



# Feed the Future Innovation Lab for Livestock Systems

## Nepal: Enabling Policies for Livestock Brief

May 2016

The Management Entity at the University of Florida



## **Acknowledgement**

The Enabling Policy Brief was prepared by Dr. Bhawna Thapa, IFAS Global, and Anil Sigdel, M.S. student, Department of Animal Science

This Brief is a work in progress. It will be updated with additional information collected in the future.

This Brief is made possible with the generous support of the American people through the United States Agency for International Development (USAID) under the Feed the Future Initiative. The contents in this brief are the responsibility of the University of Florida and do not necessarily reflect the views of USAID or the United States Government, and its partners in Feed the Future countries.

## **1. Introduction**

The production of livestock products, such as milk and meat, has increased dramatically in Nepal past since the late 1990s, in part because of increased population and incomes that have driven the increased production and demand. This demand growth can provide significant opportunities for many rural and smallholder farmers to increase returns from their livestock resources, given coherent and coordinated national policies.

Effective and coherent livestock policies, alleviating both institutional and technical constraints, are crucial to capitalize on the opportunities offered by the livestock sector. This policy brief discusses past and present livestock policies, as well as the vision and objectives of Nepal's new Ministry of Livestock Development.

## **2. Relevant Policies and Actors in the Livestock Sector**

Nepal has a subsistence and mixed farming system with domination of smallholder farmers (MoAD, 2014). Livestock is integral component of Nepalese mixed farming system where crops provide feed and fodder and livestock provide milk, meat, manure, and draught power to till the land. The agriculture sector, which is the dominant economic driver in Nepal, contributed about 36.64% of GDP in 2005/2006 and, despite falling to 33.1% by 2014/2015, remains by far the largest contributor of the economy (MoAD, 2014). Nepal has always prioritized development of agriculture sector as a national goal and developed a number of policies and strategies focused on agricultural and livestock development. Appendix A illustrates the organizational structure of the various GoN agencies that focus on research and development of the livestock sector. The Agriculture Perspective Plan (APP), which began in 1995 and ended in 2015, is the first comprehensive and long term plan for agriculture development in Nepal. Since then, various policies and programs have been formulated in accordance with APP.

Nepal's Agriculture Development Strategy (ADS 2015-2035) is a 20-year plan developed by the Ministry of Agricultural Development (MoAD) that envisions the achievement of high productivity, competitiveness, inclusiveness, and sustainability by including agricultural production sectors (e.g., crops, livestock, fisheries, forestry) as well as processing, trade, and other services (e.g., storage, transportation and logistics, finance, marketing, research, and extension) (ADS, 2014).

There is currently no separate livestock policy for Nepal. The policy for livestock development is mainly spread throughout agriculture and other sectoral policies in the country. The Agriculture Perspective Plan (1995-2015), National Agricultural Policy (NAP) 2004, Agriculture Business Promotion Policy 2007 (ABPP), and the Agriculture Development Strategy (ADS) (2015-2035) are the major policies that guide livestock development in Nepal. Table 1 lists some of the policies relevant to the livestock sector in Nepal.

Table 1. List of policies relevant to the Nepalese livestock sector.

Comprehensive Policies and Plans	Specific Livestock and Other Relevant Policies
Agriculture Perspective Plan (APP), 1995-2015	<ul style="list-style-type: none"> <li>• Animal Feed Act, 1976</li> <li>• Animal Health and Livestock Services Act, 1999</li> <li>• Animal Slaughterhouse and Meat Inspection Act, 1999</li> </ul>
National Agriculture Policy (NAP), 2004	<ul style="list-style-type: none"> <li>• Forestry Policy, 2000</li> </ul>
Agribusiness Promotion Policy (ABPP), 2006	<ul style="list-style-type: none"> <li>• Dairy Development Policy, 2007</li> <li>• Agriculture Bio-Diversity Policy, 2007</li> <li>• Trade Policy, 2009</li> </ul>
Approach paper to the 13 <sup>th</sup> plan (2013/2014-2015/2016) and Agriculture/Livestock Development Policies	<ul style="list-style-type: none"> <li>• Climate change Policy, 2011</li> <li>• Breeding Policy, 2011</li> <li>• Birds rearing Policy, 2011</li> <li>• Rangeland Policy, 2012</li> <li>• Livestock Insurance Policy and Agriculture and Livestock Insurance Regulation, 2013</li> <li>• National Land Use policy, 2012</li> </ul>
Nepal's Agriculture Development Strategy (ADS) (2015-2035)	

Source: Pradhanang et al., 2015; MoAD, 2014

### Agriculture Perspective Plan (1995-2015)

The Agriculture Perspective Plan (1995-2015) (APP) was the first long-term comprehensive policy relating to agriculture and livestock development in Nepal. The APP was prepared with financial support of Asian Development Bank (ADB) and other development partners, such as the World Bank and FAO. The APP objectives were to accelerate the growth rate in agriculture through increased factor productivity to alleviate poverty by transforming subsistence based agriculture into a commercial one through diversification and to prepare periodic plans and programs in future. The APP recognized the livestock sector as one of the four priority outputs and identified the livestock sector as a contributor to national economic development, poverty reduction, regional balance, and gender mainstreaming. The APP envisaged increasing the share of the livestock sector in the AGDP from 31% in the preplan period to 45%, through a targeted livestock annual growth rate of 2.9% to 6.1% during the plan period from 1995 to 2015. During the APP implementation period, some sectors, such as poultry and fisheries, showed growth; however, the APP was not able to fully achieve its objectives during the established timeline. A large number of indicators including labor productivity, productivity gaps, trade and competitiveness, poverty and malnutrition, and infrastructure development are still in low development stage (ADS, 2014). In addition, new and emerging issues, such as climate change, food security, out-migration of youth, decentralization, inclusions, and governance, present challenges to the implementation of APP. Considering the successes and challenges of APP, the new comprehensive Agriculture Development Strategy (ADS) was formulated and implemented in the fiscal year 2016-2017 and will supersede the

existing Agriculture Perspective Plan (1995-2015), which is expected to tackle these challenges and improve overall productivity. The progress APP achieved during its implementation period is presented in Table 2.

Table 2. Summary of APP Targets and Achievements

<b>Items</b>	<b>Targets</b>	<b>Achievements</b>
<b>Inputs</b>		
Irrigation	1.44 million ha	1.23 million ha (2009)
Fertilizers	131 kg/ha Reform of Agriculture Inputs Company, Limited	102 kg/ha (2001) Partial reform, subsidy amount fluctuated. Illegal fertilizer imports supply 70% needs
Technology services	No targets, but aim is to support priorities	Limited responsiveness to farmer needs NARC priority on cereals, not high value products Government investment growth rate: Extension 8% vs research 1.2% (1996-2005) Devolution issues remain
Roads and power	6,200 km rural roads 9496 km of 400/220v distribution line	17,244 km of rural roads 15106 km of distribution line
Credit	US \$109.5 billion estimated need, 75% from Asian Development Bank, Nepal	ADB/N and small farmer development bank loans to agriculture about 50 billion
<b>Outputs</b>		
Livestock	45% of AGDP	29.4% in 2011 Private sector investing in dairy and poultry
High Value crops	5.8% of AGDP	11.8% (fruits and vegetables) in 2011
Agribusiness	No target, except institutional development and private investment	Commodity associations and Agro Enterprise Centres in Federation of Nepalese Chambers of Commerce and Industry formed
Forestry	2.3% of AGDP, established Community Forest User's Groups (CFUG)	8.6% of AGDP averaged 2001-2011 About 13,800 CFUGs established

Source: FAO, 2005a; Economic survey, 2014/15

## National Agriculture Policy

A National Agriculture Policy (NAP) was introduced in 2004 during the time APP was being implemented. The long-term vision of the policy was to bring improvement to the standard of living for rural people by transforming the subsistence-oriented farming system into a commercial and competitive one. The goal of the NAP is to contribute to food security and poverty alleviation. The NAP divides farmers into two groups: small farmers (those having less than one hectare of land) and large farmers (those having more than one hectare of land). Additionally, preference is given to small farmers through facilities in credit and other resources. The NAP is participatory and strives to ensure involvement of all relevant stakeholders (village, district, region, or nation) in the process of formulating, monitoring, and evaluating plans connected with the agriculture sector. The objectives and policies for achieving the objectives of NAP are outlined in the table below.

Table 3. NAP (2004) Objectives and Policy Measures

Investment Areas	Required Policy Interventions/Measures	Desired Outcomes
1.1. Identify and develop priority areas of agriculture	<ul style="list-style-type: none"> <li>• Develop policy on development, Extension, and utilization of appropriate agriculture technology.</li> <li>• Develop pockets of high-value agricultural products.</li> <li>• Assign competent local bodies with the task of formulating, implementing, and monitoring agricultural plans suitable to a particular region.</li> <li>• Develop and strengthen National Agriculture Research Center capable of operating survey/surveillance and laboratory services for diagnosis of livestock diseases, soil analysis, seed certification, and crop protection and for providing capacity development training to entrepreneurs, business persons, cooperative workers, and agricultural activity workers.</li> </ul>	Increase agriculture production and productivity.
1.2. Attract private and foreign investments in agriculture	<ul style="list-style-type: none"> <li>• Set up processes to arrange easy and convenient credit for investment in agriculture.</li> <li>• Create tax deductions for institutes involved in agriculture research.</li> <li>• Ensure smooth supply of main production inputs, such as seeds, fertilizers, livestock, will be guaranteed.</li> </ul>	
1.3. Capacity building and promotion of technical manpower	<ul style="list-style-type: none"> <li>• Conduct farmers' training to improve the efficiency of farmers at the local level.</li> <li>• Establish of technical institutes for producing technical human resources in agriculture.</li> <li>• Conduct mobile training programs in villages and households and encourage the participation of farmers up to 50% in such training.</li> </ul>	
1.4. Access of land to poor and marginal farmers having less than half hectare of land.	<ul style="list-style-type: none"> <li>• Develop a policy of access to land for the landless, marginal, and small farmers by placing legal ceiling on land holdings and progressive tax system.</li> <li>• Establish land bank to provide credit facility to the target groups at a special concession rate.</li> <li>• Develop plan to distribute marginal land, pastures degraded forests, and waste public lands to the target farmers to use as a cultivable land.</li> </ul>	Special facility to poor and marginalized farmers having less than half a hectare of land.

---

	<ul style="list-style-type: none"> <li>• Develop policy to provide government subsidies on priority basis by identifying areas and groups facing a risk from a view point of food security.</li> </ul>	
1.5. Develop agricultural pocket areas	<ul style="list-style-type: none"> <li>• Develop agricultural production pockets and arrangement of technological and technical services, irrigation, rural electrification, and marketing arrangements</li> <li>• Create provisions for livestock and crops insurance, and extension of livestock insurance programs.</li> </ul>	Development of commercial and competitive farming system
1.6. Capacity building and technical manpower	<ul style="list-style-type: none"> <li>• Develop capacity building enterprise promotion training programs and agricultural training programs.</li> </ul>	
1.7. Conservation of biodiversity	<ul style="list-style-type: none"> <li>• Establish a policy for developing gene banks and in situ conservation in order to conserve biodiversity. Promote the production and use of organic fertilizers.</li> <li>• Promote conservation-oriented farming system by managing watersheds and controlling erosion of soil by rivers on the basis of local participation.</li> </ul>	Conservation, promotion, and utilization of natural resources and the environment

---

Source: MOAD, 2014

### **Agro-Business Promotion Policy (ABPP), 2006**

The Ministry of Agriculture and Cooperatives (MoAC) introduced Agri-business Promotion Policy in 2006 with an objective of diversification, commercialization, and promotion of agriculture sector by encouraging private sector involvement in commercial farming. The policy aims to reduce poverty by encouraging production of market-oriented and competitive agro-products and promoting internal and external markets. This policy was prepared to complement the National Agriculture Policy (2004) by emphasizing business service centers establishment for quality agriculture inputs and services. Partnership between the private sector and GoN has been emphasized for the export of quality goods. The policy prioritizes infrastructure development as a cornerstone for commercialization of agro-products and promotes internal and external markets. The objectives and policies for achieving the objectives of ABPP are outlined in Table 4.

Table 4. Agri-Business Promotion Policy and Objectives

Objectives	Policies
<ol style="list-style-type: none"> <li>1. To help in production of market-oriented and competitive agro-products</li> <li>2. To develop Nepalese agriculture industry and promote internal and external markets</li> <li>3. To reduce poverty through commercialization of agriculture</li> </ol>	<ul style="list-style-type: none"> <li>• High priority on diversification, modernization, commercialization, and promotion of agriculture sector.</li> <li>• Supports the important role of private sector to promote commercial farming and for transforming agriculture from the subsistence to the commercial form.</li> <li>• Puts emphasis on infrastructure development as a cornerstone for commercialization and emphasizes establishing business service centers for quality agriculture inputs and services.</li> <li>• Puts emphasis on special economic zones for agro-industry development- commercial, organic and export areas.</li> <li>• Puts emphasis on promoting a partnership approach between government and private sector for export of quality goods and market network.</li> <li>• Establishes agribusiness service centers for quality agriculture inputs and services infrastructure development for processing and marketing as a foundation for commercialization and diversification.</li> <li>• Creates a provision for a 25% discount on electricity charge for the first ten years from industry establishment.</li> <li>• Provision to treat agribusiness projects as a collateral for loans.</li> <li>• Supports development of market and processing facilities under public private partnership.</li> <li>• Strengthens agricultural information (statistics and market information).</li> </ul>

Source: MOAD, 2014

### Dairy Development Policy, 2008

Nepal's dairy subsector shares more than 60% of the livestock sector's contribution to the GDP. The annual production of milk is 1.35 million metric tons (MT) per year. Buffaloes contribute more than two-thirds of the total milk production and the remainder is from cows. Only about 13% of the total cattle population and 26% of the buffaloes (1.19 million) in the country are in milking condition. The Nepal dairy industry is dominated by a smallholder milk production system. Nearly 125,000 farm families are engaged in milk production and are organized in about 1,500 primary cooperatives throughout the country (FAO, 2010).

The Dairy Development Policy, the main document guiding the industry, was designed with an objective to increase milk production and productivity and was formulated to align with the preceding agricultural policies: APP (1995-2015), NAP 2004, and the ABPP 2006. This policy aims at extending milk collection by arranging proper transportation while establishing dairy processing industries. The policy has long-term strategies to substitute dairy imports, to promote the export of dairy products, and to make milk and dairy products easily available to the consumers through quality improvement and regulation (FAO, 2010). The GoN has a policy to attract private sector investments in the dairy sector by improving the access for private sectors to institutional credit and through insurance coverage of the dairy industry.



Currently, Dairy Development Cooperation (DDC), a state-owned dairy corporation, fixes the price of milk in Nepal, largely driven by demand for and supply of milk. This does not take into account the production costs of dairy farmers and as a result, farmers may get a price that is lower than production costs. Additionally, the poor quality of raw milk, subsistence level, and scattered milk production with no commercial orientation are other issues that need addressing through appropriate policy for the development of dairy industry in the country.

Table 5. Dairy Development Policy Interventions to Develop Nepal’s Dairy Sector

<b>Investment Areas</b>	<b>Required Policy Interventions/Measures</b>	<b>Desired Outcomes</b>
1. Dairy cattle improvement	<ul style="list-style-type: none"> <li>• Mobilization of cooperatives, groups, and private enterprises for establishing resources center for breed improvement, conservation of native germplasm.</li> <li>• Provision of effective veterinary services.</li> <li>• Promotion of banks and other financial institutions for easy and convenient credit to dairy farmers.</li> <li>• Extension of milk chilling centers into rural areas and the development of transportation resources for expanding the collection of milk.</li> </ul>	Increase production and productivity of milk in the rural areas.
2. Improvement of feed and animal management	<ul style="list-style-type: none"> <li>• Generation of appropriate animal feeding, breeding, and grass harvesting technology for milk production throughout the year.</li> </ul>	
3. Attraction of private sector investment in milk collection, transportation, and processing of dairy products	<ul style="list-style-type: none"> <li>• Reduction of electricity tariffs for milk chilling center and dairy processing industries.</li> <li>• Provide concession in custom duty for National Dairy Development Board approved dairy machinery and equipment</li> <li>• Create provisions for making the movement of vehicles for milk transportation and prioritizing essential service</li> <li>• Develop tax exemptions for research and development in dairy technology</li> <li>• Provide credit opportunities and technical support for enhancing capacity for the production of good quality, modern, and traditional dairy products</li> <li>• Develop capacity for dairy cooperatives and the private sector to produce Nepalese identity products like Yak cheese.</li> </ul>	The extension of milk collection, transportation, and processing industries by making production of milk and dairy products commercial and competitive.
4. Capacity building and technical training in dairy industry	<ul style="list-style-type: none"> <li>• Establish dairy institutes and training centers.</li> <li>• Encourage and support research and development of appropriate dairy technology for milking products, processing, and marketing.</li> </ul>	

5. Appropriate pricing of milk and milk products	<ul style="list-style-type: none"> <li>• Develop free market policies</li> <li>• Disseminate information on price, demand, and supply of milk products.</li> <li>• Complete exemption of income tax for dairy industries that fully utilizes milk and dairy products produced locally.</li> </ul>	The substitution of the import of dairy products through product diversification and development of milk and dairy products as exportable commodities.
6. Promote exportation of dairy products	<ul style="list-style-type: none"> <li>• Remove bilateral and regional tariff and nontariff barriers for making exportation of milk comfortable.</li> </ul>	
7. Promote consumption habit of milk and dairy products	<ul style="list-style-type: none"> <li>• Develop consumer-targeted public awareness programs.</li> <li>• Regularly monitor the marketing of milk and dairy products to improve the welfare of consumers.</li> <li>• Implement milk collection and processing code of practices at milk chilling centers and dairy processing factories.</li> <li>• Arrange and strengthen the capacity of laboratories for ensuring quality of milk and dairy products.</li> </ul>	To make milk and dairy products easily available to consumers through quality improvement and regulation.

Source: MOAD, 2014

### The National Breeding Policy, 2011

Nepal signed the agreements of New Earth Summit 1992 on livestock genetic resource conservation and improvement which states that every country has to develop a policy and strategy of conservation and improvement of indigenous livestock genetic resources. As a result, in 1998, Nepal introduced a conservation of livestock and poultry and breeding policy. However, due to lack of proper provisions in the policy, the agreements of conservation of genetic resources and biodiversity are not fully implemented and many indigenous germplasm are in danger of extinction. To address the need for effective conservation and genetic development, the GoN introduced the National Breeding Policy in 2011. This new policy has identified following investment areas to achieve its objectives of food and nutrition security through improving the production and productivity of livestock.

Table 6. National Breeding Policy Interventions and Desired Outcomes

Investment Areas	Required Policy Interventions/Measures	Desired Outcomes
1. Genetic improvement of livestock and poultry	<ul style="list-style-type: none"> <li>• Identification, development, and extension of suitable breeds of livestock and poultry for suitability of different geographical environment and resources.</li> <li>• Development of livestock and poultry resource center through public private partnerships.</li> </ul>	Improve the situation of food security and nutrition through the qualitative and quantitative increase of production and productivity of livestock and their products.
2. Capacity building and technical manpower	<ul style="list-style-type: none"> <li>• Develop research and implementation programs for the promotion of high value commodities, such as domestic species, deer, wild pigs, and forest fowl (kalij).</li> </ul>	

Source: MOAD, 2014

## Agriculture Development Strategy

The Agriculture Development Strategy (ADS 2015-2035) is a comprehensive long term strategy prepared by the GoN that will replace the existing APP, which started in 1995 and ended in 2015. The ADS was built on the lessons learned from APP.

ADS was initiated by the GoN with technical and financial support from ADB and eleven other development partners, such as USAID, FAO, and World Bank. ADS is a comprehensive long-term strategy relating to agriculture sector in the country. ADS will be implemented from fiscal year 2016/2017 and will guide the transformation of agriculture over next 20 years. The vision of the ADS plan is to form a self-reliant, sustainable, competitive, and inclusive agricultural sector that drives economic growth and contributes to improved livelihoods and food and nutrition security, which will lead to food sovereignty (ADS, 2014). ADS plans to achieve its vision through four strategic components related to governance, productivity, profitable commercialization, and competitiveness while promoting inclusiveness, sustainability, and development of the private sector (ADS, 2014). ADS also has plans and programs to increase the labor and land productivity while promoting exports. Importantly, ADS will consider the agricultural sector in its complexity, which encompasses not only the production sectors (e.g., crops, livestock, fisheries, forestry) but also the processing sector, trade, and other services (e.g., storage, transportation and logistics, finance, marketing, research, Extension). The ADS proposes to boost the average annual growth rate for the agricultural sector from 3% to 5% and to increase land productivity from \$1,600 to \$5,000 per hectare (ADS, 2014). It also aims to increase labor productivity from \$800 to \$2,000 per worker and to increase farm exports from \$250 million to \$1.6 billion. ADS plans also call for increasing year-round irrigation coverage to 80% from the current 18%. One of the program's most ambitious targets is to decrease poverty by 50% in less than 10 years through an agriculture-led economy. Table 7 outlines the expected outputs and outcomes of ADS 2015-2035.

Table 7. Expected Outputs and Outcomes of ADS

<b>Outcome</b>	<b>No.</b>	<b>Output</b>
1.Improved Governance	1.1	Credibility of policy commitment.
	1.2	Improved coordination among institutions involved in the ADS implementation
	1.3	Integrated planning.
	1.4	Effective implementation support.
	1.5	Mechanisms established for gender equality and social and geographic inclusion in the ADS.
	1.6	Timely and effective monitoring and evaluation of the ADS.
	1.7	Mechanisms established for participation of farmers and value chain actors in the planning, implementation, and monitoring of the ADS (e.g., Farmers' Commission).
	1.8	Enhanced capacity of key institutions involved in ADS coordination and implementation.
	1.9	Improved food and nutrition security of the most disadvantaged groups and rights to food.
2.Higher Productivity	1.1	Performance-based management systems linked with rewards established.
	2.1	A decentralized extension system responsive to farmers and agro-enterprises' needs.
	2.2	A decentralized research system responsive to farmers and agro-enterprises' needs.
	2.3	A strengthened agricultural education system.
	2.4	A farming sector composed of adequately sized farms that use land efficiently and sustainably
	2.5	Irrigated area expanded equitably and viably, and improved irrigation efficiency and management.

---

2.6	Timely access to quality agricultural inputs at affordable price. Effective implementation of existing seed policies including Seed Vision 2013-2025 through sufficient investment in resources and capacity building, resulting in an improved and decentralized seed system providing timely access to quality seed at affordable price.
2.7	A pragmatic solution to fertilizer supply that is acceptable in the short-term, clearly indicates a strategy for the medium and long term, and aims at improving productivity.
2.8	A variety of improved animal breeds appropriate for the Nepal farming systems conditions are available to farmers.
2.9	A range of mechanization options accessible to farmers. Improved resilience of farmers to climate change, disasters, price volatility and other shocks.
2.11	Sustainable farming, good agricultural practices (GAP), good veterinary animal husbandry practice (GVAHP) are established and adopted.
2.12	Subsistence production based forestry is developed into competitive, agriculture friendly and inclusive forest management practice, with a holistic and community based landscape approach to natural resource management and livelihoods improvement.
2.13	

---

3. Profitable	
Commercialization	3.1 Improved investment climate for agricultural commercialization.
	3.2 Contractual arrangements for commercial agriculture.
	3.3 Tax policy that supports an efficient commercial agricultural sector. A variety of competitive and demand-driven financial and agricultural insurance products.
	3.4 Competitive agricultural value chains that increase value added and benefits to smallholder farmers and agro-enterprises.
	3.5 Rural roads network expanded.
	3.6

---

Source: ADS, 2014

### **Vision of Ministry of Livestock Development**

The vision of the newly formed (2015) Ministry of Livestock Development (MoLD) is “Food Sovereign and Prosperous Nepal through Sustainable Livestock Development.” Its mission is stated as “Food and Nutrition Security through Sustainable Livestock Production for Higher Economic Growth” (MoLD, trans. 2016). A brief summary on the objectives and policies of the MoLD in the livestock sector is outlined in the following section (MoLD, trans. 2016).

#### *Objectives*

1. To make the country self-sufficient in animal products by transforming traditional and subsistence livestock farming into a commercial and competitive one.
2. To provide technical services, improved breed and feeds, and veterinary services to livestock farmers, community, co-operatives, and livestock entrepreneurs through a well-coordinated integrated channel.
3. To reduce child malnutrition and improve food and nutrition security by making Nepal independent in milk, meat, eggs, and other animal source foods.
4. To contribute to the national economy by encouraging women and youth to become involved in livestock production, processing, management, and marketing.
5. To contribute to increases in hygienic and wholesome livestock and livestock products by preventing, controlling, and eradicating diseases that create economic and public health challenges.

#### *Planned activities*

1. Initiate realistic and fact-based programs in year 2016/17 in order to make Nepal independent in milk, meat, and eggs within one year, two years and three years, respectively.
2. Increase production and productivity of the livestock sector and declare certain regions of the country independent in livestock and livestock products.
3. Solve the problem of the “milk holiday” in country.
  - Develop arrangements to buy surplus milk from farmers during flush season and convert milk into skimmed milk powder and distribute it in lean season.
  - Improve the capacity of Biratnagar Milk Supply scheme (Eastern Nepal) to produce three tons per day skimmed milk powder to 6 tons per day in the year 2016/17.
4. Prepare and develop a 10-year National Dairy Development Plan and execute it within a fiscal year 2016/17.
5. Develop a National Dairy Development Board as a think tank in policy making to identify problems and potentials for dairy sector of Nepal.
6. Improve the capacity building of dairy cooperatives and farmers in milk collection processing and marketing.
7. Protect the health and welfare of the consumers through regular monitoring of dairy and slaughterhouses.
8. Develop breed improvement programs for increased productivity through artificial insemination. Double the number of improved breeds in cows, buffaloes, and goats. Improve the capacity of Lahan, Pokhara, and Nepalganj liquid nitrogen production plan.
9. Improve vaccine production for diseases like FMD, PPR, rabies, and fowl pox. These diseases are main hindrances for livestock development, production of hygienic animal products, and export of Nepalese livestock products.
10. Double the vaccine dose of rabies from the present 50,000 doses to 100,000 doses within the fiscal year of 2016/17.

### Literature Cited

- ADS. 2014. Agriculture Development Strategy. Ministry of Agricultural Development. Singhdurbar, Kathmandu, Nepal. Summary Document. (Accessed 01 May 2016.)
- APP. 1995. Agriculture Perspective Plan, National Planning Commission, His Majesty Governments of Nepal. Summary Document. (Accessed 01 February 2016.)
- CBS. 2013. Central Bureau of Statistics, National Planning Commission Secretariat, Thapathali, Kathmandu. Statistical year Book of Nepal. (Accessed 10 February 2016.)
- Economic Survey. 2014. Government of Nepal, Ministry of Finance. Annual Technical Report. . <http://www.grs.com.np/uploads/2014/07.Economic-survey-FY-2070-71.pdf> (Accessed 15 February 2016.)
- FAO. 2010. Food and Agriculture Organization of the United States. Dairy Sector Study of Nepal. (Accessed 27 February 2016.)
- IFPRI. 2013. International Food Policy and Research Institute. Report. <https://www.ifpri.org/> (Accessed 27 April 2016.)
- MoAD. 2014. Ministry of Agricultural Development, Agribusiness Promotion and Statistics Division, Agri Statistics Section, Singhdurbar, Kathmandu Nepal. Statistical Information on Nepalese. (Accessed 10 February 2016.)
- MoLD. 2016. Ministry of Livestock Development. Commitment paper (Nepali). <http://www.mold.gov.np/uploads/files/pratibaddata.pdf> (Accessed 10 April 2016.)
- Nikku, B. R. 2015. Living through and responding to disasters: Multiple roles for Social Work. Social Work Education. 34(6):601-606.
- NPC. 2013. Approach paper to the Thirteenth plan (Fiscal Year 2012/13- 2015/16). National Planning Commission. Government of Nepal: Singhdurbar, Kathmandu, Nepal.
- Pradhanang, U.B.; Pradhanang, S.M.; Sthapit, A.; Krakauer, N.Y.; Jha, A., and Lakhankar, T. 2015. National Livestock Policy of Nepal: Needs and Opportunities. Agriculture. 5:103-131. doi:[10.3390/agriculture5010103](https://doi.org/10.3390/agriculture5010103)
- UNDP. 2014. United Nations Development Program. <http://hdr.undp.org/en/countries/profiles/NPL>
- Wikipedia 2016. Nepal. <https://en.wikipedia.org/wiki/Nepal> (Accessed 01 May 2016.)

## Appendix A

### Organization chart of the Government of Nepal policy agencies

