DRAFT REPORT

ON

WORLDWIDE CERTIFIED CATTLE FARMING

SYSTEM ANALYSIS

FOR

XIENG KHOUANG PROVINCE

BY

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SMALL SCALE AGRO-ENTERPRISE DEVEOLOPMENT

FOR THE UPLANDS (SADU)

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ACRONYMS

ADB	-	Asian Development Bank
ACIAR	-	Australian Center for International Agricultural Research
CIAT	-	Centro Internacional de Agricultura Tropical
DAFEO	-	District Agriculture and Forestry Extension Office
DLD	-	Department of Land Development
DLF	-	Department of Livestock and Fisheries
EU	-	European Union
FLSP	-	Forages and Livestock Systems Project
IFAD	-	International Fund for Agricultural Development
ILRI	-	International Livestock Research Institute
NGO		Non-Government Organization
UNCTAD	-	United National Conference on Trade and Development
LNCCI	-	Lao National Chamber of Commerce and Industry
SME	-	Small and Medium Enterprise
MIS	-	Management Information System
SMEDO	-	SME Development Office
PROFIL	-	Promotion Organic Farming in Lao PDR
LLSP	-	Livelihood and Livestock Systems Project
MAF	-	Ministry of Agriculture and Forestry
NAFES	-	National Agricultural and Forestry Extension Service
NAFRI	-	National Agriculture and Forestry Research Institute
MOC		Ministry of Ecommerce
PAFO	-	Provincial Agriculture and Forestry Office
PLDP	-	Participatory Livestock Development Project
PPTA	-	Participatory Livestock Development Project
PRONAE	-	Program National Agro-Ecology
GDP	-	Gross Domestic Product
JICA	-	Japan International Cooperation Agency
STEA	-	Scientific Technology and Environment Agency
LDC	-	Least Development Country
UNDP	-	United Nations Development Program
WTO	-	World Trade Organization
IFAOM	-	International Food Agriculture Organization Movement
TA	-	Technical assistance
NES	-	National Export Strategy
UNIDO	-	United Nations Industry Development Organization
GATT	-	General Agreement on Tariff and Trade

EXECUTIVE SUMMARY

The small-scale agro-enterprise development Upland (SADU) project has been to examine the market-chain for cattle and buffalo in Xieng Khouang province and piloted a number of other initiatives necessary to support the development of small holders of livestock production.

In other to reach such a goal, local consultant has been invited to study the classification of beef product with its higher demand and price in global markets. The study indicates that there are 4 distinct types of beef classification such as Conventional, chemical free, grass fed and organic beef. in which organic beef is demanded and reaches higher prices in global market from now until the year 2010. However, the organic beef product requires higher standard and certification than other beef classification. Lao country especially Xieng Khouang province has to take dedication and longer time to shift the current status of cattle production system to be organic because of unsuitable land condition, less main supply of chemical free inputs, no organic certifier and etc…

However, based on the study of grass fed beef with its higher price fixed in global market, the field trip study of cattle production system in Xieng Khouang province and data supplied by CIAT, local consultant suggests that there is a high potential to shift XK cattle production system to become the grass-fed cattle production in order to enhance farm-gate prices. The reasons that XK cattle production system still initiates applying chemical substances namely chemical fertilizers, insecticide, pesticide are not widely applied into the farms. By the way, there are large and proper pasture area together with appropriate climate conducive to grass-fed cattle farming which cattle must be 100% grass fed .

Ultimately, local consultant analyzes the cattle production systems in Xieng Khuaong province gives the recommendation as follows:

- Starting up the grass-fed cattle certification process in Xieng Khouang Province in order to meet demand and higher prices in global markets.
- Providing the training program on grass-fed beef certification to the farmers in Xieng Khouang Province.
- Registering for being membership of American Grassfed Association (AGA) in order to get their own certification or contacting other international certifier like IFOAM to certify the production system in Xieng Khouang Province.
- Convince the foreign investors to establishing the sanitary slaughter house with international standard in Xieng Khouang Province.
- Developing bio fertilizers from natural resources for sustainable use. It is also recommended that SADU survey bio fertilizers (Guano) sources in Nong hat district, Xieng Khouang Province. Currently, the cave guano exist is being harvested in Pha louang cave in Muong Feauong district and Ting cave in Luang Prabang Province in order to fertilize the pasture and conserve the soil fertility. (This idea is also to conserve the bad in cave, but utilize their own dung).
- Building up capacity of demand-supply by clustering among the farmers to increase of grass fed cattle production in order to convince the foreign investors.

Chapter I

Concept of beef industry

I. Overview of global beef market :

Since the Global Population has been growing up rapidly, food industry seems the major concern. Agriculture is the greatest share in the food industry, especially livestock production, in which beef products are increasingly required in the worldwide markets. USA seems the big exporter of beef and meat variety products. During January to December, 2003 the volume of beef and meat variety products exports increased to 3.45% and 20.54% in volume compared to exports during the same time in 2002. The total export of US beef during 2003 was at 1.276 million metric tons valued at almost $3.9 billion. The main export markets of US beef is Japan, Mexico, the Republic of South Korea, and Canada accounted for nearly 83 percent of export tonnage and 88 percent of the export value. Japan was regarded as the top export market for beef and beef variety on both a volume and value basis in 2003. South Korea is an excellent market for U.S. beef variety meats. In 2003, the U.S exported 33 percent more beef variety meats on a volume basis and 69 percent more on a value basis to South Korea than in 2002[1].

1. Study case for U.S beef export market[2]

Top markets for U.S. beef (accounting for over 90 percent of total beef exports)								
	2002		2003		2004		2005	
	Volume (Million lbs. carcass weight)	Value ($million)	Volume (Million lbs. carcass weight)	Value ($million)	Volume (Million lbs. carcass weight)	Value ($million)	Volume (Million lbs. carcass weight)	Value ($million)
Japan	771	848	920	1,173	12	13	17	23
Mexico	629	647	589	640	334	399	464	578
South Korea	597	614	588	761	1	1	1	1
Canada	241	286	226	316	56	101	106	196

Note: Total beef exports include several processed meat categories, each of which is assumed to contain a specific portion of beef.

U.S Beef exports are expected to continue competitive in EU market. The prediction of beef consumption in EU is expected to be largely unchanged in 2006, with the demand again exceeding supply. The UK remains its largest single destination, receiving exports of 260,000 tons or almost 50 percent of Irish beef production. French, Italy and Netherlands are the country's biggest customers, with the continental EU accounting for about 40 percent of the country's beef exports. The Commission also forecasts that in the EU beef market, consumption will remain higher than domestic production over the period to 2012, with increasing imports from non-EU countries expected to fill the need[3].

In 2004, Japan's imports have forecasted down 36% from 2003 at 520.000 tons. Japan will complete with Korea for beef from Australia and New Zealand unless additional North America beef is allowed into these markets. The need of imported beef in Japan will be

[1] Based on beef export report by National Cattlemen's Beef Association. U.S Meat Export Federation. http://www.usmef.org.
[2] Background Statistics: U.S. Beef and Cattle Industry, 2002 - 2005 by USDA united States Department of Agriculture, Economic Research Service, The Economics of Food, Farming, Natural Resources, and Rural America. webadmin@ers.usda.gov, updated date: August 11, 2006.
[3] Ireland dairy and beef supplies forge into EU markets (14.06.2006). http://www.litfood-fair .com/index.php?content=pages&Ing=It&page_id=71&news_id=1325

continued from BSE countries in which their animals have been tested for BSE and specified risk materials (SRMs) have been removed regardless of age[4].

Australia is the greatest export country of beef products to Japan. Australian beef export volumes rose to nearly 41 percent to 393,000 tones in 2004 and by another 3 percent in 2005. In 2005, Japan imported around 405,000 tones of beef from Australia with an export value of nearly $2.2 billion. In both 2004 and 2005, Australia exports accounted for between 85 and 90 percent of total Japanese beef imports. In 2004, the number of Australian cattle on feed destined for Japan increased by around 27 percent, to 1.6 million. In 2005 this increased by a further 19 percent to total 1.9 million[5].

II. Classification of beef in Global Market:

Besides the beef derived from the conventional farm, beef exported to worldwide market is classified as follows:

1. Organic beef:

1.1. Definition of organic beef:

Organic beef must be derived from cattle fed by 100 percent organic feed. Cattle must be raised in the open pasture in which the forage crops must be grown without the use of conventional pesticides, as well as artificial fertilizers or sewage sludge. Cattle must be reared without the daily use of antibiotics, growth hormones, the use of a wide range of food additives and food processed without ionizing radiation. It is produced on all levels without the use of genetically modified organisms[6].

1.2. Benefits of organics:

Based on Promotion of organic farming and marketing in Lao PDR (PROFIL in Laos), going organics consists of following benefits[7]:

1.2.1. Soil fertility is strongly conserved and maintained
1.2.2. Organic agriculture provides less pollution of water.
1.2.3. Non renewable external inputs and energy are not utilized.
1.2.4. Chemical fertilizers or other chemical substances, pesticides or insecticides, antibiotics, synthetic vitamins, growth hormones which cause the risk to health damage are prohibited.
1.2.5. Organic agriculture protects the biodiversity in the nature.
1.2.6. Organic product provides better product quality (taste, storage, properties).

Ysanne Spevack, Editor OrganicFood.co.uk also says that[8]:

1.2.7. Fresh organic produce contains on average 50% more vitamins, minerals, enzymes and other micro-nutrients than conventional farmed products.
1.2.8. Doing organic agriculture is the only practical way to avoid genetically modified (GM) food.
1.2.9. Conventional farming can severely damage farm workers' health.

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[4] The report of World Beef Overview by FAS online. http://www.fas.usda.gov/info/circular/2004/04-03 LP/beefoverview.html
[5] Meat outlook to 2010-11. prospects for beef and veal, pigs and poultry by Frank Drum, Andrew Dickson and John Hogan. http://www.google.com/Asean Meat market.
[6] Organic food From Wikipedia, the free encyclopedia and National Cattlemen's Beef Association.htm
[7] Organic agriculture in the Lao PDR by PROFIL. www.laoprofil.org
[8] 10 Top Reasons to Go Organic by Ysanne Spevack, Editor OrganicFood.co.uk.

2. Grass fed beef:

2.1. Definition of organic beef:

Grass fed beef does not have the same strict interpretation as organic does. Based on the USDA Food Safety Inspection Service (FSIS), grass fed beef must be derived from cattle that have grazed in pastures their entire lives. The pastures where cattle are raised are not allowed to use chemical fertilizers. Cattle must not be also have the application of antibiotics or growth hormones. All grass fed beef must not contain any artificial flavor or flavoring, coloring ingredient, chemical preservative, or other artificial or synthetic ingredient.[9].

2.2. Benefits of grass fed beef:

According to Natural Grass Fed Beef by American Grass Fed Beef.Com[10],

2.2.1. Grass fed beef is low in harmful fats, but high in heart healthy Omega Fatty Acids;
2.2.2. Grass fed beef is free of hormones, steroids, antibiotics and other chemical substances that will be able to damage people's health;
2.2.3. Irradiation and GMO are absolutely eliminated from the grass fed beef;
2.2.4. Grass fed cattle farming emphasizes on soil conservation and biodiversity protection; in which chemical fertilizers, pesticides or insecticides and other growth hormone are not fed to animals.

3. Chemical free beef:

3.1. Definition of Chemical free beef:

Chemical free beef must be derived from cattle finished by 80% grain (cereal grain is desirable) with out using any chemical substances, antibiotics and growth hormone.

3.2. Benefits of Chemical free beef:

3.2.1. Going chemical free beef is the way that customers can avoid eating chemical food.
3.2.3. Chemical free supports the soil fertility, soil conservation and environment protection.

III. Standard and Certification processes of beef classification:

1. Organic beef:

Organic beef is required to guarantee its quality based on the following steps:

1.1. Standards:

Organic beef standard needs particular set of rules and requirements for production and post harvesting process based on the basic standard of the International Federation of Organic Agriculture Movement (IFOAM).

Organic Beef Standard should not be defined its quality status (e.g. level of pesticide residues) in the final products, but it should be defined by the way of its production and handling from producer to customer.

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[9] May2006, Natural beef profile overview by Reginald Clause, Value-added agriculture specialist, AgMRC, Lowa State University, rclause@iastate.edu. http://www.agmrc.org/agmrc/commodity/livestock/beef/naturalbeefprofile.htm and National Cattlemen's Beef Association.htm

[10] http://www.American Grass Fed Beef .com

1.2. Certification:

Certification is a process in which a certification body assesses a farm and ensures in writing that specified standards for production and processing are met. Certification of organic beef requires two following steps:

Certification process is based on the following procedures:

Usual visits by the inspector to verify that production and handling are practiced in accordance with the standard (see above), Inspector submits his/her findings to the certification body. The certification body compare the results of the inspection with the requirements of the organic standards. Ultimately, certification committee decides whether certification may be granted or not.

Certified organic beef strictly emphasizes on:

- **Feed Requirements:**

All feed sources must be 100 % certified organic, without exception. Harvesting and processing must also occur in certified facilities. Certified organic cereal grain is also permitted. It is recommended that cattle should be grazing on the open pasture area where chemical fertilizers are not applied.

Stock Replenishment

Beef to be sold as organic must be maintained under continuous organic management. Non-organic breeder stock may be brought into an organic operation method. In case of pregnant breeding stock, she has to be brought into the organic operation prior to the third quarter. There are no restrictions on male breeding stock and the practice of artificial insemination is discouraged.

- **Animal Health Care Practices:**

Producers of organic livestock should establish, maintain and document their preventive health care practices. Particularly, infectious animal must receive any treatments. If the prohibited drug is used, the animal must be identified and sold into non-organic markets. Ruthless selection of chronic problem cattle is the best way to develop a healthy herd that is adapted to a particular farm.

A key ingredient in preventive health care is the reduction of stress. Animals should receive housing, pasture and sanitation conditions that minimize the occurrence and spread of disease. Conditions must also provide for exercise, freedom of movement and reduction of stress that is appropriate to the species.

Certified organic cattle must receive the double size of pasture area where the conventional cattle are raised.

- **Vaccinations and Antibiotics:**

The use of certain vaccinations is permitted; however, antibiotics are prohibited in order to maintain organic status (Organics stresses on the primary healthcare and sanitation of the animals, not treatment).

- **Pesticides and Insecticides:**

Any kinds of pesticides and insecticides for pest and weed control are strongly prohibited.

- **Parasite Control:**

A common method of parasite control is the use of diatomaceous earth. This product can be used as a feed ingredient and is claimed to be effective for this purpose. Diatomaceous earth is also used externally as a dust for lice.

- **General Animal Husbandry:**

Producers should select types of livestock that are suitable to the management and facilities of their farms to minimize stress and disease potential. On-farm conditions should accommodate the natural behavior of the livestock. Access to the outdoors, shade and shelter must be provided. Excessive crowding of animals is prohibited. The space allotted per animal is generally twice that given animals in a non-organic environment.

- **Growth Hormones:**

The use of growth hormones is prohibited.

- **Genetically Modified Organism (GMO):**

Any methods of GMO is strongly banned in organic products.

- **Manure Management:**

Producers are required to manage manure in a manner that does not contribute to pollution of crops, soil or water by plant nutrients, heavy metals or pathogenic organisms. Processing and application should be such that nutrient recycling is optimized. Composting with effective micro organism (EM) is highly recommended and restrictions on the application of raw manure do exist. By the way, the manure left from soil fertilizer is recommended to produce the Bio-gas.

- **Soil Fertility Management[11]:**

Soil deficiencies and imbalance can be corrected by application of suitable amendments. Amendments commonly used by organic growers include:

a. lime - to increase pH; supply calcium.
b. dolomite - to increase pH; supply plus magnesium.
c. gypsum - to improve structure (especially salt affected); supply calcium plus sulfur.
d. rock phosphate (various forms), guano - to supply phosphorous.
e. sulphate of potash - to supply potassium and sulfur.
f. crushed mineral bearing rock - to supply potassium plus other minerals; and increase 'paramaganetism'.
g. calcified seaweed - to supply trace elements.
trace elements including natural chelating agents.
h. various formulated fertilizers - approved for use in organic systems.

Many of these inputs are typically made available to plants via the activity of soil organisms. Therefore, immediate plant response (common with highly soluble synthetic fertilizers) may not be evident and must be observed over time. Several smaller applications may be preferable to a single large application, particularly on light soils with buffering capacity. Economical and effective soil management can require a longer term view to build up soil fertility and balance.

- **Confinement:**

Cattle are not allowed to be confined and finished in the feedlot with non-organic certified feed. They must be grazing on the open pasture while they are waiting for the slaughter.

[11] Organic Beef Production Guidelines by Steven McCoy, Organic Farming Project, Agriculture Western Australia. http://www.rirdc.gov.au/reports/ORG/00-189.pdf

- **Record Keeping:**

There is third party inspection of the producer's operation, including Animals, facility and records. Ultimately, there is an inspection from the primary product to the finished product.

- **Packaging:**

When the good packaging also enhances sales, vacuumed packaging can provide superior product protection to hand wrapped[12]. Certification agencies promote recyclable, reduceable or reuseable packaging. Packaging and presentation of meat must focus on freshness and the wholesome taste appeal[13].

- **Labels and certification marks:**

Labels and certification marks are important marketing tools providing access to organic beef markets and help to achieve a better price compared to the conventional beef. Labeling is the final procedures of organic products certification. Laos does not have a certification body yet and producers or exporters have to use agencies from other countries.

At the present time, The Ministry of Agriculture and Forestry approved organic standards for Lao based on the basic standards of IFOAM[14].

1.3. Accreditation:

Accreditation is the formally written acknowledgement of certification and its quality control undertaken by authorized bodies at the national and international level to make sure that the inspection and certification are competent according to the organic standard[15].

2. Grass fed beef:

2.1. Certification Requirement[16]:

Based on American Grass fed Association (AGA) Updated Grazing American 2006, grass fed beef must be derived from the farm where producer emphasizes on:

- From birth to harvest, 100% Grass fed Cattle Beef must be derived from the cattle finished on forage pasture consisting of available and acceptable herbage, along with mother's milk. Grass fed beef comes from Certified Grass fed cattle received only herbaceous plant material and/or mothers milk (without confinement).
- Cereal grains, cereal by-products, cottonseed and cottonseed meal, and/or soybeans and soybean meal must not be fed any time of cattle's lives.
- Certified grass fed cattle can not be fed for extended periods in confinement or creep fed grain and/or starch supplements.
- Certified grass fed cattle must not be administered by any antibiotics or hormones (other than naturally occurring in grass fed forage) at any time during their originated.
- No synthetic vitamins and Mineral supplements containing any grain of starch shall not be fed.
- No growth hormones of any type may be administered in any fashion.
- Animals given hormones are not allowed to mingle with grass fed.

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[12] University of California, Sustainable Agriculture Research and Education Program. http://www.sarep.ucdavis.edu/grants/Reports/nader/THINK.HTM

[13] The Organic Meat Myth revealed opportunities for New Zealand Organic beef and lamb in Europe. http://www2.dpi.qld.gov.au/extra/pdf/organicmeatmyth.pdf.

[14] Based on Organic Agriculture in The Lao PDR by PROFIL in Laos.

[15] Based on Organic Agriculture in The Lao PDR by PROFIL in Laos.

[16] According to standard of American Grass fed Association.100% Grass fed Ruminant Program ~ Measuring, Standards and Requirements Updated at Grazing America 2006.http://americangrassfed.org/standards.htm

- Animals are not allowed to be in pens or other confined areas where vegetation, forage growth, crops, or post-harvest crop residues without grain. Said energy sources such as vegetation, et cetera shall be available for them to forage on, in an unconfined environment on a daily basis.
- Grass fed should not be finished in confinements for slaughter such as feed-lot situation where non grain products are substituted. Grass fed cattle must be raised on the pasture area while waiting for slaughter.
- Certified cattle can not be fed in confinement more than 30 days per calendar except the provision including roundups, sorting, transportation, and weaning of offspring. Extended winters, wet weather, drought and naturally occurring conditions (fire, flood, et cetera) are not also exempt from confinement.
- Certified grass fed cattle must be identified at the earliest opportunity following birth.
- Certified grass fed cattle must be traceable by written record through out their entire life from birth to harvest to the farm or ranch from which they originated.
- Certified grass fed cattle must be traceable to a signed written record from each sale or transport.
- All people with responsibilities for the AGA's 100% Grass fed Ruminant Livestock Program must have complete understanding of all program requirements.
- Complete records regarding AGA Certified Ruminant animals and supplemental feeds must be maintained.
- Packaging by vacuum sealed in clear plastic[17].

The following provisions are also attributed in grass fed certification (based on American Grass Fed Beef & Grocery Store Beef)[18]

Grass Fed Beef also emphasizes on:

- Restriction of chemical fertilizers, insecticide and natural rotation of the cattle is taken place in order to fertilize, refresh, the soil condition.
- Solar power is strongly recommended for healthy land and cows.
- Fertilize land with a long grass growing season.
- Chemical substances (e.g. sterile conditions and clean equipment used so treating the beef) are prohibited.
- For the dry beef, dry aging for 14 days with labor, storage expenses and the loss of 18 to 20 % of our beef. Only handful of U.S. grass fed beef operations go to this extreme.
- Grass fed steaks and roasts are flash frozen and vacuum sealed for convenience and safety, but is the most expensive packaging.

2.2. Assessment and Membership [19]:

- The annual cost for AGA Certified Producer Member, at this time, is $250 and it includes assessment for certification and regular producer benefits.
- The annual cost for an AGA Producer Member, at this time, is $100, and it is a separate type of membership from AGA Certified Producer Member; but a producer Member may upgrade to a Certified Producer Member by applying, paying the difference and going through the AGA certification process.

[17] Oklahoma Natural Beef. Skelton's Natural Beef, Roger and Jane Skelton, Rural Route 1, Box 25 A, Texhoma (Panhandle), 800.687.3821. Cypertfamilyfarm@juno.com http://www.cypertfamilyfarm.com/

[18] Based on the comparison of American Grass Fed Beef and Typical Grocery Store Beef. http://.americangrassfed.com/comparison.asp

[19] According to standard of American Grass fed Association
100% Grass fed Ruminant Program ~ Measuring, Standards and Requirements Updated at Grazing America 2006
http://americangrassfed.org/standards.htm

- Unless otherwise noted, annual is defined as a calendar year from January 1st through December 31st.

3. Chemical free beef:

3.1. Certification Requirement:

- Finishing ration consisting of up to 80% grain.
- No antibiotics for growth is fed to the cattle.
- Vaccination is permitted.
- Any kinds of antibiotics for growth and hormonal growth promotants are forbidden. GMO is strongly avoided.
- Synthetic vitamin and Mineral supplements containing any grain of starch are not allowed to feed cattle.
- Certification of livestock & processing facility and Labeling have to be practiced.

3.2. Record keeping:

- Record keeping is mandatory.

Worldwide beef production consists of the different certification. The following table indicates the summary of differences in major practices of beef certification system for both worldwide and Xieng Khouang Province.

IV. Summary of the differences in Major Production Practices for both global and Xieng Khouang system:

1. Summary of the differences in major beef production practices:

	Certified Organic	Certified Grass fed	Certified Chemical Free	Natural	Conventional	Cattle production System in Xieng Khouang Province
Feed	100% of feed is organic, could be grass-fed	100 % grass finished. Cereal grains, cereal by-products, cottonseed and cottonseed meal, and/or soybeans and soybean meal fed to cattle at any time of cattle's lives are prohibited.	Finishing ration consisting of up to 80% grain	May be Grass fed and grain finished	Finishing ration consisting of up to 80% grain	grass, legume, rice straw from non-certified organic field fed. Cereal grains are sometime fed to cattle
Antibiotics for treatment of disease	No	No	Yes, must keep records and withdrawal times doubled	Yes, must keep records	Yes, often recorded as in the "Quality Starter Here" Program	Yes
Antibiotics for growth	No	No	No	No	Yes	No
Hormonal growth promotants	No	No	No	No	Yes	No
GMO	No	No	No	No	Yes, for own purposes	No
Vaccinations	Yes, must keep records	Yes	Yes, must keep records	Yes, must keep records	Yes, often recorded	Yes
Parasite control	A common method of	Herbal method for	Herbal method for	Herbal method for	Chemical	Chemical antiseptics

	parasite control is the use of diatomaceous earth. This product can be used as a feed ingredient and is claimed to be effective for this purpose. Diatomaceous earth is also used externally as a dust for lice.	parasite control is recommended.	parasite control is recommended.	parasite control is recommended.	antiseptics are usually used to control parasite.	are usually used to control parasite.
Synthetic vitamin and Mineral supplements containing any grain of starch	No	No	No	No	Yes	Yes
Livestock handling	Recommended practices	Recommended practices	Recommended practices	Recommended practices	Recommended practices	Recommended practices
Days on feed	Longer	Longer	Slightly longer Calves – 200+ days	Longer	Yearlings – 60 to 100 days, calves – 170 - 210 days	Longer
Animal health care practice	A key ingredient in preventive health care is the reduction of stress. No chemical antibiotics are administered to infectious animals. Animals should receive housing, pasture and sanitation conditions that minimize the occurrence and spread of disease. Conditions must also provide for exercise, freedom of movement and reduction of stress that is	Cattle are not allowed to be confined at any time of their lives. No chemical antibiotics are administered to infectious animals. Animals should receive housing, pasture and sanitation conditions that minimize the occurrence and spread of disease. Conditions must also provide for exercise, freedom of	No chemical antibiotics are administered to infectious animals. Animals should receive housing, pasture and sanitation conditions that minimize the occurrence and spread of disease. Conditions must also provide for exercise, freedom of movement and	Animal are free for grazing in the natural pasture. No chemical antibiotics are administered to infectious animals.	Cattle are raised in the limited area and feedlot fed are usually practiced. Chemical antibiotics are administered to infectious animals.	Chemical antibiotics are initially administered to infectious animals. Animal are free for grazing in the improved pasture.

	appropriate to the species. Certified organic cattle must receive the double size of pasture area where the conventional cattle are raised.	movement and reduction of stress that is appropriate to the species.	reduction of stress that is appropriate to the species.			
Confinement of cattle	No	No	Yes, for their own purposes.	No	Cattle are usually confined for feedlot fed	occasionally
Stock Replenishment	Non-organic breeder stock may be brought into an organic operation method. In case of pregnant breeding stock, she has to be brought into the organic operation prior to the third quarter. There are no restrictions on male breeding stock and the practice of artificial insemination is discouraged.	Non-grass fed breeder stock may be brought into a grass fed operation method and there are no restrictions on male breeding stock and the practice of artificial insemination is discouraged.	There are no restrictions on male breeding stock and the practice of artificial insemination is discouraged.	No restriction of breeding stock. Natural insemination is recommended.	No restriction of breeding stock.	Native breeders are brought into the farm and cattle are free for natural breeding.
Soil fertility management.	Manure must be managed by recycling and back to enhance the soil fertility. Soil can be amended to increase or decrease pH concentration by applying substances mentioned in organic certification above.	Manure must be managed by recycling and back to enhance the soil fertility. Soil can be amended to increase or decrease pH concentration by applying substances mentioned in organic certification above	Manure must be managed by recycling and back to enhance the soil fertility. Soil can be amended to increase or decrease pH concentration by applying substances mentioned in organic certification above	Manure must be managed by recycling and back to enhance the soil fertility. Soil can be amended to increase or decrease pH concentration by applying substances mentioned in organic certification above	Chemical fertilizers is usually implied inland for increasing soil fertility.	Soil fertility improvement is conducted by applying chemical fertilizers (N-P-K). UXO is not certainly cleaned out.
Manure management	Manure must be managed by recycling and back to	Manure must be managed by recycling	Manure must be managed by recycling	Manure must be managed by	No	No

	enhance the soil fertility. Composting with effective micro organism (EM) and/or establishing the Bio-gas plant is strongly recommended since they are optimized to the environment.	and back to enhance the soil fertility. Composting with effective micro organism (EM) and/or establishing the Bio-gas plant is strongly recommended since they are optimized to the environment.	and back to enhance the soil fertility.	recycling and back to enhance the soil fertility.		
Clean energy	Yes	Yes, Solar power is strongly recommended for healthy land and cows.	Yes	Yes	No	Yes
Certification of livestock & processing facility and Labeling	Yes	Yes	Yes	No	No	No
Record keeping	Mandatory	Mandatory	Mandatory	Yes, for own purposes	Yes, for own purposes	Yes, for own purposes
Packaging	Vacuumed, recyclable, reduceable or reuseable packaging is recommended.	Vacuumed, recyclable, reduceable or reuseable packaging is recommended.	Vacuumed, recyclable, reduceable or reuseable packaging is recommended.	No	No	No

2. The key differences among organic, grass fed and free chemical free beef :

In conclusion, there differences among organic, grass fed and free chemical beef are as follows:

2.1 Organic beef:

- Certified organic-cattle can be fed by other 100% certified organic feed (stricter on quality control of these feed) and certified organic cattle have to be raised in double pasture area of conventional cattle.

2.2 Grass fed beef:

- Certified grass-fed cattle are not allowed to eat any kinds of additional feed, but they have to be finished by 100% grass fed.

2.3 Chemical free beef:

- Certified chemical-free cattle can be finished by 80% grain (cereal grain) and any kind of feed with out chemical substances.

V. International Certification Bodies:

1. Organic Certification Bodies:

IFOAM is considered to be the international certification body on organic products acceptable to the markets worldwide.

IFOAM contact:
IFOAM Head Office
Charles-de-Gaulle-Str. 5
53113 Bonn - Germany
headoffice@ifoam.org
Tel: +49 (0) 228 926 50-10
Fax: +49 (0) 228 926 50-99

International Organic Accreditation Service:
IOAS Head Office
A Non-profit Organization
40 1st Ave West, Suite 104, Dickinson, ND 58601 USA
Tel: (+1 701) 483 5504 Fax: (+ 701) 483 5508
Email Info@ioas.org

2 Grass-fed Certification Bodies:.

Grass fed beef should be certified by **American Grassfed Association(AGA).** The biggest beef exporters in the world like USA**,** Uruguay, Australia and the great importing beef markets like Japan, Hon Kong, South Korea and also Vietnam currently accept AGA standard.

AGA contact (USA):
For more information on the American Grassfed Association

phone us at 1-877-77GRASS (877-774-7277)
or use one of the links below:
Media inquiries……..Media Inquiry@americangrassfed.org
Producer…….Producer Inquiries@americangrassfed.org
Membership……...Membership@americangrassfed.org
1648 Gaylord Street ~ Denver. Co 80206
Phone: 877 – 77GRASS (774 – 7277) ~ Fax: 877 – 77GRASS ~
AGA@AMERICANGRASSFED.ORG

Chapter II

Worldwide Meat Market demand

I. Overview of worldwide organic market :

As the intensively farmed products have been still roaming into the markets worldwide, organic agriculture has convinced the conventional producers to make the transition because of higher profitable income in the markets and the reputation of healthy food and environmental preservation obtained from organic products. Organic agriculture is one of the currently growing industries and sustainable business that the producers through out the world deserve more profit through the certification process essential to access this market. The organics have reached almost 20 percent per year over the last 7 years[20]. The industry specialists say that such a growth will be gradually continuing. Also, according to the study carried out by the Organic Trade Association **(OTA)** and the survey of the industry leaders, organics trends to be prosperous and acknowledged by people worldwide by the year 2025[21]. It is believed that the more people care for their health, the more habitually organics will be consumed. The following table indicates the estimated growth of organic food beverage retail sale in the year 2010.

The estimated growth of organic food and beverages retail sales in 2010[22]

Country	Expected medium term growth rates (%)	Expected sales in 2010 (US $ m)
Germany	10-15	5,706 - 8,900
UK	25-30	9,313 - 13,786
Italy	15-20	4,046 - 6,192
France	15-20	3,034 - 4,644
Switzerland	15-20	1,719 - 2 631
Denmark	10-15	908 - 1,416
Austria	10-15	648 - 1,011
Netherland	10-20	584 - 1,393
Sweden	20-25	774 - 1,164
Other Europe	**10-15**	**778 - 1,214**
Sub-total (Europe)	**-**	**27,510 - 42,351**
USA	**15-20**	**32,364 - 49,534**
Japan	**10-15**	**778 - 1,214**
Australia	10-15	441 - 688
New Zealand	10-15	153 - 239
Argentina	10-15	52 - 81
China	10-15	31 - 49
Taiwan	10-15	26 - 40
Philippines	10-15	16 - 24
Total	15-20**	61,372 – 94,220
***Growth rate estimates for European Union member states are derived from ITC, 2001. Where unspecified, growth rates are assumed to range from 10 to 15 percent per annum. The 2010 sales estimates are based on these assumed growth rates, applied to the lower bound of the 2000 sales estimates. ** Weighted average.**		

[20]

[21] The study of OTA and survey of the industry leaders.

[22] Factors driving organic agriculture growth, Trends in market growth, http://www. Organic market shares refine

1. Organic beef market:

1.1 Main organic beef exporting countries :

1.1.1 USA:

Organic farm production consists of 1.5 percent of all agricultural production in the United States, USDA estimates organic farming industry in United States will account for $11 billion. It is expected that the industry will soon approach $13 billion; in 1990 it was a $1billion industry[23]. The National Food Merchandiser **(NFM, June 2006)** reports that American shoppers expended over $51 billion on natural and organic products in 2005. The large participation of those organic products is fresh meat and seafood which grew by more than 67.4 percent to $114 million in 2005. The average rate of growth in USA has been more than 20 percent annually and it is expected to go on 9 - 10 percent range until 2010[24].

1.1.2 Australia:

Australia is the greater export market for organic beef besides the largest beef export market in the world like USA. From 1992, Australia has had an official **National Standard for Organic and Biodynamic Produce**. All products exported as organic must be certified according to at least the level of this standard by one of the organizations accredited by the **Australian Quarantine and Inspection Service (AQIS)**.

The main importers of Australian organic beef were Japan, the UK, the USA and Canada. The Australian organic beef production has grown at a rapid rate since 1990s, from estimated $32 million (farm-gate prices) in 2000-2001 to approximately $60 million in 2005.

Total Australian beef exports were 948 kt in 2004-2005 (ABARE 2006) in which beef exports account for less than 0.1 percent of this[25].

1.2 Main organic beef importing countries :

1.1.1 EU:

USA is not only the largest organic and grass-fed beef exporting market in the world but also the largest organic and grass-fed beef importer. USA and EU have long been known as the great organic market in the world. Every year, Europe imports organic products approximately 15 percent from United States.

The EU and the U.S. negotiate an organic equivalency agreement, importers must work through German authorities to submit oversight information on certified organic products on a case-by-case basis. Currently, the EU is in the process of amending its organic production, processing, and trading regulations.

By the way, EU experienced importing organic beef cattle. Of the total 268 tons of organic beef produced in Argentina in 1998, roughly 80 percent was exported (the majority of which was shipped to the EU). In Argentina, 512,770 acres are dedicated to organic livestock production, the majority of which is organic beef cattle[26].

1.1.2 Japan:

Approximately 80 to 90 percent of the market in Japan is supplied from abroad. According to the report of the US Department, the organic sales in Japan reached $3.2 billion in the year 2000. However, the organic export to Japan significantly decreased to 90 percent in the year 2001 because of the requirement of the Higher Organic Standard **'The Japanese**

[23] http://.www.zwire.com/site/news.cfm?BRD=1163&dept_id=97662&newsid=1438299...10/16/2006
[24] ERS 2005
[25] Organic beef production and markering in Australia by Els Wynen, Eco Landuse Systems, Canberra, Australia.- Microsoft Internet Eplorer.
[26] Organic DLP Trade – Overview: Global Production – Microsoft Internet Explorer

Agricultural Standard (JAS), April 2001'[27] focusing on the 'chemical-free' products. Many products previously labeled as **'Organic'** were re-labeled and enhanced as **'Green'**.

All though Japan was an originally promising importer of Australian organic beef, but there is now a number of significant challenges.

Firstly, most Japanese consumers prefer grain-fed to grass-fed beef; most organic beef produced in Australia is grass-fed.

Secondly, organic certified beef in Japan requires the birth date of calves to be provided, a requirement with which many beef enterprises in Australia are unable to comply at present.

However, those are not the obstacles for growth in demand for Australian organic beef in Japan, but customers in Japan must be declared the means of 'organic'. Also, retailers will require to be involved in selling organic beef[28].

2. Grass fed Beef Market:

2.1 Main grass-fed beef exporting countries :

2.1.1 USA:

USA is a large exporter of grass-fed beef. However, importing countries has occasionally imposed a ban on US beef import when the mad cow disease (BSE) was detected in US. The main importing countries of US beef are Japan, South Korea, Hong Kong Taiwan, China and Canada. US beef exports in 2006 are expected to make steady gains. USMEF expected that the USA would export 100.000 mt. of beef to Japan in 2006 and US total exports are expected grow up to 14 percent by the end of 2011[29].

2.1.2 Australia:

Australia is well-known as the world's largest grass-fed beef exporter. At the mean time, Australia continues to dominate the fresh/chilled sector. The main grass-fed importing markets are USA, EU, UK, Canada, Japan. The following table shows the beef and veal outlook of Australian grass-fed beef export.

beef and veal outlook[30]					
	Unit	2004-2005	2005-2006	2006-2007	% Change
Cattle	Million	27.8	28.6	29.1	1.7
Beef	Million	24.7	25.5	26.1	2.4
Slaughtering	'000	8 853	8 401	8 800	4.7
Production	kt	2 162	2 077	2 141	3.1
Export(shipped weight)					
To US	Kt	363	295	285	- 3.4
To Japan	Kt	419	388	364	- 6.2
To Korea, Rep.of	Kt	91	121	110	- 9.1
Total	Kt	948	892	915	2.6
Value	A$m	4584	4274	4051	- 5.2
Live cattle	'000	550	547	580	6.0
Price					
Saleyard	Ac/kg	320	322	290	- 9.9
US import	USc/kg	286	277	250	- 9.7

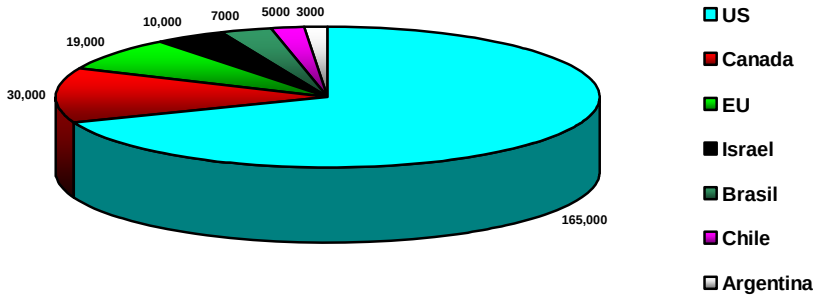
[27] Organic certification-Wikipedia, the free encyclopedia
[28] Organic beef production and marketing in Australia. http://www.google.com/organic farm gate price in Japan.
[29] U.S. beef returns to three export markets-Microsoft Internet Explorer.
[30] abare-australian commodities: September quarter 2006-Microsoft Internet Explorer

Japanese import	USc/kg	490	430	410	- 4.7
s ABARE estimate. f ABARE forecast.					

2.1.3 Uruguay:

Uruguay is also the significant grass fed exporter in which the main importers of its product are USA, Canada, Australia and EU. Currently there are 35 nationally certified beef slaughterhouses, of which 24 are approved by Uruguay for export. As of March 2005, sixteen of these were approved by the USDA to export the United States. In 2004, the top 4 companies accounted for 35.8 percent of slaughter and 38.8 percent of exports. The figure 1 shows the growth rate of Uruguay grass fed beef exports in 2004.

In 2003 and 2004, grass fed beef supplies and higher prices in the U.S led to a significant increase in U.S. imports from Uruguay. Between 2001 and 2004, the number of U.S. importers handling Uruguayan beef increased from 29 to 67 percent.



Metric Tons (carcass weight basis)

Figure 1. Study Case of Uruguayan beef exports in 2004

2.2 Main grass-fed beef importing countries:

2.2.1 EU:

EU is one of the great export market of grass-fed beef in which main grass-fed beef import markets are Uruguay, USA, and Australia. In 2004, exports to European Union (EU) amounted to approximately 18,600 metric tons. Each year the EU allocates 55,000 metric tons of Hilton quota import permits, of which Uruguay has 6,300 metric tons, while Argentina has 28,000 metric tons[31]. In 2004, for example, **the average FOB value of exports to the EU was US$ 4.96 per Kilogram compared to US$ 2.29 per Kilogram for exports to the United States**.

2.2.2 Japan:

Japan is the largest beef importing country in the world in terms of value in which Australia and U.S are the main beef market exporting to Japan. Japan imports over 300,000 tons of beef from Australia and United States. Japanese consumers prefer and are glad to pay higher prices for chilled beef products especially grass fed beef[32]. Because of the limited supply of U.S beef, and competition with other markets such as South Korea, the price of Australia full sets of grass - fed beef exported to Japan significantly rose **4 cents to US$ 2.18 a pound**, including carriage and freight[33].

[31] Based on Grass fed Certification: The case of the Uruguayan Beef Industry. By John A. Fox, Lautaro Perez, and Michael Boland, May 2005. Agricultural Issue Center, University of California. www. aic.ucdavis.edu

[32] Measuring the Intensity of Competition in the Japanese Beef Market. Journal of Agricultural and Applied Economics, Applied Economics - Find Articles.htm. 2004 by Reed, Michael R, Saghaian, Sayed H

[33] Australian Cattle Mkt: Prices Tumble As Supply Jumps, 10/13/2006 5:52:00. Cattle Network - connecting the Beef industry

Australian exports to Japan in 2006-07 are forecast to fall by 6 per cent to 364 000 tones, with export prices for grain fed and grass fed product forecast to fall by 4 per cent and 5 per cent respectively to **average US$ 4.76 and 4.10 a kilogram**. **Japan will only accept shipments of US beef from cattle 20 months of age or younger from a list of 35 approved processing facilities[34].**

2.2.3 South Korea:

Korea is a rival beef import market of Japan. The main beef exporters of Korea are USA and Australia. However, Korea will only accept shipments of US beef from **animals 30 months of age or younger**. US bone-in products, including any product that has the propensity to contain bone chips, such as intercostals, will also be permitted.

Australian exports to Korea are forecast to fall by 9 per cent in 2006-07 to 110 000 tones. Australian beef is featured in retail stores such as E-mart and Lotte Mark. Australian grain-fed beef shares a half in these markets and other half is Australian grass-fed beef.

3. Observation on Japanese ban on US beef:

Technically, this is reasonable for US beef exporters that Japan banned U.S. beef and beef products after a single case of **bovine spongiform encephalopathy (BSE, or mad cow disease)** in an 8-year-old cow imported into the United States from Canada was detected in December 2003[35]. The gab of US beef export to Japan has narrowed considerably since Japan began liberalizing its market in mid-1980's. However, Japan is the world's leading beef importer in value terms due to imports of high-valued cuts[36]. Actually, Japanese strategy is to avoid monopoly of imports' market from foreign countries in particular USA or whatever. According to an interview of Mr. Hisatsugu Furukawa[37], he mentioned that Japan has got a pressure with US beef quota. Therefore, Japan prefers to play the multilateral trade to bilateral trade especially with the least developed countries, the main suppliers for raw material sources, in order to strengthen their economic environment.

3.1 Opportunity for Lao beef access to Japanese market:

Based on true benefits for Lao WTO membership:

- WTO accession will provide greater access in long term.
- Laos will benefit by duty-free transit by neighboring WTO member countries. Article 5 of the GATT requires WTO members to commit to providing duty-free transit via convenient route to other members' shipment.
- WTO membership provides a legal benchmark for establishing transit arrangements with neighboring countries.

Worldwide,htm

[34] abare-australian commodities: September quarter 2006-Microsoft Internet Explorer

[35] Japan's Restriction on US Beef Exports Unjustified, U.S.says. US Department of State-Microsoft Internet Explorer.

[36] Grassfed beef demand in Japan.pdf, Economic Rerearch Service/USDA – Microsoft Internet Explorer

[37] Former president of bank of Japan and recently he took the position of Senior Consultant of Mitsubishi UFJ Research and Consulting

Ultimately, those aforementioned issues would be the great opportunity for Lao country to export beef to Japan by making further joint contact with the Japanese trader.

4. New options for Lao conventional beef market in the neighboring countries:

A part from organic and/or grass fed beef market in Japan, EU and US markets, the neighboring countries' beef markets seems significant opportunity for Lao conventional beef in order to create more value (addition, creation retention value). The following information strongly shows the feasible access for Lao beef market in order to increase higher costs.

4.1. Beef market in Vietnam:

Vietnam, the country having closest relationship with Lao PDR, is the new beef market opportunity. Because of the long time special relationship between Laos and Vietnam, Lao government has an extra policy on bilateral trade with Vietnam. According to the SADU report, Vietnam has imported 500-600 hd of buffalo/mth and 400-500 hd/mth. Also, The livestock trading network has already existed in the northern region, Lao PDR with Vietnam. This business operation takes place in Pek and Nonghet districts, Xieng Khouang Province by one ethnic minority group that has links to members of the same ethnic group in Viet Nam. At the same time, traders in the North also had one interest that Viet Nam implemented its tariff reductions to 0-5 percent in 2003[38].

In other hand, according to Market report for March and forecast for April 2005 by Ministry of Trade, Socialist Republic of Vietnam on Friday, November17, 2006, the domestic demand for foodstuff such as pork, beef and etc...still stayed high, Price of grade 1 conventional beef was from **VND 70,000 to 80,000 per kg [39] or US$ 4.50 - 5.50 per Kg**

The aforementioned factors are the high opportunity for Lao country to continue the beef trade with Vietnam.

The following certification will enable Lao small holders to improve their own beef product (in case of conventional beef) to meet the Vietnamese beef market.

4.1.1 Vietnamese Beef Certification (Conventional Beef)[40]:

A. Eligible Products

Beef meat, including bone-in and boneless, and offal products from animals less than 30 months of age produced under an approved AMS Export Verification (EV) program.

Information about the EV program for Vietnam and a list of EV approved establishments can be obtained from the following website:http://www.ams.usda.gov/lsg/arc/bev.htm.

If FSIS inspection personnel become aware of concerns that an AMS approved EV establishment is not properly executing its EV program, export certification should not be issued for the product in question and AMS should be notified at ARCBranch@usda.gov. Inspection personnel should include their immediate supervisor on messages to AMS. The following information should be included in the message:

[38] Final Report, Supplementary Participatory Livestock Development Project Supplementary Appendix 4 to Final Report, ADB PPTA No.4287-LAO Market Analysis for Livestock and Livestock Products
[39] Vietnam Market report beef price.pdf - Microsoft Internet Explorer.
[40] Export Requirements for Vietnam- Microsoft Internet Explorer

- Establishment name, address, and establishment number
- Product type, product code, and quantity of product
- Date of production, lot number, and shift
- Date and nature of observation
- Name of country product is intended for export
- Export certificate number (if applicable)
- Any other information to verify claim
- Name of inspection official

B. Documentation Requirements

For beef meat, including bone-in and boneless, and offal products. In completing the FSIS Form 9060-6, Application for Export, the following statement must be included: "The product meets EV requirements for Vietnam." Obtain FSIS Form 9060-5, Meat and Poultry Export Certificate of Wholesomeness. The following certification statements must be included in the "Remarks" section of the FSIS Form 9060-5 or on a letterhead certificate:

1. The meat was derived from cattle less than thirty (30) months of age.
2. The meat was derived from federally certified slaughter and processing facilities, operating under supervision of the Food Safety and Inspection Service (FSIS).
3. The cattle from which the beef and beef meat products were derived were not subjected to a stunning process, prior to slaughter, with a device injecting compressed air or gas into the cranial cavity or to a pithing process.
4. The meat was derived from cattle that were officially given an ante and post-mortem inspection by FSIS inspection officials, and were not suspect or confirmed BSE cases.
5. The beef and beef meat products were not derived from the following specified risk materials: the brain, skull, eyes, trigeminal ganglia, spinal cord, vertebral column (excluding the vertebrae of the tail, the transverse processes of the thoracic and lumbar vertebrae, and the wings of the sacrum) and dorsal root ganglia and the tonsils and distal ileum of the small intestine of any cattle regardless of age.
6. The meat does not contain advanced recovery meat or mechanically separated meat.
7. The cattle from which the product was derived were not fed meat and bone meal or greaves of ruminant origin.

4.2. Beef market in Thailand:

Actually, Thailand and Laos have a close relationship on trade. Lao country has long imported products especially the product for consumption and the main products exported to Thailand are log and electricity. Today, Thailand seems alternative for beef market. This approach had occurred from 2002 to 2004 in the northern provinces in Lao PDR in which a Thai meat processing factory in Chiangmai province produces beef meatballs by solely using meat from Lao PDR. This factory annually imported an average of 15.6 tons with value at **US$2.50 per kilogram**[41].

[41] Comparing with Final Report, Supplementary Participatory Livestock Development Project Supplementary Appendix 4 to Final Report, ADB PPTA No.4287-LAO Market Analysis for Livestock and Livestock Products

4.3. Beef market in Hong Kong:

In the first half year of 2006, Hong Kong imported variety meats accounting for $87 million in which US chilled beef shared $3.7 million from January to June, 2006. US beef exports to Hong Kong are estimated to increase steadily in the second half of 2006. By the way Hong Kong's supply still relies on import of live cattle from China[42].

4.4. Beef market in Singapore[43]:

Singapore, which has virtually no agricultural sector, currently imports most of its beef from Australia and New Zealand. It consumed 20,392 tones of beef worth more than $A90 million in 2005. However, Singapore imposed the ban in December 2003 after a case of mad cow disease (BSC), detected in Washington state. Before the ban, Singapore imported 5 per cent or 1,009 tones of local beef supply.

II. Comparison of Beef classification price:

The price of beef varies according to the beef classification like organic, grass fed, and chemical free beef . By the way, the demand of beef in global market is also an indicator of beef price. The price of different classification of beef in worldwide markets and XK are listed below:

1. Farm-gate price for Organic, Grass fed and Chemical free beef:

Beef Description	Farm-gate price of Organic beef (US $/Kg)		Farm-gate price of Grass fed beef (US $/Kg)			Farm-gate price of Chemical free beef (US $/Kg)	
	From Australia	From US	From Australia	From US	From Uruguay	From Australia	From US
Carcass	4.00		3.66				
Prime beef	25.00						
Mince	15.00						
Conventional Mince	10.00						
chilled grass-fed full set			4.76 - 4.79[44]				
short-fed full set			5.69 - 5.70[45]				

2. The price of Organic, Grass fed and Chemical free beef shipped to Japan and EU:

Beef Description	Organic beef price shifted to Japan and EU (US $/Kg)		Grass fed beef price shifted to Japan and EU (US $/Kg)		Chemical free beef price shifted to Japan and EU (US $/Kg)	
	Japan	EU	Japan	EU	Japan	EU
Carcass	4.76[46]		4.10[47]	4.96[48]		

[42] Hong Kong Livestock and Products Annual 2006 – Microsoft Internet Explorer.
[43] Singapore lifts ban on US beef. 17/01/2006.ABC News online - Microsoft Internet Explorer.
[44] According to MEATNEWS.COM: JAPAN STILL WANTS AUSTRALIAN BEEF-Microsoft Internet Explorer, chilled grass-fed fullsets cost US$ 2.38 per pound and short-fed fullsets cost US$ 2.53 per pound
[45] According to MEATNEWS.COM: JAPAN STILL WANTS AUSTRALIAN BEEF-Microsoft Internet Explorer, chilled grass-fed fullsets cost US$ 2.38 per pound and short-fed fullsets cost US$ 2.53 per pound
[46] abare-australian commodities: September quarter 2006-Microsoft Internet Explorer

Grass fed full set			4.00 - 5.00[49]			
Prime beef						
Mince						
Conventional Mince						

Note: Japanese import tariff on beef is 38.5 percent[50].

3. The Farm-gate price of XK beef:

Beef Description	Farm gate price	Farm-gate price sold to Vientiane market	Farm-gate price exported to Vietnam
	(US $/Kg)	(US $/Kg)	(US $/Kg)
Live weight	3.50	3.50	3.50

4. Retail price of XK beef in Local market:

Description of beef cut	Weight (kg)	%	Price (kg)	Total (US $)	Remark
Prime beef	35	35	2.50	87.50	The boneless beef is 52 kg (items 1-3) whereas the carcass weight being 67 kg (Items 1 - 4).
Shanks	10	10	2.20	22.00	
Mince	7	7	2.00	14.00	
Bones	15	15	2.00	30.00	
Head	6	6	0.83	5.00	
Eatable offal /Blood	7	7	1.6	8.00	
Skin	7	7	0.2	1.40	
Tails and legs	5	5	0.3	1.50	
Non-eatable items	10	10	-	0	
Total	100	100		169.4	

5. Observation on Farm-gate price in Xieng Khouang Province:

The middle man usually takes an advantages of farmers by twisting bona fide weight of boneless beef at only 40 kg instead of existing 52 kg in 100kg-live cattle (as given in article 4 and 5.1).

5.1 Eye-estimation system of boneless beef in the live cattle:

Eye-estimation	Expected outputs (kg)	Price (US $/Kg)	Total (US $)	Remark
Estimated live weight of 100 kg - cattle	40	3.5	140	• The middle man is willing to pay for only estimated boneless beef in the live cattle. Head, feet, skin, and internal parts are excluded. • Trade guesstimates only 40 kg of 100 kg – live cattle. In fact, 100 kg-live cattle provide 52 kg of boneless beef or 67 kg of carcass.

[47] abare-australian commodities: September quarter 2006-Microsoft Internet Explorer
[48] Uruguay grassfed beef export-Microsoft Internet Explorer
[49] Import prices of Australian beef, quarterly, ended June 2006. frank drum > fdrum @ abare.gov.au – Microsoft Internet Explorer.
[50] Import prices of Australian beef, quarterly, ended June 2006. frank drum > fdrum @ abare.gov.au – Microsoft Internet Explorer.

Total	**40**	**3.5**	**140**	**The true value of boneless beef (52 kg) per XK 100 kg-live cattle is US$182.**

6. Comparison of Farm-gate price of Grass-fed Carcass in Australia, US and XK:

	Farm-gate price (US$/kg)		Description of XK carcass	%	Weight	Price	Total	Average price of XK carcass
	Aus	US			(kg)	(US$/kg)	(US$)	(US$/kg)
Grass-fed carcass	3.66		Prime beef	35	2.50	2.50	87.50	2.29
			Shanks	10	2.20	2.20	22.00	
			Mince	7	2.00	2.00	14.00	
			Bones	15	2.00	2.00	30.00	
Total	**3.66**			**67**	**67**		**154**	**2.29**

NOTE:

As above mentioned, trader takes an advantages of farmers by distorting the truly existing weight of boneless beef and no charging for head, feet, skin, and internal parts. Therefore, the farm-gate price of XK beef gets lower value. To better enjoy the worldwide prevailing out-and-out benefits from cattle farming, it is recommended that XK cattle production system has to be rearranged to meet the grass fed certification prerequisites. Notwithstanding this, the slaughtering and packaging modus operandi has to be by the internationally accepted carcass beef cuts in order to enhance superior XK beef export end with better farm-gate price.

Chapter III

Technical Requirement

I. Overview of XK cattle production system and meat marketing:

1. International assistances on Cattle production improvement and marketing:

Besides the governmental support, cattle production in XiengKhouang province have been considerably assisted by international organization for the better improved status of cattle farming. Over the last five years, XK gain more benefits from foreign assistance such as the cattle bank station mainly supported by the public sector also has been technically assisted by Centro Internacional de Agricultura Tropical (CIAT)/SADU. Simultaneously, PRONAE/ CIRAD has been working on grazing on improve pasture in which main grass grown in the station for improved propagation purpose are Brachiria Brizantha, Ruzi, Gramba, Ginea, legume like Stylosanthis, soy bean and Upland rice on trial are also participating in the program for soil fertility improvement and soil erosion control purposes.

Notwithstanding, Smallscale Aro-Enterprise Development for The Uplands (SADU) under the implementation of CIAT funded by the Swiss Agency for Development & Cooperation (SDC) seems significant approach in two districts, Paek in XK and Xieng Ngeun in Luang Prabang. The main objective of this project focuses on developing enterprise and engaging in marketing system. The target villages where productivities take place included all upland area was centralized by the mode of clusters.

Peanut and meat are the first and second prioritization of the project respectively in which peanut was initiated in the process of the cluster of 5 villages in Nong Ped Zone in 2004 and the work of meat was later conducted by basing on the existing work of the Forage and Livestock Project (FLSP). Because of satisfactory result of work practice in the first year, the project was asked to extend to two further districts, Koun and Phou Kouth districts[51].

2. Current production system:

Based on SADU report[52], It is estimated that nearly 50,000 head of buffalo and 100,000 head of cattle are raised in Xieng Khouang, the majority by small holder farmers. Cattle Bank Station, one of the public sector directly involving the cattle production, has technically assisted on forages since 1995 by FSL/CIAT and starting up expansion to the farmer in 2000. ‘ Chemical fertilizer (formula: 15-15-15) has been applied into the pasture area in the period of land preparation in order to increase the forage yield ’, said the director of the Cattle Bank Station. Also, PRONAE who began the forage crop study as improved pasture in the Cattle Bank Station in 2003 are still using weedicides (Round-up) for weed control.

Nevertheless, some villagers in XK have traditionally raised cattle in the form of natural production and simple practice. Cattle are usually freed to graze on the natural pasture in the allocated upland and plateau. Villagers are raising cattle for self subsistence purpose and selling their excess products.

3. Animal healthcare:

‘ Infectious cattle are sometimes treated by chemical antibiotics, whereas the herbal plants are still the major supply for animal treatment. Antiseptics are occasionally utilized for controlling disease outbreak’, said the man who have been trained on the primary animal husbandry by CIAT.

4. Slaughtering processes:

The slaughtering of cattle in XK has usually conducted in the non-sanitary slaughterhouse with the simple techniques under the concession of the private sectors. Meat packaging and labeling for exporting purpose is not practiced and never mentioned after slaughtering.

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[51] According to the Lessons Learnt Implementation –Year 1 Draft by SADU/CIAT

[52] STEPS TOWARDS DEVELOPMENT OF AN IMPLEMENTATION PLAN FOR SMALL-HOLDER LIVESTOCK DEVELOPMENT IN XIENG KHOUANG

5. Meat marketing:

Traditionally, XK meat markets are Vientiane and neighboring province. Cattle are purchased in the form of eyes estimation of live weight. Vientiane traders usually buy XK cattle in the form of eyes estimation of live weight and loading to the slaughter in Vientaine. Purchasing is practiced on credit. However, beef cut from slaughter houses are sold in the local markets and also exported to Vientiane.

By the way, as above mentioned (4.1 in chapter II), Vietnam (VN) is a special meat market opportunity for XK since VN has imported double amount of cattle sold to Vientiane markets (buffalo: 500-600 hd/month and 400-500 hd/month for the cattle). However the export price to VN is not rather higher, but it is paid in cash different while Vientiane traders buy on credit. VN meat market approached following the steps of CIAT's agro-enterprise development program. In other hands, SADU/CIAT's agro-enterprise works on marketing survey and link farmer to the market chain.

II. Summary of XK cattle production system:

In conclusion, there are there mainly different groups of cattle production in XiengKouang Province such as (1) Public sector, (2) International Organizations , (3) small holder farmers and common villagers. The production system can be summarized as follows:

- Public sector like Cattle Bank Station have a technical assistance form international project (SADU/CIAT, PRONEA). Small holder farmers and common villagers conducting cattle production are getting promoted by those projects.
- Less chemical fertilizers, antibiotics, antiseptics, weedicides are being initiated using in the cattle farms.
- Some cattle undertaken by small holder farmers and common villagers are naturally raised and provided by herbal plants for therapy.
- Slaughtering of the cattle are operated by the simple an non-hygienic technique with out packaging and labeling of meat product.
- Purchasing of cattle have traditionally made by eyes-estimation of live weight. Main exporting markets of XK beef are Vientiane, neighboring provinces and Vietnam. However, beef cut from the slaughterhouse are sold in the local markets and neighboring provinces.
- Now, SADU/CIAT's agro-enterprise project are working on linking farmers in XK to the market chain in both national and international markets.

The following tables show the XK beef production analysis and comparison of international certified-grassfed beef needed by worldwide markets. It is to consider the potential, possibility, challenging and the further steps to shift current status of XK cattle farming system to meet the need of global markets.

1. SWOT analysis for Current status of Xieng Khouang (XK) cattle production system:

No	Strengths	No	Weaknesses
1.	Government has strongly supported the XK livestock production strategy from now to the year 2010 and 2020.	1.	Disease still seasonally widespread in the cattle (Black quarter disease, Haemorrihagic septicaemia disease and Foot and Mouth disease)
2.	People in XK have traditionally practiced livestock production especially cattle farming.	2.	Farmers have not got any technical knowledge, skills and apprehension of grass fed and/or organic certification.
3.	The national route no 7 accesses to Wing's port (Vietnam).	3.	Land is still applied by chemical fertilizers.
4.	Suitable pasture area, climate (20 Celsius in average), precipitation (1400 mm/year) valuable for cattle production.	4.	UXO are unclearly certified.
5.	Application of chemical fertilizers, antibiotics, insecticides, pesticides, and hormone is initially practiced.	5.	Pesticides, insecticides and some kinds of hormone are initially used.
6.	Herb available in local area can be used for the treatment of infectious cattle.	6.	Antibiotics and antiseptics are still administered to the infectious cattle.
7.	Cattle production farms in XK have been credited by cattle bank station and also technically supported by both governmental and international organization (such as SADU/CIAT, PRONEA, CBSLSP, LFSP, PLDP, NAFRI, DLFF, NAFES, DLFFNAFES).	7.	Cattle confinement for feedlot fed purposes are occasionally practiced.
8.	Existing export markets in Vientiane capital city, Vietnam.	8.	Slaughter house is not international standard. By the way, slaughter is primarily implemented.
9.	Lao PDR has an organic standardization to support….	9.	The middle man always takes the advantages of the farmers by buying cattle in the form of eye estimation of animal weight.
		10.	Classification of beef cut is not internationally required.
		11.	Poor experiences in packaging labeling and certifying processes.
No	**Opportunity**	**No**	**Threats**
1.	High potential to develop the current status of XK cattle production system to become 100% certified grass fed cattle farming.	1.	Unexpectedly, epidemic immediately occurs and widespread to the cattle in the farm which causes the damage to the cattle lives and property of the farmers.
2.	No grassfed or organic beef are produced in neighboring countries or in southeast Asia.	2.	Suddenly natural phenomenon occurs in the farm such as drought, flood and so on…
3.	Higher price of grass fed or organic beef than conventional beef in international markets.	3.	Variable price occurs in both national and international export markets.
4.	People in the local area will be able to access to the full employment (value of addition, creation, retention will be increased)		
5.	Green back payment to the nature and/or biodiversity.		
6.	The productive activities will be able gain sub-second benefits from such an improved cattle production system for instances: free chemical production of vegetable, swine, and other livestock.		
7.	Scio-economy will be sustainably developed in rural area.		
8.	Worldwide increasing consumers prefer eating organic or grassfed beef to conventional beef.		

2. Comparison of certified grass-fed beef and XK cattle farming system:

No		Certified Grass fed beef Yes = necessarily certified No = non-certified	The current status of XK cattle production farming system 'yes'= already practiced 'No'= must be introduced	Explanation	The shifting steps of XK production system to meet the grass fed beef certification
1.	Cattle must be 100% native grass fed.	Yes	Yes		Continue to improve the current status of pasture area.
2.	No chemical fertilizers are applied in the pasture	Yes	No	Chemical fertilizers are still applied in the pasture area where the cattle are grazing.	Bio fertilizer is strongly recommended for starting up grass fed cattle production system and further shifting to organic production system. This is an only technical way to preserve land and increase the microorganism (soil fertility). Cattle manure, bad dung (guano) and also bio-compost are very suitable and available in Laos.
3.	No food additive or food supplementary, synthetic vitamins, antibiotics and other chemical substances are fed to the animals in the farm.	Yes	No	XK production system is occasionally practiced those processes especially the antibiotics fed to the infectious cattle.	Any kinds of chemical substances, synthetic vitamins must me given up. Herbal treatment method must be trained to farmers.
4.	No growth hormones are fed to the animals.	Yes	Yes		Stop using any kinds of hormone.
5.	Vaccination is permitted.	Yes	Yes	Vaccine is seasonally used to prevent the animal	Prevention by vaccination shall be continuously practiced.

				disease.	
6.	Cereal grains, cereal by-products, cottonseed and cottonseed meal, and/or soybeans and soybean meal must not be fed any time of cattle's lives.	Yes	Yes	Additional feed are occasionally fed to cattle for specific purposes.	100 % grass must be fed to animals in the farm with out feeding and food supplementary or food additive and cereal grain.
7.	No chemical fertilizers are applied inland. Natural rotation of the cattle is taken place in order to fertilize, refresh, the soil.	Yes	No	Chemical fertilizers are current implied to increase the fertility for the pasture in XK	Guano or manure rotation in order to get fertility back to the soil. Composting the remaining manure with EM and/or bio gas plant are strongly recommended. UXO must be strongly cleared out or removed from the land where the farm takes place. Bio-technology for soil improvement must be used. Lime application inland can be practiced for pH adjustment.
9.	Solar power is strongly recommended for healthy land and cows.	Yes	No	Electricity produced from hydropower plant is introduced in the farm.	Solar system should be placed instead of electricity.
10.	Certified grass fed cattle must be traceable by written record through out their entire life from birth to harvest to the farm or ranch from which they originated.	Yes	No	The record keeping is not clearly practiced in the form of international organic of grass fed beef standard.	Data collection system must be introduced into the cattle farm production.
11.	Animals are not allowed to be in pens or other confined areas where vegetation, forage growth, crops, or post-harvest crop residues without grain. Said energy sources such as vegetation, et cetera shall be available for them to forage on, in an unconfined environment on a daily basis	Yes	No	Cattle are occasionally confined for their specific purposes in XK	Pasture area must be continuously improved and extended emphasized on sanitation of animals' health (relaxing place and so on…)
12.	Certified cattle can not be fed in confinement more than 30 days per	Yes	No	Live cattle in XK have been usually transported to	To avoid stress happening with animals during the transportation,

	calendar except the provision including roundups, sorting, transportation, and weaning of offspring. Extended winters, wet weather, drought and naturally occurring conditions (fire, flood, et cetera) are not also exempt from confinement.			Vietnam and/or Vientiane Capital for purchasing purposes.	slaughter house must be established at the place with open pasture area.
13.	Grass fed should not be finished in confinements for slaughter such as feed-lot situation where non grain products are substituted. Grass fed cattle must be raised on the open pasture area while waiting for slaughter.	Yes	No	Cattle are usually confined to wait for slaughter in case that the beef output will be sold out in XK markets.	Slaughter house with high standard must be established at the farm. Old style of slaughter and purchasing without weighing must be absolutely eliminated. Farmers must be trained and transferred know-how on humane slaughter technique, purchasing and packaging of the products.
14	Grass fed steaks and roasts are flash frozen and vacuum sealed for convenience and safety, but is the most expensive packaging.	Yes	No	No beef packing in XK in which this is not strongly allowed in international organic or grass fed beef markets.	Vacuum sealed package must be trained to farmers and practiced before exporting beef products.
15	Grass fed beef product must be certified and labeled by the specific certifier such AGA-USDA, IFOAM, and etc…	Yes	No	No certifiers in XK to undertake the certification processes before selling out beef.	International certifier such as IFORM or AGA-UADA must be employed to gradually certify the farm production in Xieng Khouang Province.

III. The challenging of Lao Organic Beef products:

We go once step forward the Lao Government

The main Challenging:

- Laos will be first country to develop Grass-fed and Organic Beef Product for Exporting in South East Asian.
- PROFIL[53] in Laos is initiating the certification for organic vegetable plantation. However, they lack of experiences in organic or grass-fed beef certification.
- Building capacity for regular supply for organic and grass-fed beef.
- Trade facilitation needs to be developed.

IV. Recommendation:

1. Strategy Recommendation:

- Develop from Free Chemical Beef Products and shift up to Grass Fed Beef Products in 2-3 years and shift up to Organic Beef Products in 5 years
- Using Guano to be driven
- Using International Organization and IFAOM to develop Organic Beef Products in Lao PDR by leaning experience from Cambodia on Organic Rice[54]
- Taking the advantages from True benefit for Lao WTO membership mentioned in Chapter II.
- Using Lao PDR joint AFTA:
    - AFTA is ASEAN Free Trade Area by 2008, 95% of tariff lines will be subject to a Zero or 5 percent tariff.
    - World Trade Organization by 2009, provides an important avenue for greater integration of the Lao PDR into the global economy.

2. Technical Recommendation:

According to worldwide certified beef classification , data provided by CIAT, the field trip study in XK and the similarity of XK and global certified grass-fed beef, it is more possible to shift current status of Xieng Khouang cattle production system and start up the certified grass-fed cattle farming because of extensive and proper pasture area, appropriate climate, less application of chemical inputs.

However to begin certified grass-fed cattle production, the following condition must be more improved:

2.1 Land use capacity:

- Soil fertility improvement by applying chemical fertilizers (N-P-K) must be revised and duly brought to an end by using bio-fertilizers such bad dung (guano) and etc…

[53] PROFIL : Project for the Promotion of Organic Farming and Marketing in the Lao PDR, implemented by the Department of Agriculture and Helvetas-Swiss Association for International Cooperation.
[54] Cambodia Organic Rice certification by IFOAM

- Manure management by composting with EM or introduction of bio-gas plant is strongly recommended;
- UXO must be strongly cleared out or removed from the land where the farm takes place. Bio-technology for soil improvement must be used. Lime application inland can be practiced for pH adjustment;
- Safe and clean energy system should be considered with hydro-power electric energy permitted;
- Cattle farming system must focus on the animal sanitation, and prevention of disease, not treatment. Cattle must be provided the suitable environment for their relaxing and exercising.

2.2 Fertilizers:

- Bio-fertilizer is strongly recommended for starting up grass fed cattle production system and further shifting to organic production system. This is an only technical way to preserve land and increase the microorganism (soil fertility). Cattle manure, bad dung (guano) and also bio-compost are very suitable and available in Laos.

2.3 Breeding stock of cattle and species of grass:

- Continue the improvement and extension of the current status of pasture area by planting 100% native species of grass[55] without applying chemical fertilizers;
- Promulgate and provide due training in clean agriculture stressing on chemical free, organic and/or grass-fed livestock husbandry to relevant government workers, farmers and related stakeholders;
- Further develop and/or foster the livestock beeves programs.

2.4 Pesticides and Insecticides application:

- Pesticides and insecticides application for pest and weed control must be absolutely eliminated.

2.5 Vaccination, Antibiotics, Synthetic Vitamin and Hormone:

- Vaccination is performed in order to prevent the animal disease.
- Hormone and antibiotics are administered to the animals. However, treatment of infectious cattle by medical herb is also effectively practiced in Xieng Khouang Province.

2.6 Feed additive and any kinds of cereal grain fed:

- Confinement of cattle for feedlot with cereal grain, rice straw treatment and/or any kind of feed supplementary must not be administered to cattle. **Cattle must be 100% grass finished.**

2.7 Slaughtering and Beef Packaging System:

- To avoid the tense with animals during the transportation, sanitary slaughter house with high technology and international standard must be established in the place with open pasture area. The reasons that shipping live cattle to the target countries ordering cattle from Laos takes so longer times, so that stock loose weight. In other hand, cattle arriving to the target have to wait before they are accepted for slaughter. Doubtlessly, cattle get stressed and

[55] Ruzy, Gramba, gueanea , paspalum,...are all the native species of African grass

loose their weight. This reasons are not absolutely desirable for grass fed beef certification.

- Establishing the sanitary slaughter house with slaughtering facility to catch the need of worldwide beef export markets;
- Farmers must be trained and transferred know-how on grass-fed cattle farming system, hygienic slaughtering and vacuum sealed packaging technique of the grass-fed beef products.
- Convert eye-estimation of live weight of cattle in XK to international beef cut (carcass) end with better farm-gate price in global grass-fed beef market

2.8 Marketing:

- Researching and developing better marketing strategy for both national (namely relating to neighboring provinces), regional (China, Vietnam, Japan and etc.) and international market;
- In view of Lao PDR benefits from its forthcoming membership of WTO in 2008-2009 and other international trade organizations, it is recommended that SADU considers revising Xieng Khouang existing beef marketing transaction so as to secure a fairer deal with mutual advantages between the traders and the farmers; namely revising the classification of different beef meat type in accordance to WTO and/or worldwide requirements and best practices as well as, at least, considering an decent impartial benchmark for sets of weighing scale;
- International certifier must be contacted and employed to gradually certify the farm production in Xieng Khouang Province. (IFOAM or AGA or other acceptable certifiers mentioned above is strongly recommended)

2.9 Essential Vision:

- It is **strongly** recommended that SADU develop a pilot project covering the trimming, packaging and delivery of grass fed/organic beef export products to service various Laos's tourist locales and adjacent provinces in neighboring countries in order to enhance the skill development and/or improvement among producers and traders in export beef product handling and the related export beef transaction monitoring to secure further advancement toward international organic beef exporter caliber in the forthcoming, 3 to 5 years, near future.
- Develop bio-fertilizers from natural resources for sustainable use from neighboring provinces. It is also recommended that SADU survey bio fertilizers (Guano) sources in Nong hat district, Xieng Khouang Province. Currently, the cave guano exist is being harvested in Phalauong cave in Muong Fuong district and Ting cave in Luang Pra Bang Province in order to fertilize the pasture and conserve the soil fertility. (This idea is also to conserve the bad in cave, but utilize their own dung).
- Building up capacity of demand-supply by clustering among the farmers in order to convince the foreign investors.

V. <u>Grass-fed and Organic-beef Certification Fee</u>:

According to the Cambodian experience on organic certification presented by Dr. Joern Rieken, CTA Trade Promotion, GTZ/GOPA and Mr. Edwin de Korte, Cambodia (International Control System of the Cambodian Organic Agriculture Association-COrAA at Forum on ' Fair Trade and Organic Labels: creating a niche market for Lao products ' on 7-8 December,2006, Dr. Joern Rieken said that Cambodia has not had the national organic

certification body yet and International certification bodies like JAS , EC-9021 and NOP has been employed to certified their own organic products for exporting purposes.

By the way, Jhai Coffee Farmers Cooperative in southern Laos exporting coffee to Japan and USA certified by FLO-Cert Certification of Social-Economic Development GmbH (Germany) , said Mr. Vorasone DENGKAYAPHICHITH the Co-Founder/Advisor, JC.

Therefore, it is recommended that Xieng Khouang can initiated grass-fed or organic cattle farming by contacting the international certification bodies to certify beef before exporting to Japan or EU.

1. Organic and Grass fed Resources & FAQ:

Application Fee: around ~$150
Inspection Fee: ~$250
Certification Fee: ~$150

For more information, please contact:

Diamond D Angus, Valier, MT. (800) 932-6487 (Mark)
Jauer Cattle, Hinton, IA. (712) 947-4357 (Roger)
BentTree Farms, Fort Payne, AL. (256) 845-3009
Ohlde Cattle Co, Palmer, Kansas (785) 692-4332
Dakota LowLines, Chamberlain, SD. (605) 734-6152 (Rick)
KPS Dakota Organic Beef, Ferney, SD. (605) 395-6658

Who is buying Organic Grass fed Cattle?

Ahava Beef Program, Angela Pridie (605) 638-0748
KOW Program, Robert Pridie, (712) 551-6775
Panarama Grass-fed Meats, Lori Carrion, (530) 668.8920
Mesquite Organic Foods, Mike Cummings, (303) 808.7460
Maverick Ranch Organic, Clair Hull, (970) 587-5144
Wholesome Harvest, Wende Elliot, (641) 377-7777

Who is buying All-Natural Grass fed Cattle?

Tallgrass Beef Company (312) 235-4941 (Denise)
1000 Hills Cattle Co. 507-263-4001. (Todd)
Western Grasslands Beef (530) 253-1193 (Wayne)

2. In case of United States Department of Agriculture (USDA), the organic and grass fed beef certification process and fee are defined as follows[56]:

- **Study** the organic or grass fed beef standards, which cover in specific detail what is and is not permitted for every aspect of farming, including storage, transport and sale.
- **Compliance** - farm facilities and production methods must comply with the standards, which may involve modifying facilities, sourcing and changing suppliers, etc.
- **Documentation** - extensive paperwork is required, detailing farm history and current set-up, and usually including results of soil and water tests.

[56] Organic certification wikipedia, the free encyclopedia. Microsoft internet explorer.

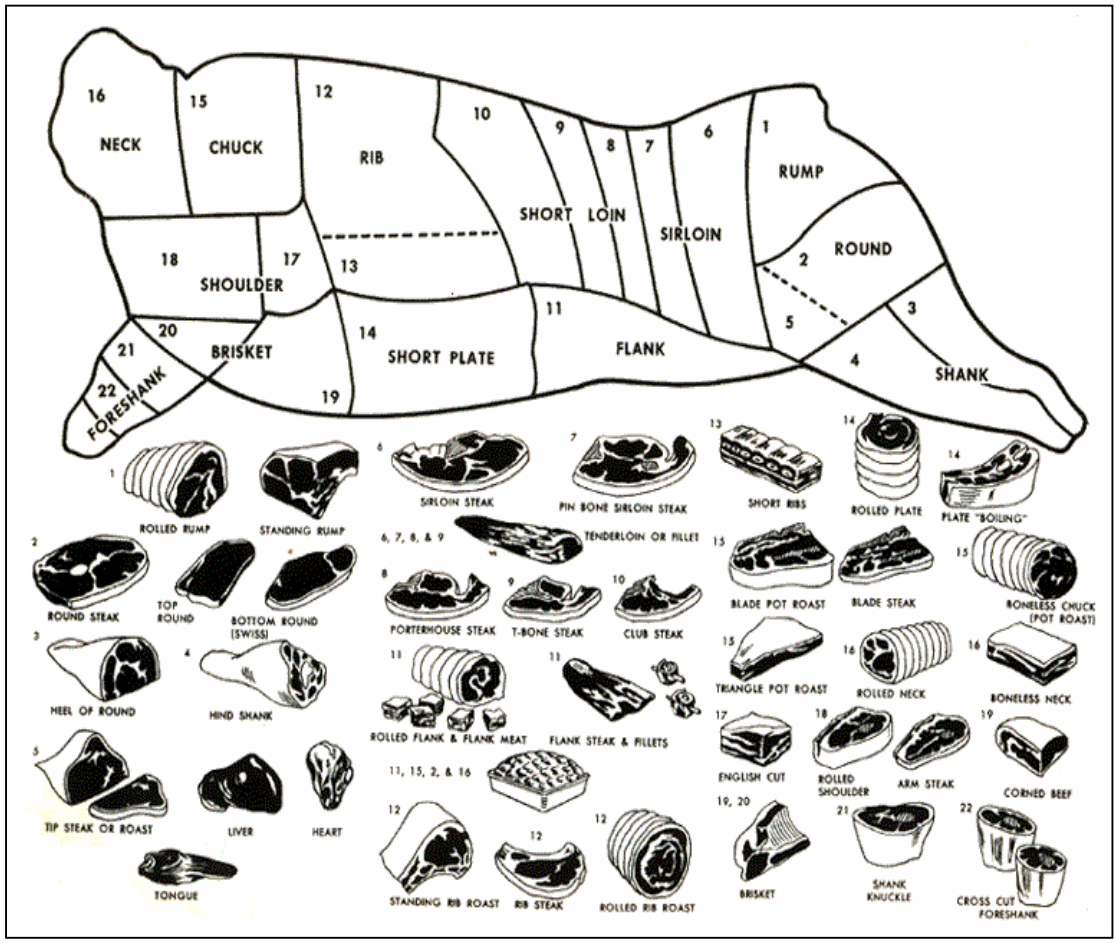
- **Planning** - a written annual production plan must be submitted, detailing everything from seed to sale: seed sources, field and crop locations, fertilization and pest control activities, harvest methods, storage locations, etc.
- **Inspection** - annual on-farm inspections are required, with a physical tour, examination of records, and an oral interview.
- **Fee - an annual inspection/certification fee (currently starting at $400-$2,000/year, in the US and Canada, depending on the agency and the size of the operation).**
- **Record-keeping** - written, day-to-day farming and marketing records, covering all activities, must be available for inspection at any time.

Annex 1: Global market classification.

Beef and veal: Total level production in live weight during the calendar year, converted into carcass weight using live weight/carcass ratios (beef and veal: 0.56).[57]
Prices are quite variable depending on factors such as the type of animal (Steer, Heifer, Cow, Bull, Bobby calf) sold timing, markets, or animal weight. The type of cattle usually classified as follows:

Type	**Characteristics**
Steer	Male cattle castrated when young.
Heifer	Female cattle having no more than six permanent incisors.
Cow	Female cattle having more than six permanent incisors.
Bull	Entire cattle with masculine characteristics.
Bobby calf	
Milk	fed, generally under two weeks old.

Beef Cuts in details



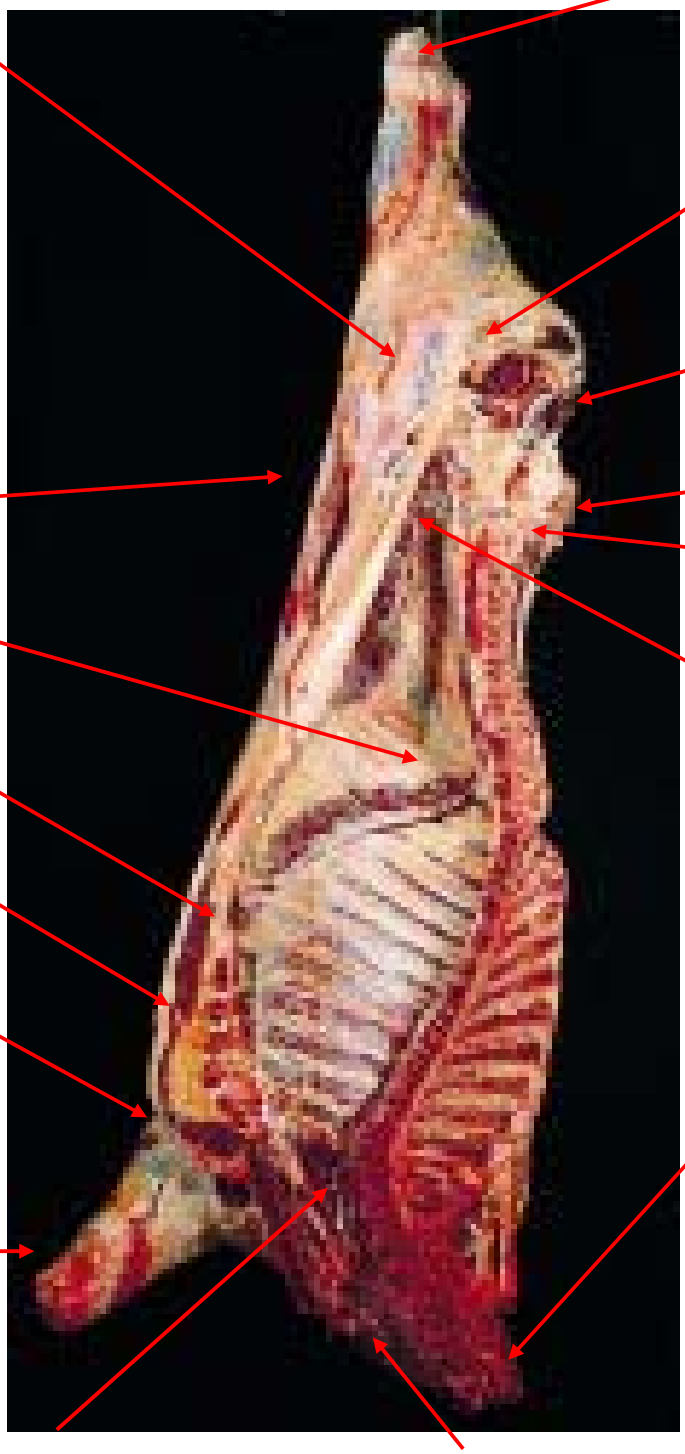
Remark:

A refers to Xieng Khouang Slaughter Premium Cut
B refers to Xieng Khouang Shank & Alike Cut
C refers to Xieng Khouang Abdomen & Alike (Bottom Round: Flank & Plate) Cut

[57] HUNGARY: ESTIMATES OF SUPPORT TO AGRICULTURE **Contact person: Dimitris Diakosavvasl** Email: Dimitris.Diakosavvas@oecd.org

Annex 2: Illustration of standard carcass trim

Illustration of standard carcass trim



Annex 3: Comparison of international beef cut .

No.	Index No. (Fig.2)	Items	Worldwide designation	XK Slaughter House (price per Kg)	
1	1	Rolled & Standing Rump	Round	A	Slaughter premium 32 % @ US$ 3.00
2	2	Round Steak, Top & Bottom Round	Round	A	
3	5	Tip Steak or Roast, Tongue, Liver, Hearth	Chuck	A	
4	6	Sirloin Steak, Tender Loin or Fillet	Loin	A	
5	7	Tender Loin or Fillet, Pin Bone Sirloin Steak	Loin	A	
6	8	Porterhouse, Tender Loin or Fillet	Loin	A	
7	9	T-Bone Steak, Tender Loin or Fillet	Loin	A	
8	10	Club Steak	Loin	A	
9	12	Standing Rib Roast, Rib Steak	Round	A	
10	13	Rolled Rib Roast, Short Ribs	Round	A	
11	15	Blade Pot Roast, Blade Steak, Boneless Chuck (Pot Roast), Triangle Pot Roast	Chuck	A	
12	16	Rolled Neck, Boneless Neck	Chuck	A	
13	17	English Cut	Chuck	A	
14	18	Rolled Shoulder, Arm Steak	Chuck	A	
15	19	Corned Beef, Brisket	Chuck	A	
16	20	Brisket,	Chuck	A	
17	3	Meer of Round	Round	B	Shank & alike 6-8 % @ US$ 2.80
18	4	Hind Shank	Ground	B	
19	21	Shank Knuckle	Ground	B	
20	22	Cross Cut Foreshank	Ground	B	
21	11	Rolled Flank & Flank Meat, Flank Steak & Fillet	Chuck	C	Abdomen & alike (Bottom Round) 3 % @ US$ 2.00
22	14	Rolled Plate, Plate Boiling	Chuck	C	
23	23	Miscellaneous: Head	Items not for export but directly consumed as local foodstuff in Lao PDR	D	7 % @ US$ 5-10 per head
24	24	Miscellaneous: Eatable Offal & blood		E	5 % @ US$ 2.00
25	25	Miscellaneous: Tails & legs		F	3-5 % @ US$ 2.70 per lot
26	26	Miscellaneous: Bones		L	10-12 % @ US$ 0.20
27	27	Miscellaneous: Skin		M	7-9 % @ US$
28	28	Edible Offal and waste		N	19-27 %

Annex 4: Agricultural marketing resource center[58] classifies the US cut categories as:

The price of US beef cuts

Category	Cuts	100 %	US Retail Price per Kg
CHUCK	Chuck roast, arm clod, brisket, flank steak, London broil, tri-tip	16 %	US$ 7.72 per Kg
GROUND	Ground beef	45 %	US$ 5.07 per Kg
LOIN	KC strip, sirloin, strip, T-bone, tender loin, top sirloin	26 %	US$ 5.51 per Kg
RIB	Rip eye, rib	6 %	US$ 5.51 per Kg
ROUND	eye of round, inside round, rum roast, top round	7 %	US$ 8.82 per Kg

Annex 5: Prices of selected U.S. choice boxed beef cuts in Japan (C&F port)

The price of box beef cuts in Japan[59]

Cut	Lower	Higher
Rib eye Roll, Lip On	US $ 4.57	US $ 4.92
Shoulder Clod	US $ 1.19	US $ 1.50
Square Cut Chuck, Clod Off	-	-
Chuck Roll	US $ 1.29	US $ 1.64
Chuck Tender	US $ 1.36	US $ 1.51
Brisket, Boneless. Deck Off	US $ 1.06	US $ 140
Short Plate, Boneless.	US $ 1.43	US $ 1.66
Knuckle1	US $ 1.37	US $ 1.72
Top (Inside) Round	US $ 1.15	US $ 1.30
Bottom (Gooseneck) Round	US $ 3.90	US $ 4.05
Strip Loin, Short Cut Boneless	US $ 1.77	US $ 1.92
Top Sirloin Butt	US $ 1.77	US $ 1.92
Full Tenderloin	US $ 4.40	5.45
Tenderloin, Trimmed	-	-
Chuck Eye Roll	-	-
Short Rib, Boneless	-	-
Chuck Rib	-	-

[58] Kansas State University, Dept. of Agricultural Economics, August, 2002.

[59] Japan grass fed per Kg. U.S Meat Export Analysis and Trade News, Meat Export Research Center, Lowa State University. 215F Meat Lab, Ames, IA 50011-1070

Annex 6: How to apply for Membership of American Grassfed Association

AMERICAN GRASSFED ASSOCIATION

Membership | FAQs | Our Producers | Goals & Activities | Recipes | Links

Membership

Home

Welcome! Come join us ....

Please print this page, complete, and mail with your check to:

AMERICAN GRASSFED ASSOCIATION
1648 Gaylord Street
Denver, CO 80206

Join a Committee

First Name _____Last Name_____

Business name_____

_____

Mailing address_____

_____

_____

_____

Phone number_____ Fax number_____

Email address_____

_____

Website_____

_____

How did you learn about us?

_____

We encourage *YOUR* involvement in *YOUR* association:

____ Conference

____ Finance

____ Membership

____ Newsletter

____ Research

____ Standards

Interested in volunteering for other tasks? Please let us know!

*Click here for information about Membership Benefits for each member level.

_____ Producers: $100 (please rank (1-7) species, using 1 for your main species)

__ Beef __ Buffalo __ Dairy __ Goat __ Lamb __ Pork __ Poultry __ Other (describe below):

_____

_____ Professionals: $50 (Please describe):_____

_____**Personal: $30** (Grassfed Friend & Health Conscious Food Consumer)

You are why we do what we do!

[back to top]

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List of References

1. Lessons learnt Implementation – Year 1 Draft by John G CONNELL_SADU, February 2005
2. National Export Strategy on Organic Agricultural Products Sector, ITC/WTO/LTPC. MOC, Nov 2005, Lao PDR.
3. National Growth and Poverty Eradication Strategy, toward 2020, Prime Minister Office, Vientiane, LAO PDR, Jan 2004.
4. Agriculture and Forestry Development Strategy toward 2020, Ministry of Agriculture and Forestry, 2004.
5. Report on Commodity Production Promotion in Lao PDR, National Economic Research Institute, Committee for Planning and Investment, 2005.
6. UNITED NATIONS CONFERENCE ON TRADE & DEVELOPMENT, Organic Fruit and Vegetables from the Tropics, Market, Certification and Production Information for Producers and International Trading Companies, UNITED NATIONS, New York and Geneva, 2003.
7. Uncommon Country Assessment (CCA) The people's Democratic Republic. United Nation, Vientiane Lao PDR, 2003.
8. Rural and Microfinance Statistic in Lao PDR, National Economic Research Institute, Committee for Planning and Investment, Microfinance Capacity Building and Research Project, Vientiane Lao PDR, 2003.
9. Lao Export potential assessment for selected sectors in Lao PDR. Project LAO/61/89: Support to Trade Promotion and Export Development in the Lao PDR. Financed by the Government of Switzerland (Seco) SECONDDRAFT, Market Analysis, Section International Trade Centre, 2004.
10. Poverty Reduction and Shifting Cultivation Stabilization in the Uplands of Lao PDR, National Agriculture Forestry Research Institute, 2004
11. World Market for organic fruits and vegetables, Opportunities for developing countries the production and export of organic horticultural products, by FAO International trade Centre, UNCTAD/WTO, Rome, 2001.
12. Coffee Economy in the Lao PDR: A review of development under the changing trade nvironment and export potentials by Yoko Matsushima and Chongpraseuth Vilaylack, 2003.
13. Vegetable Survey Report in Vientiane municipal, Plantation Dept, MAF, 2000.
14. IUCN Environment Law Program, Publication 2001-2004
15. Integrating Gender in Environment and Conservation Programs, United States Agency for International Development, USAID, 2001.
16. Population and Environnent, Population Action, International, 2002.
17. Overview of THE CERTIFIED ORGANIC AGRICULTURE - SITUATION AND OUTLOOK.ITC, 2002.
18. Promotion of Organic rice from Lao PDR, "ProRice", Phase II, 2006-2008, helvetas, Vientiane, Aug, 2005
19. Macroeconomic Policy support for Socio-Economic development in Lao PDR, Phase 2, Main Report, Volume 1, Committee for the Planning and investment Lao PDR/Japan International Cooperation Agency, March 2005.
20. Final Report on The advisory assistance to the Lao PDR on Small and Medium-Seize Enterprise and Private Sector development Project, ADTD 4279-LAO, Prepared by Rowna M. Dowing, Hendrik Prinds, and Morton Roodman with the guidance and assistance of Ms. Madeleine Varkay, Finance specialist, ADB/MKGF Department, 2005.
21. Country strategy and Program update, 2005-2006, by ASIAN DEVELOPMENT BANK, Lao PDR, July 2004.
22. Recommendations for Private sector Development in Lao PDR, Charles Schneider, Sengxay Phousinghao (SEM Specialist), T. A. No. 3737-LAO: Financial Sector development Program, Vientiane, by ASIAN DEVELOPMENT BANK, July 2002.

23. Mekong Private Sector Development Facility, Draft Strategy Plan for Business Enabling Environment Activities of MPDF, Prepared by Development Consultant International, March 2004.
24. MKGF Road Map 2002-20010, LAO PDR, Second Draft, 08 Dec 2003.
25. Prospects for Future Integration of Lao PDR' s Manufacturing Sector into ASEAN, Executing Agency: UNIDO, Government Counterpart Agency: Ministry of Industry and Handicrafts, Report prepared by: Mr. Mikael Brenning and Mr. Somneuk DAVADING, Vientiane, 20 March 2003.
26. Analysis of business Associations/group in Lao PDR, By Lao SNV, June 2004
27. UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION, Integrated Program for Lao PDR: Implementing the Medium-term Action Plan for Industrial Development, Component 2: Private Sector Development and SME Promotion Initial of start-up assistance towards the implementation of the April 2004 SME Decree (US/LAO/02/105), Options and Modalities for the Creation and Operation of an SME Fund in the Lao PDR, Revised Technical Report, 21 June 2005, By NICK J. FREEMAN and Somphone SISENGLATH, Project Manger: Juergen Reinhardt, UNIDO Vienna
28. UNIDO/NPORAD Intervention, STEA , Annual Report 2003-2004.
29. National Cattlemen's Beef Association. U.S Meat Export Federation. http://www.usmef.org.
30. Background Statistics: U.S. Beef and Cattle Industry, 2002 - 2005 by USDA united States Deartment of Agriculture,
31. Economic Research Service, The Economics of Food, Farming, Natural Resources, and Rural America. webadmin@ers.usda.gov, updated date: August 11, 2006.
32. Ireland dairy and beef supplies forge into EU markets (14.06.2006). http://www.litfood-fair .com/index.php?content=pages&Ing=It&page_id=71&news_id=1325
33. World Beef Overview by FAS online. http://www.fas.usda.gov/info/circular/2004/04-03 LP/beefoverview.html
34. Meat outlook to 2010-11. prospects for beef and veal, pigs and poultry by Frank Drum, Andrew Dickson and John Hogan. http://www.google.com/Asean Meat market.
35. Organic food From Wikipedia, the free encyclopedia and National Cattlemen's Beef Association.htm
36. Organic agriculture in the Lao PDR by PROFIL. www.laoprofil.org
37. Top Reasons to Go Organic by Ysanne Spevack, Editor OrganicFood.co.uk.
38. May2006, Natural beef profile overview by Reginald Clause, Value-added agriculture specialist, AgMRC, Lowa State University, rclause@iastate.edu. http://www.agmrc.org/agmrc/commodity/livestock/beef/naturalbeefprofile.htm and National Cattlemen's Beef Association.htm
39. http://www.American Grass Fed Beef .com
40. Organic Beef Production Guidelines by Steven McCoy, Organic Farming Project, Agriculture Western Australia. http://www.rirdc.gov.au/reports/ORG/00-189.pdf
41. University of California, Sustainable Agriculture Research and Education Program. http://www.sarep.ucdavis.edu/grants/Reports/nader/THINK.HTM
42. Europe.http://www2.dpi.qld.gov.au/extra/pdf/organicmeatmyth.pdf.
43. Standard of American Grass fed Association.100% Grass fed Ruminant Program ~ Measuring, Standards and Requirements Updated at Grazing America 2006.http://americangrassfed.org/standards.htm
44. Oklahoma Natural Beef. Skelton's Natural Beef, Roger and Jane Skelton, Rural Route 1, Box 25 A, Texhoma (Panhandle), 800.687.3821. Cypertfamilyfarm@juno.com http://www.cypertfamilyfarm.com/
45. American Grass Fed Beef and Typical Grocery Store Beef. http://.americangrassfed.com/comparison.asp

46. standard of American Grass fed Association, 100% Grass fed Ruminant Program ~ Measuring, Standards and Requirements Updated at Grazing America 2006 http://americangrassfed.org/standards.htm
47. The study of OTA and survey of the industry leaders.
48. USDA ERS http://.www.zwire.com/site/news.cfm?BRD=1163&dept_id=97662&newsid=1438299...10/16/2006
49. ERS 2005 http://.www.zwire.com/site/news.cfm?BRD=1163&dept_id=97662&newsid=1438299...10/16/2006
50. ERS 2005
51. Organic certification-Wikipedia, the free encyclopedia
52. Organic beef production and marketing in Australia. http://www.google.com/organic farm gate price in Japan.
53. Factors driving organic agriculture growth, Trends in market growth, http://www. Organic market shares refine
54. Grass fed Certification: The case of the Uruguayan Beef Industry. By John A. Fox, Lautaro Perez, and Michael Boland, May 2005. Agricultural Issue Center, University of California. www. aic.ucdavis.edu
55. Measuring the Intensity of Competition in the Japanese Beef Market. Journal of Agricultural and Applied Economics, Applied Economics - Find Articles.htm. 2004 by Reed, Michael R, Saghaian, Sayed H
56. Australian Cattle Mkt: Prices Tumble As Supply Jumps, 10/13/2006 5:52:00. Cattle Network - connecting the Beef industry Worldwide,htm
57. HUNGARY: ESTIMATES OF SUPPORT TO AGRICULTURE **Contact person: Dimitris Diakosavvasl** Email: Dimitris.Diakosavvas@oecd.org
58. Xieng Khouang field visit Feedback report and SADU data report
59. Kansas State University, Dept. of Agricultural Economics, August, 2002.
60. Japan grass fed per Kg. U.S Meat Export Analysis and Trade News, Meat Export Research Center, Lowa State University. 215F Meat Lab, Ames, IA 50011-1070
61. Organic beef production and marketing in Australia. http://www.google.com/organic farm gate price in Japan.