

# AUSTRALIAN AGRICULTURAL NUTRITION CONSULTING Pty Ltd

[www.aanc.com.au](http://www.aanc.com.au)

**International Agribusiness Consultants Specializing in Animal Protein based  
Food Production Supply Chains in Developing Countries**



**Modern 25,000 head feedlot for Australian live exported beef cattle in the Lampung province of Sumatra, Indonesia. This was in part designed, constructed and managed under the on-going supervision of AANC consultants from 1995 - 2005.**

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## **Managing Director and CEO - Dr JOHN C RICH**

**BVSc, BSc (Vet) (Uni Syd), MRCVS, MACVS, AABP**



Dr Rich is the Senior Regional Consulting Agribusiness Specialist for the International Finance Corporation (Turkey, Eastern Europe, Middle East and Africa), and also Managing Director and CEO of Australian Agricultural Nutrition Consulting Pty Ltd.

Dr Rich holds a BSc and a BVSc from the University of Sydney, is a member of the Australian College of Veterinary Scientists and a registered member of the Royal College of Veterinary Scientists, with post graduate experience in the food and finance industries.

***COMPANY COMPETANCY  
STATEMENT***



**AANC Pty Ltd**  
**COMPETENCY STATEMENT**

**ACN 003 243 249 ABN 64 003 243 249**  
**World Bank Vendor No. 79863**

AANC Pty Ltd is an approved International Finance Corporation consultancy provider (World Bank Vendor No. 79863) and has completed many major projects for IFC over the past 10 years, particularly for Animal Protein based Food Production companies in developing countries.

AANC commenced as an Australian beef feedlot consultancy business in 1990 and expanded into international beef and dairy consultancy in 1995, with the majority of work concentrated in Indonesia, Malaysia and the Philippines. A Turkish office was opened in 2005, at a time when the company's poultry and pig consultancy services were expanding rapidly. The Australian office now services SE Asia and China, with the Istanbul office servicing Turkey, Africa, Eastern Europe, Russia, Ukraine, Kazakhstan, Central Asia, and the Middle East.

**AANC is a consultancy service provider for AGRIBUSINESS and ANIMAL PROTEIN based FOOD PRODUCTION companies in DEVELOPING countries. The company specializes in:**

- **Feasibility Studies - Livestock & Food Production Projects.**
- **Agribusiness Appraisals – Livestock & Food Production Companies.**
- **Livestock Performance Improvement – through advice in Animal Health & Welfare, Ration Formulation & Nutritional Management.**
- **Cropping, Irrigation & Forage Development projects to support Livestock industries – Beef & Dairy, Sheep, Goat, Poultry & Pig.**
- **Detailed Financial & Operational Modelling.**
- **Quality Assurance and HACCP Plans.**
- **Biosecurity Planning and Implementation.**
- **Food Safety Programs.**
- **Environmental Management.**
- **Occupational Health & Safety.**
- **Compliance Auditing Services – in each of these disciplines.**
- **Staff Training – all aspects of Agribusiness & Livestock Production.**
- **Advice for Sales, Marketing & Distribution.**

**AANC currently engages 15 consultants well experienced in Australia, SE Asia, Turkey, Africa, Eastern Europe, Russia, China & the Middle East and for a range of projects throughout the developing world. These consultants include:**

- VETERINARIANS and BIOSECURITY specialists for the Ruminant, Poultry or Pig industries.**
- NUTRITIONISTS specializing in either Ruminants, Poultry or Pigs.**
- AGRONOMISTS with expertise in extensive Cropping, Forages, Pastures, Hay Making & Silage production systems.**
- ABATTOIR, FURTHER PROCESSING & DAIRY FACTORY specialists.**
- MILKING PARLOUR and HATCHERY specialists.**
- FINANCIAL MODELLING and AGRIBUSINESS specialists.**
- QUALITY MANAGEMENT, HACCP and FOOD SAFETY specialists.**
- ENVIRONMENTAL MANAGEMENT and OCCUPATIONAL HEALTH & SAFETY specialists.**
- Consultants willing to take on LONG TERM PLACEMENTS in Developing Countries, to supervise start-up projects.**

# **CURRENT & PAST** **PROJECTS**

***SNAP SHOT OF CONSULTING  
PROJECTS UNDERTAKEN,  
BY LIVESTOCK INDUSTRY TYPE***



***AFRICAN LIVESTOCK  
DEVELOPMENT & POVERTY  
ALLEVIATION PROJECTS  
(CATTLE, GOATS & SHEEP  
FEEDLOTING, CROP PRODUCTION,  
SLAUGHTER & EXPORT)***



# BOVIMA-AGRIFEED CATTLE & GOAT FEEDLOTING & EXPORT PROJECT

8,500 Cattle & 10,000 Goats in the Anosy Region of Southern Madagascar

Co-Funded by International Finance Corporation (World Bank Group)



## ***MADAGASCAR: 2015-2018 on-going***

**FULL CONSULTANCY SUPPORT – Feasibility Study, Infrastructure Design, Capital Expenditure Budgets, Financing Options, plus Technical Advisory covering Animal Health & Nutrition, Cropping & Irrigation, Abattoir Operations and Meat Export.**





**Feedlot construction should be completed by late 2019 and will incorporate a Quarantine Isolation Unit, prior to animal entry to the main Feedlot Pens.**





**Phase One of project development also involves the construction of an EXPORT ACCREDITED ABATTOIR.**

**The 'Mozbife' plant here in Mozambique is similar to that planned for Bovima.**



**Bovima - Agrifeed's main source of power will be a Photovoltaic Diesel Hybrid Generation system – similar to this supplied by SMA Solar Technology AG, Germany. Such systems, as well as Wind Turbines, have become the most cost effective technologies for power generation in remote locations.**





**The nearby Ifaho River Scheme has been planned to become the heart of a large IRRIGATION PROJECT to supply the feedlot. This will enable the contract growing by local village people of FRESH CORN, LEUCAENA and NAPIER GRASS for Bovima. Approx 4,000 ha are available near this river, only 10 km from the Feedlot site.**





**A large proportion of the Fresh Corn will be diverted to making CORN SILAGE, such as shown below (from a large feedlot in China).**







## LUNA EXPORTS ANIMAL FARM

### GOAT & SHEEP FEEDLOTING & EXPORT PROJECT

50,000 animals in the Tigray Region of Northern Ethiopia

Co-Funded by International Finance Corporation (World Bank Group)



## ***ETHIOPIA: 2016-2018 on-going***

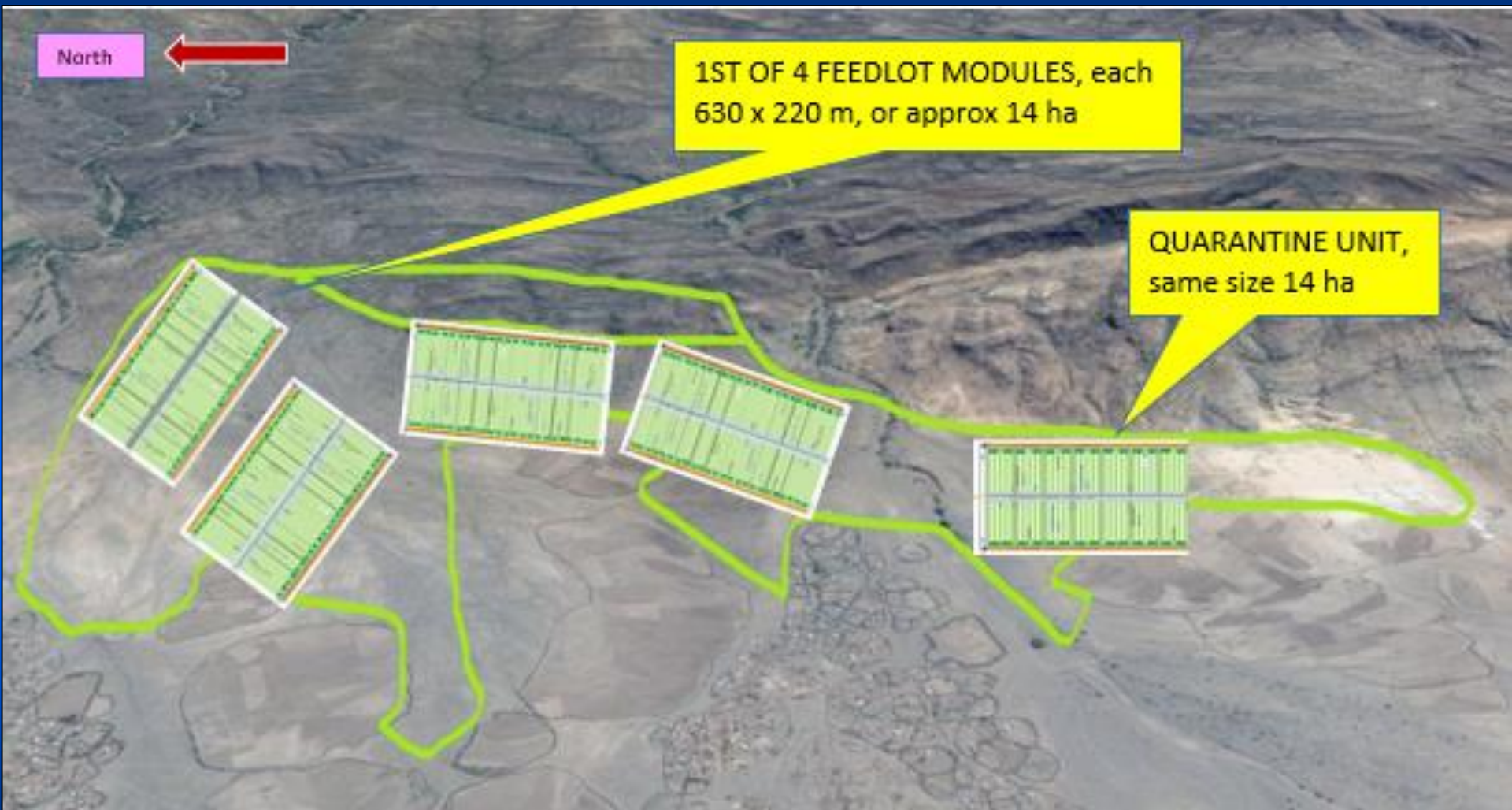
**FULL CONSULTANCY SUPPORT – Feasibility Study, Infrastructure Design, Capital Expenditure Budgets, Financing Options, plus Technical Advisory covering Animal Health & Nutrition, Cropping & Irrigation, Abattoir Operations and Meat Export.**



**Goat paddocks will be very long – 100 m x 50 m - with native vegetation retained wherever possible. This will enable goats' natural 'browsing' habits, which will help relieve boredom, stress and the associated risk of disease.**



**Phase Two full development of the LEAF Feedlot will involve 4 modules, collectively supplying 1,000 goats & sheep per day to the company's slaughterhouse at Modjo.**



**Feedlot Modules (each 630 m long, and holding 13,200 shoats per batch) shown on Google Earth image of site.**



**Planned cropping programs are to include Centre Pivot & Drip Irrigation units to grow  
CORN GRAIN, FORAGE CORN, FORAGE SORGHUM, ALFALFA and LEUCAENA,  
as well as CASSAVA and SWEET POTATOES.**





**Cropping programs will provide substantial employment for village people in the Tigray region. All Goats and Sheep will be grown and supplied by local communities.**



***BIOSECURITY, ANIMAL WELFARE &  
ANTIBIOTIC AUDIT &  
MANAGEMENT MANUALS WRITTEN  
FOR IFC CLIENTS GLOBALLY***



# ***IFC Biosecurity, Animal Welfare & Antibiotic Audit Manuals, 2017***

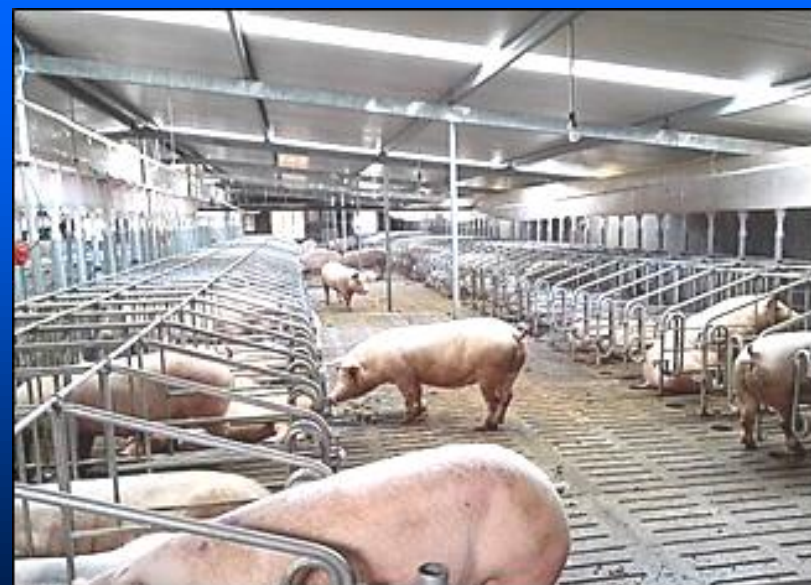
## **A.) – BEEF & DAIRY CATTLE, SHEEP & GOATS (Intensive & Extensive)**





# ***IFC Biosecurity, Animal Welfare & Antibiotic Audit Manuals, 2017***

## **B.) – POULTRY (BROILERS, EGG LAYERS, DUCKS & TURKEYS) and PIGS**



***LARGE SCALE BEEF CATTLE  
FEEDLOT PROJECTS IN DEVELOPING  
COUNTRIES***



# ***SUMATRA, INDONESIA: 1995-2004***

## ***– BEEF FEEDLOT & EXPORT ABATTOIR***

**FULL CONSULTANCY SUPPORT – Feasibility Study, Infrastructure Design, Capital Expenditure Budgets, plus Technical Advisory covering Live Exporting from Australia, Animal Health & Nutrition, Biosecurity, Commodity Supply Chain Management, Cropping & Silage, Abattoir Operations & Export Accreditation, plus QA.**





**This became the LARGEST BEEF FEEDLOT in INDONESIA, with 25,000 hd capacity. It included a Feed & Veterinary Laboratory and involved the training of local veterinarians in all matters of Cattle Medicine. The project also involved developing a LOCAL FARMER PARTICIPATION PROGRAM (PIR), whereby training & skills were transferred to local farmers who reared up to 20% of the cattle for sale.**



**ANIMAL PERFORMANCE MONITORING** was always a critical component of AANC's technical advisory. An example is the daily graphing of Dry Matter Intake (as a percentage of live weight) against Days on Feed – which is a valuable diagnostic tool in analyzing Average Daily Gain and Feed Conversion.





***EAST JAVA, INDONESIA: 1997-1998***

***- BEEF FEEDLOT & DAIRY HEIFER REARING***

**FULL CONSULTANCY SUPPORT – Feasibility Study, Infrastructure Design, Capital Expenditure Budgets, plus Technical Advisory covering Live Exporting from Australia, Animal Health & Nutrition, Biosecurity, Cropping & Silage Management, and QA.**





**This became the LARGEST BEEF FEEDLOT in EAST JAVA, with 7,000 hd capacity. It also served as a HEIFER REARING facility for the company's large Feedlot Dairy & Milk Processing operations, located in the highlands a few hours to the east.**



## ***WESTERN TURKEY : 2005-2011***

### ***- DAIRY BULL FEEDLOT & CALF REARING UNIT***

**FULL CONSULTANCY SUPPORT – Feasibility Study, Infrastructure Design, Capital Expenditure Budgets, plus Technical Advisory covering Animal Health & Nutrition, Calf Rearing Operations, FMD Biosecurity, Cropping & Silage Management and QA. It also covered a value added Further Processing Meat Division.**





**This became the LARGEST CATTLE FEEDLOT in TURKEY, with 18,000 hd capacity. Young bulls were reared in the CALF REARING UNIT and entered the feedlot at 60-80 kg and were fed for 12 months, until 450 kg (an ADG of 1.1-1.2 kg/day).**





**Strict BIOSECURITY MANAGEMENT and automated Milk Dispensing Units were key components of the modern CALF REARING UNIT.**





**Large scale CORN SILAGE production (with storage in huge plastic Silobags), together with ALFALFA HAY making, involved exhaustive planning and coordination of farmers, but were vital support components of the whole operation.**



# ***SUMATRA, INDONESIA: 2005-2007***

## ***- BEEF FEEDLOT***

**NUTRITION & ANIMAL HEALTH CONSULTANCY – Feed Commodity Management & Ration Formulation, Silage Management, Hospital Pen Establishment, Development of Biosecurity Plan and Feedlot Standard Operating Procedures.**





**Located south of Lampung in South Sumatra, this feedlot was a joint Australian – Indonesian partnership, with a 10,000 hd capacity and regarded the country's most advanced feedlot.**





**Pen riding with Australian Stockhorses was introduced to more accurately select any sick cattle from newly arriving shipments for drafting into Hospital Pens.**





***SUMATRA, INDONESIA: 2012***

***- BEEF FEEDLOT & BREEDING UNIT***

**NUTRITION, ANIMAL HEALTH & OCUPATIONAL HEALTH & SAFETY CONSULTANCY**

**– Feed Commodity & Silage Management, Ration Formulation , Calf Rearing, Herd Health, and Feedlot Standard Operating Procedures.**





**Located north of Lampung, this large older feedlot was expanded to a capacity of 15,000 hd, including cows & calves. 'Creep Feeding' setups were a feature of BREEDER PENS, with cows blocked from accessing their calves' special rations.**



## ***KLUANG, MALAYSIA: 2000-2004***

### ***- BEEF, SHEEP & GOAT FEEDLOT & SLAUGHTER UNIT***

**NUTRITIONAL & BIOSECURITY CONSULTANCY – Feed Commodity & Silage Management, Ration Formulation, plus Biosecurity Plan Development.**

**Developed for the feeding of live exported Australian cattle, this was the largest feedlot in Malaysia, with a capacity for 6,000 Cattle, plus 2,000 Sheep & Goats.**





# ***LUZON, THE PHILIPPINES: 1999-2002***

## ***- BEEF FEEDLOT***

**NUTRITIONAL & ANIMAL HEALTH CONSULTANCY – Feed Commodity & Silage Management, Ration Formulation, plus Animal Health & Biosecurity.**

**Located in the Pampanga district of Luzon, this feedlot was one of the largest in the country, with a capacity for 5,000 head, and relied on the importation of live cattle from Australia.**



## ***TIMIKA, IRIAN JAYA: 2005***

### ***- BEEF FEEDLOT***

**NUTRITIONAL & ANIMAL HEALTH CONSULTANCY – Feed Commodity & Silage Management, Ration Formulation, plus Animal Health.**

**The only commercial feedlot in Irian Jaya, and developed to supply meat to the Freeport Copper Mine. It faced extreme challenges under a very high rainfall, tropical climate. Capacity was 2,000 hd, with cattle imported from Australia.**





***“SE ASIAN FEEDLOT HEALTH MANUAL”***

***and “SE ASIAN GOAT MANUAL”***

***written for***

***MEAT & LIVESTOCK AUSTRALIA***

# ***PUBLICATIONS FOR MEAT & LIVESTOCK AUSTRALIA: 2007***

Contracted to write –

**“THE SE ASIAN FEEDLOT HEALTH MANUAL” and “THE SE ASIAN GOAT MANUAL”.**





***LARGE SCALE DAIRY FEEDLOT &  
MILK FACTORY PROJECTS IN  
DEVELOPING COUNTRIES***

## ***WESTERN TURKEY: 2011-2012***

### ***– DAIRY FEEDLOT, MILK FACTORY with Branded Products***

**FULL CONSULTANCY SUPPORT – Technical Advisory covering Animal Health & Nutrition, Biosecurity, Cropping & Silage Management, plus Business Planning for Dairy Market development.**





**This was the largest fully integrated INTENSIVE DAIRY in western Turkey, with 6,150 Holsteins in total (2,600 milkers, 350 dry cows, 3,200 heifers & calves). The enterprise included two dairy farm sites, 170 ha of cropping land, a large Ruminant Feed Mill, plus Veterinary & Feed Testing Laboratories.**





**The AANC consultancy involved long term daily involvement in all processes – from Ration Formulation, Veterinary Health, Biosecurity & Animal Welfare, to Farming Operations and Business Planning for the company's branded dairy products from their own Milk Factory.**

**(Recently weaned heifer calves shown here in grow-out pens.)**





**Delivery truck and Silage Compactor in operation filling plastic Silobags with Corn Silage on a large concrete storage pad.**

**Other wet products stored included Alfalfa Silage, Tomato Waste, Citrus, Apple & Grape Pomace. Silobags were an efficient storage method and held up to 200 tonnes of wet product at approx 65% moisture.**



**The company's impressive modern Milk Factory, located 35 km from the farm, with a daily raw milk processing capacity of 360,000 Ltr (internal & external supply).**

**Branded dairy products included a wide range of hard & soft cheeses; traditional & savoury diluted yogurts (Ayrar); butter; UHT, fresh & fermented milks.**

**The AANC consultancy also covered the preparation of an External Milk Supplier HACCP-based Accreditation Program.**





## ***EAST JAVA, INDONESIA: 1999-2005***

### ***– DAIRY FEEDLOT & MILK FACTORY with Branded Products***

**FULL CONSULTANCY SUPPORT – Feasibility Study, Infrastructure Design, Capital Expenditure Budgets, plus Technical Advisory covering Live Exporting from Australia, Animal Health, Reproduction, Biosecurity, Nutrition, Commodity Supply Chain Management, Cropping & Silage.**



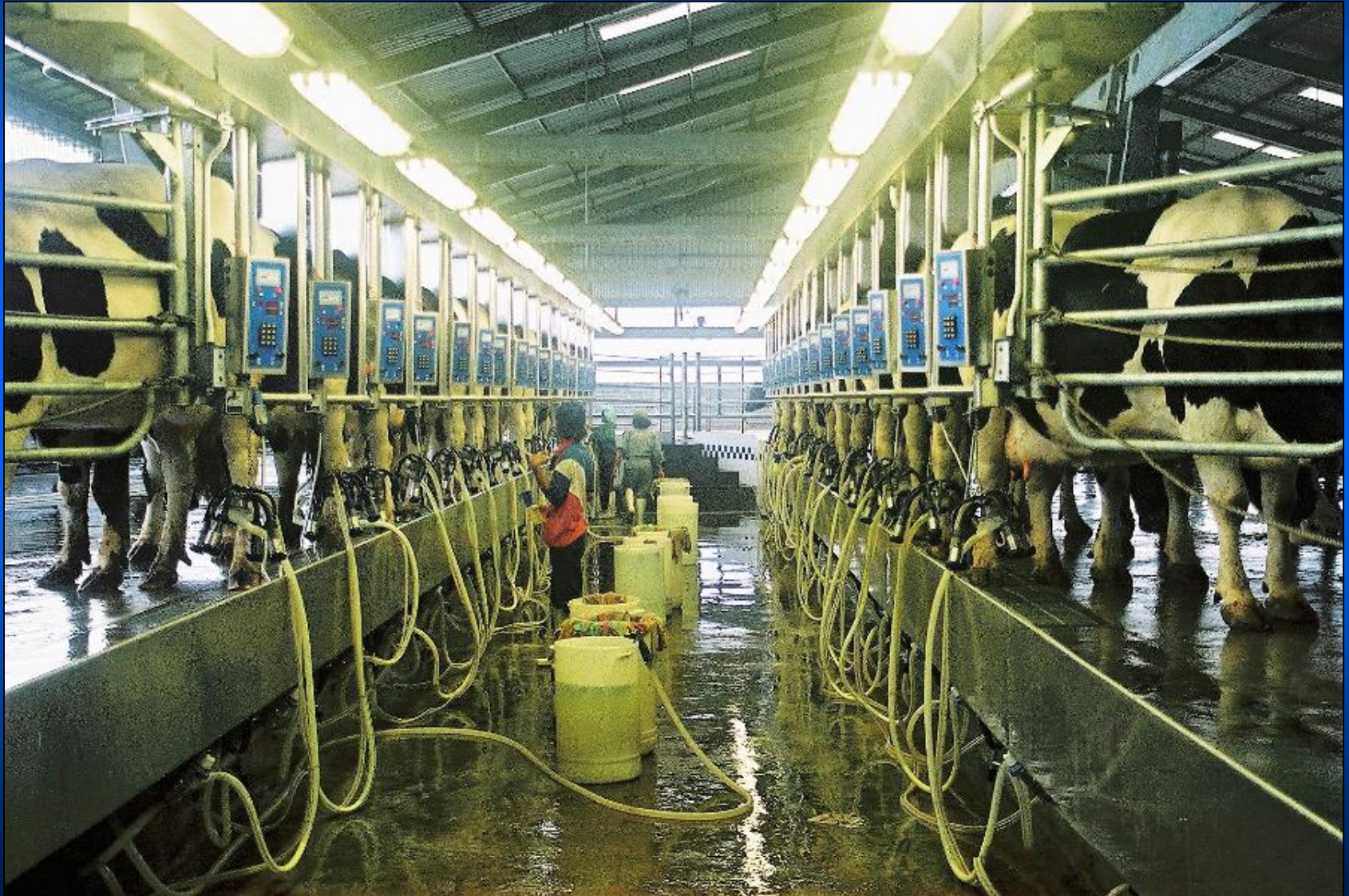
**This farm became the largest fully integrated DAIRY FEEDLOT in Indonesia, with a milking herd of 2,000 Australian live exported Holstein Friesian cows, plus a rapidly expanding herd of growing Heifers & Calves. Heifers were often reared at the company's nearby Beef Feedlot in East Java.**

**Spectacular view below of calf rearing hutches in the foreground of Mt Gunung Kawi.**





**The training of local Indonesian milkers and veterinarians in best practice MILKING PARLOUR management was a vital component of the project, with rigorous hygiene protocols imperative to prevent Mastitis and other endemic bacterial and viral diseases in the herd.**





**Following AANC assistance in QA and HACCP Plan development, the farm's adjoining MILK FACTORY succeeded in gaining Australian Government (AQIS) approval to export UHT plain & flavoured milks to Australia in 2002, an achievement never previously reached by a SE Asian country. The company is currently a successful fresh milk supplier to Indonesia, Singapore and Hong Kong.**





**TETRA BRIK ASEPTIC Ultra High Temperature packaging plant, featuring state of the art hygienic product treatment and presentation technology, which also incorporated modern Cleaning-In-Place (CIP) processes. This equipment enabled packaging in various shapes & sizes and was also used for fruit juices.**



# ***For AUSTRALIAN TRADE COMMISSION: 2010***

## ***- INTERNATIONAL DAIRY INDUSTRY CAPABILITY STUDY***

**RESEARCH PROJECT - “Capability Assessment of the Australian Dairy Industry for the supply of Australian Dairy Livestock, Food Products, Technology and Services to 14 potential Export Markets in Developing Countries.”**

**This generated a 320 page report, with a section of a key summary table below:**

FINAL RANK	COUNTRY	Real GDP Growth % Change y-o-y 2010 (f) IMF	BMI Agribusiness Environment Rating 2010	Retail Value DAIRY Market CAGR% 2004-2009	Retail Value DAIRY Market US Dollars 2010	Total TRADE with Australia mn AU Dollars 2009	Geographical Proximity to Australia (km by air) ?
	Score (best-worst)	28-2	28-2	28-2	14-1	14-1	14-1
		Scores based on standard ranking of numerical data, with weighting of either 1x or 2x					
1	CHINA	28	24	18	14	14	9
2	INDIA	26	16	26	10	13	9
3	INDONESIA	22	10	24	6	11	14
4	RUSSIA	10	26	28	12	4	3
5	PHILIPPINES	6	18	14	5	6	12
6	VIETNAM	20	12	20	2	10	12
7	MALAYSIA	14	22	4	3	12	13
8	BRAZIL	24	28	12	13	5	1
9	TURKEY *	18	8	16	9	3	4
10	SAUDI ARABIA	8	20	10	8	8	5
11	PAKISTAN	4	2	22	1	2	6
12	MEXICO	12	14	2	11	7	2
13	EGYPT	16	6	6	4	1	4
14	SOUTH AFRICA	2	4	8	7	9	6
	<u>Max possible</u>	28	28	28	14	14	14



***ABATTOIR & FURTHER PROCESSING  
OF BEEF IN DEVELOPING  
COUNTRIES***

***JAKARTA, INDONESIA: 1996-1998***

***– BEEF ABATTOIR, FURTHER PROCESSING & EXPORT***

**FULL CONSULTANCY SUPPORT FOR – Construction of beef slaughter chain, boning room & packaging/cold storage. Obtaining of Export Licenses to Malaysia & The Philippines and achieving McDonald's Supply Accreditation were components of the advisory. Export Accreditation involved development of a HACCP program, in-house Meat Laboratory, trace back MIS systems, and QA for the complete supply chain.**





**Further processing of beef from cattle live exported from Australia and reared in the company's Indonesian feedlots, into hamburger patties for McDonalds was a task dependent on extensive Staff Training & daily supervision, plus diligent Food Safety and Quality Assurance programs in place at all times.**



## ***RUSSIA & CENTRAL AMERICA: 2010-2011***

### ***- RED MEAT SLAUGHTER & PROCESSING PLANTS***

- For International Finance Corporation - Investment Appraisal of the largest Beef Slaughter, Processing & Export company in NICARAGUA, in 2010 (photo below).
- Preliminary Investment Appraisal of one of MOSCOW's largest beef & sheep meat further processing plants, in 2011.



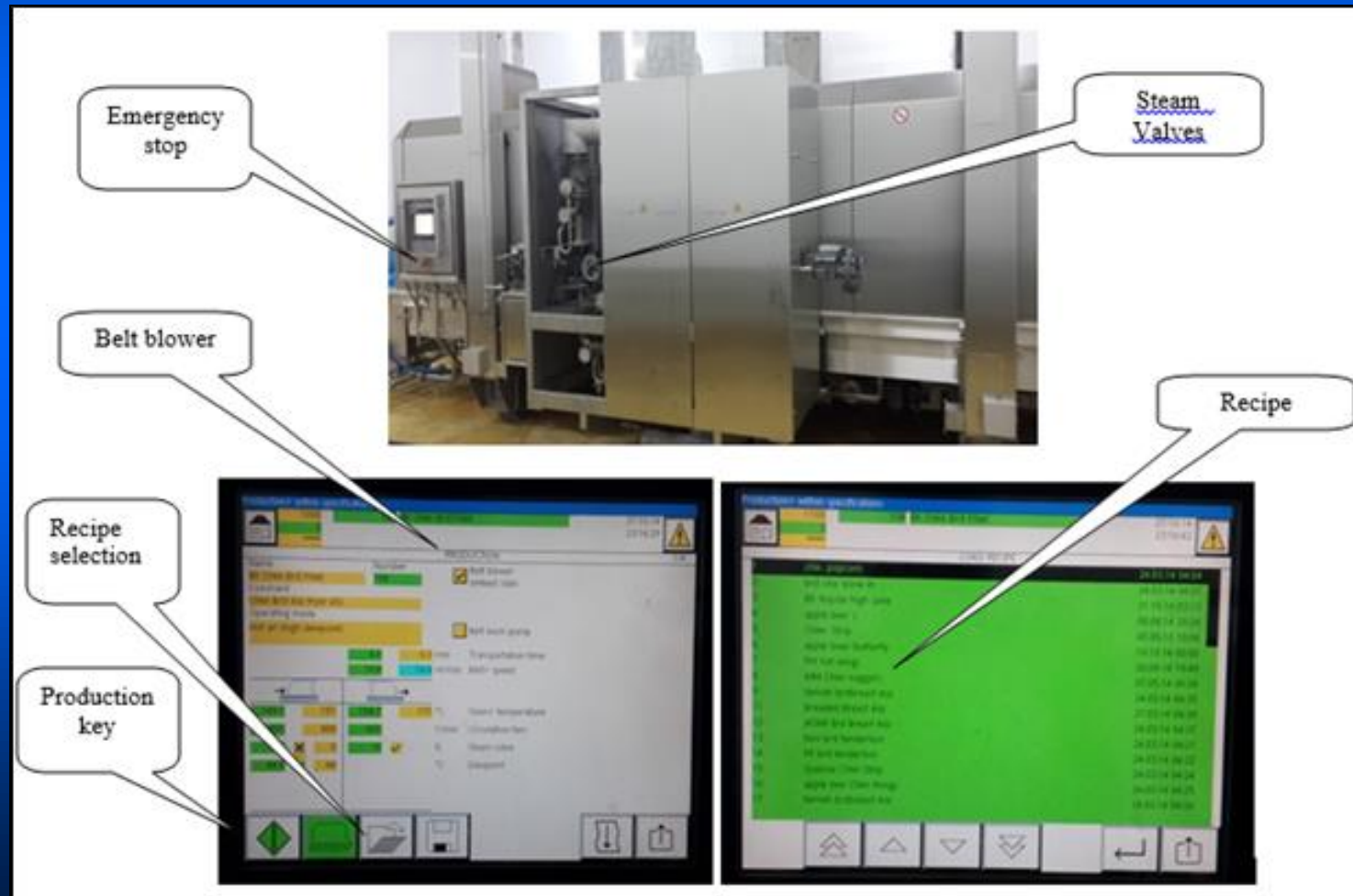


# ***DUBAI, UNITED ARAB EMIRATES: 2017-2018***

## ***– BEEF & CHICKEN FURTHER PROCESSING & EXPORT***

**CONSULTANCY FOR – Reviewing the adequacy of Standard Operating Procedures in place for all operations, including Factory Processes, Quality Assurance, Food Safety, Raw Material Purchasing and Finished Product Specifications.**

**An Operational Due Diligence of the plant was also undertaken.**



***LARGE SCALE POULTRY  
BUSINESS CONSULTANCIES IN  
DEVELOPING COUNTRIES***



## ***WESTERN TURKEY: 2017-2018***

### ***- ALTERNATIVE HOUSING SYSTEMS FOR EGG LAYING HENS***

**For European Bank for Reconstruction & Development –**

**“Programme for Improving Animal Welfare Standards in Agribusiness – Developing the Business Case for Transitioning to Higher Welfare Systems for Egg Laying Hens.”**

**Case Study with Turkey’s largest Commercial Egg Producer**



**Enriched Cages**



**Cage-Free Aviary**

## SUMMARY OF HOUSING COSTS, DIMENSIONS, BIRD NUMBERS & SPACE ALLOWANCES

	BATTERY CAGES	ENRICHED CAGES *	AVIARY	FREE RANGE	ORGANIC
House Dimensions, metres	110 x 16 x 3.2 m	110 x 16 x 3.2 m	110 x 16 x 3.2 m	100 x 16.5 x 3.2 m	100 x 16.5 x 3.2 m
Cage Dimensions	120 x 62.5 cm; 14 hens	360 x 120 cm; 57 hens			
# Space per hen - inside	536 cm <sup>2</sup> /hen	758 cm <sup>2</sup> /hen	9 hens/m <sup>2</sup>	9 hens/m <sup>2</sup>	6 hens/m <sup>2</sup>
# Space per hen - outside				4 hens/m <sup>2</sup>	4 hens/m <sup>2</sup>
Total Investment Cost, TL	1,279,224	1,561,301	1,799,346	732,082	730,785
Hen Numbers (max)	36,120	24,795	33,484	14,850	9,900
Capacity compared to Battery	100.0%	68.6%	92.7%	41.1%	27.4%
Cost of Housing, TL per Hen	<b>35.42</b>	<b>62.97</b>	<b>53.74</b>	<b>49.30</b>	<b>73.82</b>
# To comply with EU Standards		* EU Type B cages			

## RETURN ON INVESTMENT COST (YEARS) FROM ALTERNATIVE HOUSING SYSTEMS

ROI Time with EGG PRICES at Feb'18, and FEED PRICES at Dec'17					
	Eggs Produced in Alternative Housing Systems				
	BATTERY CAGES	ENRICHED CAGES	ORGANIC	FREE RANGE	AVIARY
EGG SALES PRICES, TL per Egg (Feb'18)	0.3566	0.3566	0.8856	0.5271	0.5271
FEED PRICES, TL per Tonne (Dec'17)	1,092	1,092	1,573	1,092	1,092
ROI for ONE POULTRY HOUSE, years	0.85	1.50	0.45	0.61	0.63



## ***For EUROPEAN BANK FOR RECONSTRUCTION & DEVELOPMENT : 2018***

**Preparation of presentation for EBRD and Animal Industry representatives –**

### ***“THE BENEFITS FOR COMPANIES FROM IMPROVING ANIMAL WELFARE PRACTICES”***



**As stated by OIE in their 2014 TERRESTRIAL ANIMAL HEALTH CODE, two of the fundamental Guiding Principles for Animal Welfare are:**

- 1. There is a critical relationship between ANIMAL HEALTH and ANIMAL WELFARE, and**
- 2. That improvements in Animal Welfare can often improve PRODUCTIVITY and FOOD SAFETY, and lead to ECONOMIC BENEFITS.**

## ***BAKU, AZERBAIJAN: 2015-2018 on-going - INTEGRATED BROILER & FEEDMILL***

**For International Finance Corporation - AANC has provided 4 consultants to date for Veterinary & Business Management support (long term placements), as well as Biosecurity and Nutritional assistance, for integrated Broiler operations (12,000 MT chicken meat/yr) near Baku, Azerbaijan.**



**Russian winters create special challenges in Azerbaijan, including the heating of broiler houses and the freezing of farm entrance Disinfectant Pools, which makes Biosecurity more complex.**



## The harsh reality of an AVIAN INFLUENZA outbreak on company farms





# ***ABIDJAN & YAMOUSSOUKRO, IVORY COAST: 2015-2017*** ***- INTEGRATED POULTRY - BROILER, EGG LAYER, FEEDMILL***

**For International Finance Corporation - AANC provided 5 consultants for Veterinary (long term placement), Nutritional & Agribusiness advisory services, and is soon to provide additional consulting support for Processing, Hatchery & Feedmilling divisions for the company's fully integrated poultry operations (3,700 MT chicken meat/yr and 120,000 MT feed ), based in Abidjan, Ivory Coast, West Africa.**



**New Feed Mill & Corn Drying Silo at Yamoussoukro, and Broiler Breeder hens near Abidjan.**  
**Poultry in West Africa always special face challenges from high heat & humidity.**



# Hatchery rooms and Commercial Broiler farms in Ivory Coast





# ***Near RIYADH, SAUDI ARABIA: 2013-2015***

## ***- INTEGRATED BROILER , PROCESSING & FEEDMILL***

**Agribusiness Advisory & Technical Support for 27,000 MT meat/year operations. AANC provided 5 consultants for Veterinary, Nutritional & Agribusiness advisory services, support for Processing, Hatchery & Feed milling divisions, Biosecurity Auditing, KPI monitoring, Performance evaluation and the development of Biosecurity and Poultry Husbandry SOPs.**





**Despite the desert isolation of poultry farms, productive operations were evident.**





***KIEV & CRIMEA REGIONS, UKRAINE: 2007-2014  
- CROPPING, BROILER, FEEDMILLING, PROCESSING,  
BRANDED PRODUCTS & EXPORT (350,000 MT meat/year)***

**For International Finance Corporation - AANC provided 4 consultants over an extended period for advisory services in Supply Chain Management, Veterinary & Nutritional management, Biosecurity, Primary Processing & Value Added products, as well as Performance Evaluation. This included modeling and management training, including the development of QA and HACCP systems for supply to McDonald's Ukraine and export to EU. Also included was advice in sales plan development, brand development strategy and margin mix analysis.**





# ***UST KAMENOGORSK, KAZAKHSTAN: 2010-2014***

## ***- INTEGRATED BROILER, FEEDMILL & PROCESSING***

**For International Finance Corporation - Agribusiness Advisory & Technical Support for broiler operations (10,000 MT meat/year).**

**AANC provided 4 consultants for Agribusiness, Biosecurity and HACCP Plan development, Nutritional, Feedmilling, Supply Chain Management, Agronomic and Land Valuation advisory services.**



# ***ASTANA, KAZAKHSTAN: 2009-2010***

## ***- REVIEW OF THE POULTRY MEAT SECTOR OF KAZAKHSTAN***

**For FAO - VALUE CHAIN ANALYSIS AND DEVELOPMENT OPTIONS.**

**In-Country Study and Large Report.**

- **AANC provided a consultant for 6 weeks for this project, based at the ‘Analytical Centre for Economic Policy in Agricultural Sector’ in Astana. A wide variety of Kazakh breeder and broiler operations were analysed, as well as processing plants, plus sales & distribution channels.**
- **During this period, AANC provided a second consultant to conduct a review of the “Poultry Meat Sector Master Plan” for the ‘Analytical Centre for Economic Policy in Agricultural Sector’.**





# WINTER-TIME POULTRY CONSULTANCIES IN UST KAMENOGORSK





***BANDIRMA, WESTERN TURKEY: 2005-2010***  
***- FULLY INTEGRATED BROILER, FEEDMILLING, PROCESSING,***  
***BRANDED PRODUCTS & EXPORT (100,000 MT meat/year)***

**For International Finance Corporation - AANC provided 6 consultants over a 5 year period for on-going advisory services in Veterinary Management, Biosecurity Planning, Feedmilling Efficiencies, Primary & Secondary Processing (value-added fully cooked & semi cooked coated line chicken meat for export to EU), Marketing & Distribution, Quality Management Systems, plus KPI Monitoring and Performance Evaluation.**





# AANC support from FEEDING → BREEDING → GROWING → PROCESSING



***LARGE SCALE PORK BUSINESS  
CONSULTANCIES IN DEVELOPING  
COUNTRIES***



## ***HENAN PROVINCE, CHINA: 2015***

### ***- ONE OF CHINA'S LARGEST PORK COMPANIES (55,000 sows)***

**For International Finance Corporation - AANC provided a consultant to conduct an AUDIT OF ANIMAL WELFARE PRACTICES and provide technical advice on IFC's Pilot Project on Animal Welfare. This piggery was a huge operation, with commercial, parent & grandparent herds spread over 26 farms.**



**The final Audit Score given was an impressive 86.6%**



# CCTV Surveillance over company operations has become an important component of modern day Animal Welfare and Biosecurity protection for large operations.





## ***CENTRAL ROMANIA: 2015***

### ***- PORK ABATTOIR refurbishment, Supply Chain development & Product Export***

**AANC was contracted for 6 months to Project Manage the development of a Business Plan, Refurbishment & Start-up Plan for a new investor in a Pork Abattoir and deboning facility in Romania. The plant was to process up to 10,000 pigs/week to supply domestic and export markets in Europe and beyond. The role also involved improving supply chain strategies and redesigning processing operations to improve efficiencies and return on investment. AANC conducted an Agribusiness Appraisal, determined Capex requirements and provided advice on capital Raising options.**



***LIPETSK & VORONEZH regions of RUSSIA: 2015***  
***- RUSSIA'S 2<sup>ND</sup> LARGEST PORK COMPANY (85,000 sows)***

**AANC provided 2 consultants to conduct Biosecurity and Animal Welfare Audits of this company's Swine and Poultry Divisions.**



**Final Audit Scores given were 86.0% (Biosecurity) and 83.7% (Animal Welfare)**



# ***POLAND and UKRAINE : 2013***

## ***- PORK AGRIBUSINESS APPRAISAL***

**For International Finance Corporation - Dr John Rich conducted a detailed Agribusiness Appraisal and Business Modelling of a large Danish pork production company for IFC during Jan-Mar, 2013. This fully integrated group operated the second largest pork production company in Poland (18,000 sows) and the third largest in the Ukraine (9,400 sows).**



## ***HENAN PROVINCE, CHINA: 2011***

### ***- ONE OF CHINA'S LARGEST PIG COMPANIES (40,000 sows)***

**For International Finance Corporation - AANC provided a consultant (with a 2nd in remote support) to conduct a BIOSECURITY AUDIT and provide VETERINARY ADVICE for a huge piggery operation, with commercial, parent & grandparent herds spread over 22 farms, and with it's own ISO 22,000 (Food Safety) accredited Feed Mill.**



**The main identified disease risks were:**

- 1.) Porcine Reproductive & Respiratory Syndrome (PRRS),**
- 2.) Porcine Epidemic Diarrhoea (PED), 3.) Transmissible Gastro-Enteritis (TGE)**



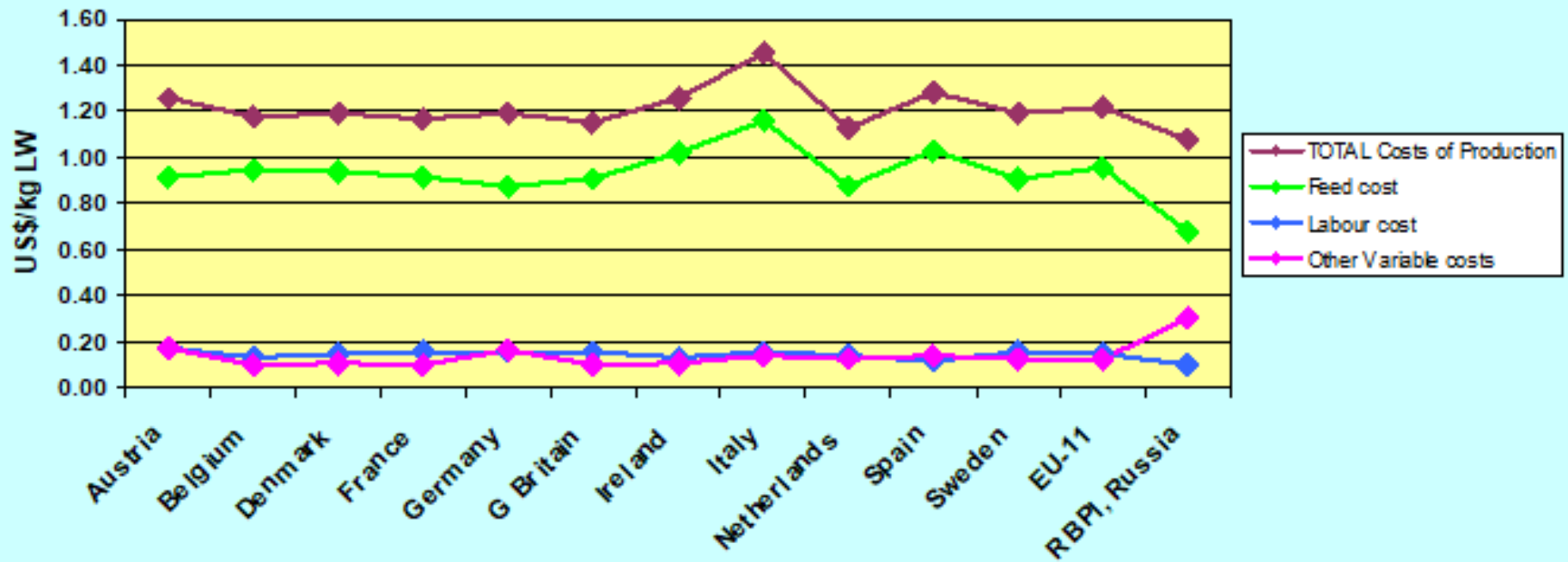
**By 2012, the company produced 1 million pigs/year, worth US\$ 600 million in sales**



## ***PRAVDINSK region of western RUSSIA: 2010-2012*** ***- PORK AGRIBUSINESS APPRAISAL***

**For International Finance Corporation - Dr John Rich conducted a detailed Agribusiness Appraisal and Business Modelling of a large Danish and Norwegian invested pork production company with 3,500 sows near Kaliningrad, during 2010 (with updates performed in 2012).**

Split of Pork Costs of Production - Europe 2008 + RBPI 2009





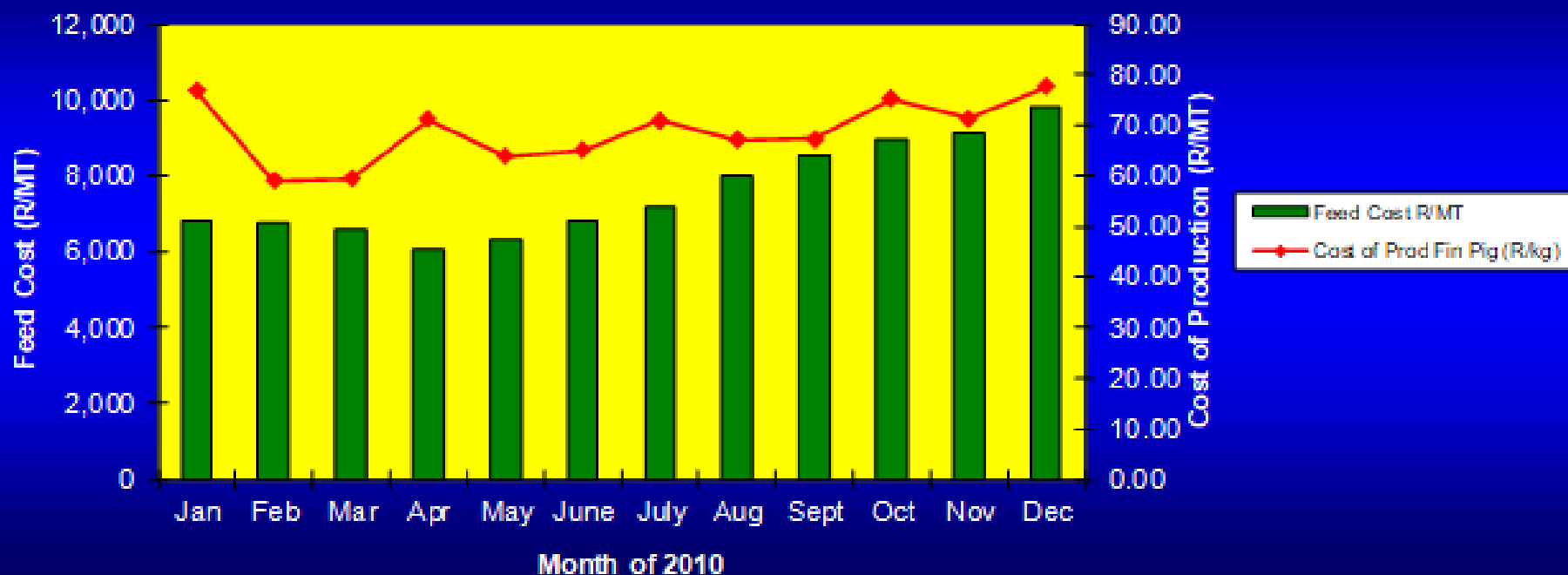
## ***BELGOROD REGION of RUSSIA: 2010-2011***

### ***- INTEGRATED PORK PRODUCTION COMPANY (16,000 sows)***

**For International Finance Corporation - AANC provided 2 consultants for an extended period of time for advisory services in Agribusiness, Veterinary & Biosecurity Management, Diet formulation, KPI Monitoring and Performance Evaluation.**

**[This was in association with AANC consultancy services for the same company's large fully Integrated Poultry Meat operations (120,000 MT chicken/year).]**

**Feed Cost and Cost of Production of Finished Pig, 2010**



***FEED MILL EXPORT  
ACCREDITATION PROJECT IN  
INDONESIA***



# ***LAMPUNG, SUMATRA, INDONESIA: 2000-2002***

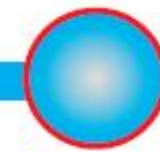
## ***- RUMINANT FEEDMILL ACCREDITATION FOR EXPORT***

**FULL CONSULTANCY SUPPORT FOR - Feasibility Study and long term on-site Technical Assistance with Upgrading and Commissioning a large old Feed Mill to manufacture SHIPPING PELLETS for export to Australia for the Live Cattle Export Trade. The AANC consultant also acted as Feed Mill Nutritionist for a 2 year period.**



**This project involved obtaining an IMPORT LICENSE from the Australian Quarantine & Inspection Service (AQIS), which was only possible after implementing a rigorous HACCP and Biosecurity Plan throughout all Feed Supply Chain, Pellet Manufacture and Shipping Container loading processes. This became the first feed mill in SE Asia licensed to export pelleted feeds to Australia.**

**Shown below are the Pellet Conditioner and Hydrothermal Sterilizer critical to achieving the AQIS specified pellet heat treatment of 85° for 3 minutes.**



## Sterilizer



### KAHL Hydrothermal Sterilizer

The sterilizer is appropriate for the hygienic treatment of coarsely structured meal feed, such as layer or pig feed. A commercial sterility is reached.

The feed is free of pathogenic bacteria, such as:

- coliform bacteria
- salmonellae
- toxigenic moulds
- E-Coli bacteria
- campylobacter



**Export Feed Mill RAW MATERIAL STORAGE WAREHOUSE - giving an indication of the scale of operations soon after project start-up in 2002. A high percentage of bags shown here contained ONGGOK – a by-product from the usage of CASSAVA tubers in Tapioca Starch Factories across Southern Sumatra. Onggok was the most cost effective base ingredient in Shipping Pellet manufacture.**



***LARGE SCALE AQUACULTURE  
BUSINESS APPRAISALS IN ECUADOR  
AND TURKEY***



## ***ECUADOR: 2015 & 2017***

### ***- AQUACULTURE BUSINESS APPRAISAL (Farmed Shrimp)***

**For International Finance Corporation –**

**Business Appraisal of a large fully integrated hatcher, processor, and exporter of Shrimp in Ecuador. The company is the country's 3<sup>rd</sup> largest Shrimp exporter, and has a strong commitment to environmental and social sustainability.**



**Seafood is a faster growing protein segment than chicken, beef and pork. There is strong long term global demand for shrimp, which is the world's most traded farmed seafood variety.**

# ***WESTERN & SOUTHERN TURKEY: 2013*** ***- AQUACULTURE BUSINESS APPRAISAL (Sea Bass & Sea Bream)***

**For European Bank for Reconstruction & Development –  
Business Appraisal of the largest producer and exporter (exporting to more than 40  
countries in 2012) of FISH PRODUCTS in Turkey.**



**Turkey has the potential to overtake Greece as the world's largest exporter of temperate water  
Sea Bass and Sea Bream.**



***COMPANY***

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