger farming operations (>20 Hectares)

Perceived requirements for the District MAIL staff from farmers, DST personnel, Civil Affairs Team members, and the Sangin mayor:

- Forming and training local farmer cooperatives or associations
- Establishment of a demonstration farm
- Assist in the negotiation of water rights with the local mirabs
- Fully qualified in subject matter expertise with adequate administrative for effective extension programming
- Develop para-veterinarian capabilities in the district

The assignment of a quality MAIL staff to Sangin should be of the highest of priorities for the Ministry. The prospects for appreciable agricultural economic development for the district are reliant on this GIROA achievement.

## District Agricultural Characteristics Evaluation

1. Ministry Of Agriculture, Irrigation And Livestock (MAIL)
  - a. Does the district have a mail director in place?
  - b. How many mail employees are actually working?
  - c. How many of these employees are extension workers?
    - i. Are these trained/competent workers?
    - ii. Do they perform field visits?
    - iii. Do they offer diagnostics for plants and/or animals?
  - d. Are there any para-veterinarians present?
    - i. Are they certified?
  - e. Does the district mail director have a plan?
    - i. If so, can you provide a copy?
  - f. Are there facilities and equipment necessary to support mail?
    - i. Describe the available facilities and equipment
  - g. Does the DST/military have regular meetings with mail?
    - i. If so, how often and who is present?
2. Crops and horticulture
  - a. List all known crops grown, give total hectares if possible
    - i. Summer
    - ii. Winter
    - iii. Fruits
    - iv. Nuts
  - b. Are large farms (> 50 hectares) operating?
    - i. If yes, provide an estimate of the number
    - ii. What are the primary crops produced?
  - c. Have the farmers identified any of the following concerns?
    - i. Low prices on commodities
    - ii. Lack of market avenues
    - iii. Freedom of movement to deliver farm goods
    - iv. Storage capacity
    - v. Market knowledge - commodity prices
    - vi. Unsure of what to plant
    - vii. Financing of operating costs (how are they financed?)
3. Livestock
  - a. Check all known livestock produced:
    - i. Cattle/dairy
    - ii. Sheep
    - iii. Goats
    - iv. Camels
    - v. Donkeys
    - vi. Poultry
  - b. Estimate percentage of each that is held by Kuchi (numbers?)

- c. Are there commercial feed mills available?
  - d. Do farmers use the para-vet?
  - e. Would farmers be interested in a vet-cap?
4. Resources
- a. What sources of irrigation water are available:
    - i. Kareze
    - ii. Tube wells
    - iii. Deep wells
    - iv. Canals
    - v. Other
  - b. If water is a concern, what problems exist:
    - i. High salinity
    - ii. Shortage of quantity
    - iii. Timeliness of availability
    - iv. Mirab corruption
  - c. Soil characteristics
    - i. Is desertification a problem and how widespread?
    - ii. Are soils consistently water logged (over irrigated)?
    - iii. Do farmers have problems attaining consistent stands?
    - iv. Does the soil wash during winter rains in some areas (where)?
5. Agribusiness infrastructure
- a. Are farm supplies available in most bazaars?
    - i. Do the shops carry adequate supplies of seed and fertilizer?
  - b. Are there wheat milling facilities prevalent (how many)?
    - i. If so, are they primarily in bazaars or communities?
  - c. If cotton is grown, how many gins are known to exist?
6. Cooperatives and Associations
- a. How many cooperatives or associations exist
    - i. Are they viable and trained
    - ii. Does MAIL recognize their existence
  - b. Are Agricultural Shuras being held and is MAIL supportive
    - i. Are they commodity specific
    - ii. Do they incorporate agribusiness leadership/owners