

Trip Report

Beyond Java

- Industry engagement, relationship development and market opportunities in the Nusa Tenggara Economic Corridor -





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1 Executive Summary

The live cattle trade between Northern Australia and Indonesia has developed due to the natural synergy and competitive advantage between the two regions. Northern Australia holds efficient and low cost breeding capacity, while Indonesia excels in the feeding and finishing of cattle for slaughter to supply protein to a large population (246 million¹) and an increasing middle class.(>40 million). There has been a decline in Australian live cattle exports to Indonesia from the peak in 2009/10 (750,000 hd) due to import policy changes within Indonesia and Australian government actions, including the suspension of exports on 2011 due to animal welfare issues. From 2010 to 2013 import of live cattle into Indonesia had been subject to an annual quota, established to mirror Indonesian government projections of domestic production and consumption and the delivery of beef self-sufficiency by 2014.

As part of Indonesian government plans to increase beef production, the eastern provinces (West / East Nusa Tenggara and Papua) have been identified as prospective for increased cattle breeding and the supply of feeder animals to feedlots in the high population areas of Java and Sumatra. Indonesian and provincial governments have been actively encouraging investment by Australian industry, business and government in these provinces and has encouraged Australia to view co-investment in the Indonesian cattle production sector as part of the overall trading relationship. It has also been made clear that Indonesia seeks business investment over aid or program investment.

While there is a long history of investment in Indonesia and the eastern provinces by Australian government and industry, involving capacity development, agricultural aid and research projects conducted by organisations such as ACIAR (Australian Centre for International Agricultural Research), it is generally not well known or acknowledged within Indonesian government circles. The renewed Indonesian call for Australian business investment in the eastern provinces has to the main, not been investigated by industry. Expectation by Indonesia, coupled with an Australian industry need to be better informed and engaged, initiated a regional tour by a selected group of Northern Territory Cattlemen's Association (NTCA) executive, members, staff and NT government officials to East Nusa Tenggara (NTT) and Lombok. Funded through the Asian Century Business Engagement Plan (Funded by Austrade) the tour of NTT is part of a wider business and market sensing exercise in developing Asian markets. The regional tour and report (Beyond Java: Industry engagement, relationship development and market opportunities in the Nusa Tenggara Economic Corridor) aims to establish renewed understanding of the region and the factors influencing current and potential increased cattle production. The information gathered is to be provided to NTCA members, Indonesian and Australian industry and government.

¹ World Bank 2012



The Industry tour was conducted from 15^{th} – 22^{nd} October 2013 and included:

- Meetings with provincial authorities and existing industry to discuss potential partnership development, production systems, infrastructure, logistics and land tenure.
- Inspection of prospective market areas and enterprise to assess collaborative/ complementary development opportunities.

The region visited included the islands of Sumba, West Timor and Lombok. Sumba and West Timor are part of Nusa Tenggara Timor (NTT). Lombok is in Nusa Tenggara Barat (NTB) and all these islands are to the east of Bali, to West Timor.

The NTT region is typically arid and isolated in comparison to Bali, Java, and Sumatra. Soils are generally less fertile with reduced pasture and feed-stuff production. The region experiences a range of challenges including a lack of infrastructure and logistics, government involvement in the supply chain including regulation, appears to be increasing cost and efficiency of production. Access to the large markets of Java and Sumatra involves long and costly transport by land and sea also exceeding the cost of transport of heavier Australian cattle to the same market.

Historically, Australian government and industry have participated in the region by way of agricultural aid projects, research and development. A 2012/13 draft report produced by ACIAR provides a good synopsis of the prevailing conditions in the region and resulting opportunities²Draft Report. Eastern Indonesia agribusiness development opportunities - analysis of beef value chains, Collins Higgins Consulting Group Pty Ltd 2012 The tour visited a selected number of ventures which had been or are currently run with the involvement of government or non-government agencies. In general the efficiency and viability of the projects visited was questionable with physical indicators of decreasing productivity including weed incursion, poor maintenance and infrastructure investment, technical, operational and strategic management oversight.

The drive to increase business investment in the regions cattle sector must be a good value proposition which can attain economic viability, improving livestock productivity and the supply chain to market, while increasing security and certainty for business through improved land tenure and regulatory mechanisms. For Australian business this would also need to include acknowledgement of that result, and effort by way of improved terms in the greater live cattle and beef trade to Indonesia. Effectively cementing and securing Australia's position as a preferred supplier of beef and cattle to Indonesia

² Draft ACIAR Report. Eastern Indonesia agribusiness development opportunities - analysis of beef value chains, Collins Higgins Consulting Group Pty Ltd 2012



The opportunities identified by the tour group can be grouped into the following categories:

- 1. Goodwill and cooperative initiatives to lift capacity and returns to small holders and develop farmer to farmer relationships. In West Timor the group visited PUSKUD, a village based project enabled through micro-financing. *Can be enabled through NTCA and NTCA members and can be initiated immediately.*
- 2. Development and technical assistance to farmer groups / cooperatives / regional government to enable improved productivity and efficiency. *Can be enabled through NTCA / Industry and Government and can be initiated with relative ease.*
- 3. Strategic support for the development of business models for large scale production systems to include land tenure security, financing, property / business planning and supply chain development. A good example of this is the Kabaru Ranch on Sumba. *Can be enabled through NTCA / Industry and government and would require extensive negotiation and cooperation.*
- 4. Direct business investment in livestock / land / infrastructure / services and product supplies. Requiring a case by case decision by the businesses concerned it requires facilitation to support adequate due diligence and investigation, followed by business establishment, advice and support. There are a range of Australian businesses operating in the region across a range of sectors including animal requisites. Establishing a business in cattle production may be considered high risk for anyone unfamiliar with doing business in Indonesia and NTT.

Further due diligence and negotiation is recommended before any further activities are undertaken.



2 Introduction

Background³

Indonesia is relatively new nation with a long and complex history. With strong influences from Hinduism, Buddhism, Islam, Christianity and a host of Indigenous societies and cultures, Indonesia was a colony of the Dutch Netherlands and agents for 340 years from 1602 to 1942. After a period of occupation by Japanese forces during the Second World War (1942-1945), independence was declared in 1945 and the nation of the Republic of Indonesia declared by Sukarno in 1949.

The modern history of Indonesia is often divided into three main periods. (1) The presidency of the first president of Indonesia, Sukarno, from 1950 to 1965. (2) The effective rule of President Suharto from 1965 to 1998 and (3) the post Suharto period of reformation and stabilisation from 1998 to the present.

The Sukarno period was characterised by nationalist idealism and anti-imperialistic rhetoric, but also by inflation, stagnation, conflict, and economic and political marginality. Culminating in a series of popular uprisings, coups and counter coups, the Sukarno period presidency was ended by the rise of the then military general Suharto. The associated political turmoil resulted in a purge of the Indonesian Communist Party. The Suharto period was characterised by economic growth, stability, and openness to international investment and commerce, but also by extreme political centralism, the oppression of dissension and political diversity and systemic corruption. Suharto resigned from power in 1998 in the wake of the devastating impact of the Asian financial crisis.

The post Suharto period is usually divided into the period of reformation or *reformasi*, a period of institutional political, and legal transformation which was chaotic and unpredictable, and the post *reformasi* period (generally coinciding with the election of Susillo Bambang Yudyono (SBY). While the presidency of SBY has been characterised by change in the political discourse of Indonesia it continues to struggle with many of the ongoing issues of Indonesian society and political culture.

2.1.1 Geography

Indonesia is a nation of extreme demographic, social, and environmental diversity. With an estimated population of 240,271,522 (July 2009 est.), it is the fourth most populous nation in the world and the largest in South-east Asia. It has a land mass of 1,904,569 square kilometres (a bit larger than QLD) and is composed of around 17,000 islands, many of which are largely or totally inhabited. It stretches for over 4000 kilometres from eastern to western tip. Its most populated Island is Java with an estimated 136,000,000 inhabitants. Java is the political, social, and economic centre of the Indonesian state and is the most densely populated island in the world. The eastern regions of Indonesia are generally less populated and significantly less developed than those of the western end of the archipelago.

³ Extracted from paper by Dr John Cook circ 2010, NTCA



2.1.2 Politics

Indonesia is structured politically as a central state and regional federation. It is divided into provinces (which may be historically, politically, demographically, or geographically derived). These provinces each have an elected governor (ratified by Central Government) who governs through *kebupaten* (also an elected level of government), *kecamatan* (appointed), and village (*desa*) levels of government. The most significant everyday level of government for most Indonesians is that of the village (*desa*). The *desa* is managed by the *kepala desa* (village head) which is also an elected position.

During the Suharto period, power and control rested firmly with the central government in Jakarta. However, with the period of reformasi since 1998, influence has swung inconsistently to the provinces. This has resulted in a constant and ongoing tension between Jakarta and the provinces regarding political, financial, and legislative control. The rapid pace of transformation has the effect that there are often few precedents for emerging political and commercial issues and they must be worked through virtually from scratch.

The central and regional tensions often touch on nascent secession or resistance movements, particularly in outlying areas of the archipelago and the management of these interests (especially post east Timor) has a strong influence on the culture and rhetoric of politics. This tension between Jakarta and regional interests has likely had an influence on most recent and current issues being confronted by the Australian live export industry.

The principle Indonesian constitutional body is the People's Consultative Assembly (MPR) which meets every five years after the swearing of a new parliament. The parliament is the House of People's Representatives (DPR) and is the main body of national politics. The DPPR is composed of around 500 representations based on a ration of one representative for each 400,000 head of population. Within the broad guidelines set by the MPR, the DPR (which is effectively a sub-branch of the MPR) acts somewhat like the Australian senate, and the House of representative in one institution. It is a dynamic and influential institution although its complexity (many parties, frequent crossing of the floor) has the effect that change is often slow and not always well targeted. Post 1998 a new parliamentary house the Regional Representatives committee (DPD was created to deal with regional issues. The president nominates a group of ministers who need not be elected members of parliament.

2.1.3 Economy

Indonesia is the largest economy in South East Asia. It is currently growing at around 7% per annum, although the effects of the global financial crisis are still being felt. Inflation is currently around 5.7% per annum. Indonesian GDP continues to rise steadily (although from a low base) at around 7.8%, and its general economic indicators are regarded as solid and stable. The Indonesian economy is primarily a service based economy 37% with strong contributions from industry (18%), manufacturing (30%), and agriculture (14%) 4 . The government of Indonesian plays a strong role in the economy through extensive involvement in private sector companies and interests and its administration of the price of basic goods such as rice, fuel, and electricity.

The economy is centred on the powerful islands of Java and Bali and to some extent the

⁴ World Bank data



resource economies of Kalimantan and West Papua. Outlying areas of Indonesia, particularly Eastern Indonesia, struggle with a long and entrenched legacy of underdevelopment and political marginalisation.

2.1.4 Indonesian agriculture in context

While agriculture is a significant economic player, it is only the fourth largest sector of the economy after services, industry (primarily resources), and manufacturing. It is an important pillar, but it is not the mainstay of the economy. Where agriculture is most significant is its political and demographic impact. Some 45-50% of all Indonesians are farmers, many of whom exist below the poverty line. This means that public policy and discourse regarding anything that affects farmers is viewed with interest, and has far reaching implications. In this context, it clear that it is difficult to engage with Indonesian agriculture purely on an economic basis and it should probably be seen equally as a political and social phenomenon.

Most Indonesians have a strong sense of themselves as a nation of farmers. Although many Indonesians have been lifted out of farming by the economic improvements of recent decades many still have parents and family who remain farmers and to whom they have a strong association. Thus even non-farming Indonesians often have a direct personal interest in issues which affect Indonesian farmers. Thus, to the extent that the live export industry is visible, it is exposed to considerable public sentiment.

The Indonesian cattle industry has, historically, been small scale and non-intensive. Mostly cattle were a subsidiary form of land use rather than a primary form and the kinds of pasture based livestock management common in Australia are rare in Indonesia. Modern land use management, feed systems, and animal husbandry remain patchy and inconsistent across the country. As a result of the live export trade a healthy and sophisticated feedlot industry has emerged, however, it remains in the hands of a relatively small number of players. More significantly it remains relatively poorly integrated with other aspects of the Indonesian cattle industry. This has perhaps exacerbated its current exposure.

A significant component of the success of the feedlot industry has been the ability of the industry to leverage off the availability of cheap and plentiful agricultural by products such as oil palm kernel and copra. This can be contrasted to pasture based livestock which has more difficulty with the availability of land and feed.

There has long been a strong sense in the Indonesian government that Indonesia needed to improve its domestic cattle production but despite many government funded and International assistance based development programs there has only been limited success in the development of domestic cattle capacity. When seen in the context of overall demand for cattle and beef in Indonesia it seems likely the case that domestic cattle production may actually be shrinking in relative terms rather than expanding. The current government has made a commitment to self-suficiency in the livestock sector and there is significant frustration at the difficulty of developing and maintaining a national breeding herd.

After the declaration of Indonesian independence, the eastern part of Indonesia declared the State of East Indonesia. The state was further included in the United States of Indonesia as part of the agreement with the Dutch contained in the transfer of its sovereignty to Indonesia in 1949.



In 1950, United States of Indonesia dissolved itself into a unitary state and began to divide its component areas into provinces. In 1958, by Indonesian law (*Undang-Undang*) No. 64/1958, three provinces were established in the Lesser Sunda Islands, namely Bali, West Nusa Tenggara and East Nusa Tenggara. The area of East Nusa Tenggara province included the western part of Timor Island, Flores, Sumba and other several small islands in the region. The province was sub-divided into twelve regencies and the City of Kupang, which had regency-level status.

This report is based on observations during a seven day tour of the Nusa Tenggara Timor (Nusa Tenggara East) (NTT) including the islands of West Timor and Sumba, and the island of Lombok in the province of Nusa Tenggara Barat (Nusa Tenggara West) (NTB). The report also includes reflections and themes from a number of meetings with government and industry officials, commentary from tour participants, selected documents and presentations.

For the greater part of this report this summary will refer to Nusa Tenggara Timor as a whole with some specific observations/recommendations made in relation to the individual islands visited.

3 Overview of the north Australian pastoral industry context

The pastoral and cattle industries of northern Australia have been operating for close to 150 years. Until about 40 years ago the system was operating with Bos Taurus (European / british) breeds of cattle and a harvest type operation whereby annual or bi annual musters were conducted to brand calves and market saleable cattle to northern abattoirs (no longer in existence today)

The last 40 years have seen major changes to the northern industry to a major degree a result of disease control protocols (associated with brucellosis and tuberculosis eradication campaign BTEC) initiated in the 1970's and 80's. Following BTEC, the northern industry introduced much improved operating infrastructure, bos indicus (tropically adapted) breeds of cattle, introduced pasture species, supplementary feeding regimes to replace pasture deficiencies, genetic improvement, as well as improved logistics and infrastructure. While productivity across the north Australian herd improved significantly in this period, increasing costs and regulation are said to have almost entirely eroded any financial gain.

3.1 Industry profile;

- i. Australia's cattle live export industry generated \$590 million in direct export earning in 2012-13⁵. It has been estimated that the entire live cattle trade adds 7.8 cents per kg live weight to the price of cattle sold nationwide.
- ii. Cattle for breeding and slaughter are sent to over 30 countries due to Australia's disease free status, food safety record, and depth of genetic quality equal to anywhere in the world.

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⁵ Meat and Livestock Australia (MLA) data



- iii. The Northern Territory and northern Western Australian annually supply over 50% of all Australian live exports. The Port of Darwin in the NT alone accounts for 40% of an average 800,000 head exported live annually.
- iv. The NT is home to over 200 cattle stations running 2.2 million cattle with an annual turnover from live export and domestic trade exceeding \$300 million⁶. The live export trade accounts on average for around 300,000 head of the NT's annual turnoff of 600,000 cattle.
- v. Relatively short transit times from northern Australia to Asian and Middle East ports and consistent supply of disease free, largely Brahman and Brahman cross cattle that perform well under hot and humid feedlot conditions, give Australian cattle producers a significant comparative advantage over other countries with similar herds.
- vi. Animal Welfare best practise presents a competitive advantage. Australia has a domestic Animal Welfare regulation that underpins a philosophy to care for livestock. With the introduction of the Export Supply Chain Assurance Scheme (ESCAS) in 2011, this continues through the supply chain to the point of slaughter in all export countries. A world first.

3.2 Production system profile

- i. The NT cattle and pastoral industry operates on $700,000 \text{ km}^2$, with an average herd size of 10,000 head and an area of $3,000 \text{ km}^2$. Approximately 50%-60% of the NT herd are in the live export zone⁷.
- ii. Rainfall, land types, and pastures render northern Australia (mostly) unsuitable for finishing or fattening cattle.
- iii. Mineral, protein, and energy deficient fodder renders the need to provide supplementary feed to most cattle
- iv. The preferred business case involves breeding calves at a weaning rate of about 65%, growing out to about 350kg with turnoff/export steers and surplus heifers supplied into the Indonesian feeder market. Redundant cows are pregnancy tested and if empty and in good condition go to slaughter. Redundant bulls go to slaughter.

3.3 Market profile

The northern Australian, and particularly Northern Territory cattle market is almost entirely dependent on the live export trade to remain viable. In instances where demand is significantly reduced and cattle are sent to south-eastern trade and slaughter markets the impact on enterprise profitability is profound with significant losses incurred. It is also reported that the impact of NT cattle moving into south eastern markets is profound, reducing cattle values by up to 8 cents per kg across the national trade.

i. Indonesia – demand for Australian cattle is currently increasing rapidly and approaching 400,000 head for 2013. The live export market to Indonesia has evolved from the 1980's to be the single largest market for the NT and Northern Australian cattle. Exports to Indonesia reached a peak in 2009 at

⁶ Combined estimate incorporating live export data, interstate sales and transfers

⁷ NTCA and government data.



750,000 head and included a significant proportion of cattle going direct to slaughter. This trend impacted negatively on returns to Indonesian producers and in 2010 the Indonesian government imposed a 350 kg weight limit on imported cattle and introduced an annual quota which reduced to 267,000 head in 2013 before it was scrapped at the start of the last quarter of the same year. With the developing economy, improving affordability, existing infrastructure and established supply chains for imported cattle, demand is sure to increase. Recent pressure to reduce the trade as a result of political tensions from alleged security service surveillance activities has fortunately not eventuated.

- ii. Vietnam & China these markets have improved considerably in recent times, both as a result of internal economic development and increasing demand for alternative protein sources. Price and disease status (bluetongue restrictions into China) are real constraints into both markets and historically Indonesia has had the ability to pay more for the cattle it wishes to procure.
- iii. The construction of the AACo abattoir in Darwin will certainly add competition to the slaughter categories.

3.4 Competitive advantage of Northern Australia

- i. Disease free while we do have a bluetongue disease restriction into China and some north African countries it is not considered a realistic threat to stock in those countries and it is anticipated these barriers will eventually fall.
- ii. Scale of operations, availability and security of land and capital.
- iii. Proximity to markets of SE Asia.
- iv. Adapted genetics suited to tropical and arid conditions and multiple markets.
- v. Research and development (R&D) capability and historic investment.
- vi. Supportive NT Government. The Northern Territory Department of Primary Industry and Fisheries (DPIF) is able to provide information on past projects undertaken to improve cattle production and technical advice on local production systems. DPIF have pledged continued technical advice and support going forward for possible engagement strategies, including participation from an extension perspective

3.5 Opportunities - Northern Australia

- i. Indonesia's improving demand metrics.
- ii. Animal welfare and the Export Supply Chain Assurance System (ESCAS) as a point of difference.
- iii. NTT investment leveraged as a point of difference for Australian suppliers.
- iv. Productivity improvements and increased availability of export suitable stock and breeders.
- v. Logistic and infrastructure improvements.

3.6 Constraints - Northern Australia

- i. Maintaining productivity and viability improvements.
- ii. Increasing pressure from Australian animal welfare activists including opposition to live export.
- iii. Government policy and Indonesian sovereign risk creating market uncertainty and reduced efficiency and viability of the northern system.



iv. Exporter / importer practice and change management capacity.

4 Beef production in NTT

Nusa Tenggara Timor (NTT) includes the islands of West Timor, Komodo, Flores, Lembota, Sumba, and Rote. Lombok is in the West Nusa Tenggara (Nusa Tenggara Barat) region. For the purpose of this report only West Timor and Sumba Island (NTT) and Lombok (NTB) have been visited and provide the basis of the commentary.

4.1 Industry profile

- Indonesian provincial government expressed and expectation that that foreign investment will be a "prime mover" in the development process of NTT agricultural industries.
- ii. Agriculture contributes about 35% of GRDP and engages 65% of the labour force. Livestock as a subsector contributes 10% of GDRP⁸
- iii. The 2008 National Livestock Household Survey showed over 280,000 households in NTT raised livestock, up 1.4% on 2007.
- iv. Any participation will be firstly by way of Government to Government dialogue which will then roll into B2B / B2G arrangements.

4.2 Production system profile

- i. NTT is an archipelago of 1,192 islands of which only 43 are inhabited
- ii. Total land area is 47,349 km²
- iii. The major cattle production regions of NTT are West Timor, Sumba and Flores.
- iv. NTT is considered semi-arid with 3-4 month wet season and 8-9 month dry season
- v. The potential land available for extensive grazing is in the vicinity of 850,000 1million ha
- vi. This land, although it is considered to be in an arid zone of Indonesia still has what would be considered very high rainfall by Australian standards.

 Consequentially soil nutrition is depleted due to leaching. This was particularly evident on Sumba and West Timor with most soils identified (by Australian authorities) as deficient in N and P. (source: NTG documents)
- vii. Pasture quality and nutrition is directly related to the soil profile and not surprisingly records show crude protien levels around 3% and phosphorous (P) below adequate levels. Pasture species across the NTT⁹ include native grasses *Ischaemum, Axonopus, and Cynodon* species, and legumes *Calopogonium, Desmodium,* and *Arachus* species, and there is substantial invasion of Alang-Alang (*Imperata cylindrica*; Blady grass) Most of the grazing areas of (Kabaru ranch in particular) had been oversown in the early 1970's with introduced legume species such as *Stylothanses guyanensis, Pueraria* and *Centrosema* species which have to some extent persisted. As well there are tropical tall grasses Kangaroo(*Themeda sp.*) and Spear grasses (*Heteropogon sp.*) In the case of Kabaru Ranch pasture maintenance has been poor and

⁸ NTT Document supplied to the tour group

⁹ drawn from official literature and personal observation



- therefore significant work needs to be undertaken to eliminate weed encroachment. It was the view of tour participants that sustainable carrying capacities need to be established so as to avoid the risk of overstocking and resulting negative impact on land condition and productivity. Prolific pasture species like Gamba grass should be considered.
- viii. The NTT herd is estimated at 825,000 head and comprises three predominant breeds of cattle; Bali, Ongole, Bali x Ongole, and some Australian Brahman and Limousine infusions. Breeding programs appear to vary significantly from place to place, and are determined by the method of feeding (cut and carry), the production system (open range), historic connection / experience with breeds including colonial and more recent agricultural aid programs. For example in West Timor and Lombok (NTB) the (bali cattle) heifers and cows, which are raised on a cut and carry fodder basis and are joined (whilst tied up) to young bulls before they are sold. On Sumba (Ongole) cows are joined all year round in the paddock similar to Australian operations.
 - ix. It was evident in NTT and Lombok (NTB) that demand was beyond the capacity to supply, resulting in very high prices for all classes of cattle. There was said to have been a significant increase in prices following the reduction in Australian imports of beef and live cattle from 2010. For years many initiatives have been undertaken in order to improve productivity of land and livestock. The efficacy of these initiatives appeared varied., It was also evident that efforts to introduce brahman cattle, particularly in Sumba, was not considered successful with reports of reduced calving, survival and general productivity.

4.3 Market profile

- i. Cattle production in the NTT (and NTB and West Papua) region is considered one of the major agricultural activities and opportunities.
- ii. Local cattle production systems and breeds are valued and in some cases unique with a strong desire by producers to ensure and improve sustainability metrics of the cattle and production systems.
- iii. Most production from the region is sold and transported to the high population centres of Java to supply feedlots and in some cases go direct to slaughter. Much of this trade is under national government directive / encouragement while provincial authorities have instigated herd protection regulations to restrict the export of productive cattle to other parts of Indonesia. Local demand is minimal as beef is mostly unaffordable for locals to purchase.

4.4 Political considerations

- i. Agriculture and food production capability occupies a central position in the national thinking and government policy. Food self-sufficiency has been a recurring and constant theme for a range of commodities including rice, soya beans, chicken and beef. The Indonesian government is currently at the end of the 2010 2014 beef self-sufficiency plan. This plan has driven import policy for beef and live cattle until late in 2013 at which stage the import permits were increased to allow a shortfall in supply to be met, and the annual quota was scrapped.
- ii. Agriculture plays a major part in reducing smallholder rural poverty. The livestock sector in particular has an important role in supplementing the needs of the rural



- communities in terms of providing draft animal power, manure for crop production, and protein for human consumption (although mainly from goats and chickens). In relation to the national economy, livestock production supplies the majority of domestic requirements for meat and milk.
- iii. A major restructure of Indonesian agriculture and rural communities will accelerate in coming decades, increasing social pressures and driving increasing agricultural production, land and production unit amalgamation. This will exert increasing pressure on conservative political forces and may continue to influence import and other rural policy.
- iv. There will be an increased desire to improve livestock productivity, increasing farmer displacement while catering for food production for an increasing population.
- v. Land tenure reform including long term lease (30-50 yrs) of government and other land to support agricultural restructuring will also increase potential for conflict between traditional smallholder farmers and those with traditional access to or rights to land. Animal welfare concerns provided the basis for a unilateral decision by the Australian government to suspend trade with Indonesia in 2011. Delivering improved animal welfare across the Indonesian supply chain will assist productivity improvement.
- vi. Cooperative arrangements between the NT and Indonesia must include welfare considerations.
 - 1. Social and cultural considerations
 - i. Population of NTT is 4.78 million people with 23% under the poverty line
 - ii. 68% of the workforce is involved in agricultural activities
 - iii. While cattle ownership is considered prestigious, there seems to be less drive to have the industry improve productivity and profitability. As the general economy moves forward there is increased awareness of the importance of education. Education of children and the resulting cost is becoming a major consideration. It is clear from the projects and farms visited, that for the first time many cattle farmers have been able to pay for children to be educated utilising the income from a small herd of cattle. In the eastern provinces the increased returns to cattle farmers has been the result of the reduction in imports of Australian cattle and the increased demand for local cattle. This situation could quickly reverse if there is an oversupply of imported cattle and beef entering Indonesia.
 - iv. Many cattle farmers utilise credit provided by traders for the purchase and management of cattle and are heavily exposed to market fluctuations which may arise as described above. This can be amplified due to the long lead time between purchase and sale of trade cattle (12 months).
 - v. Bali cattle and Sumba Ongole are native / naturalised breeds, which are preferred and should be given increased consideration when herd improvement and productivity gains are being sought. Bali cattle are small, deer like, productive animals that are very difficult to cross breed or domesticate. Ongole have historically been used extensively as draft



animals and continue to be regarded as a fertile, multipurpose breed, well understood and integrated. Research conducted in cross breeding native Ongole and Brahman¹⁰ has identified the improvements in performance of a terminal (go to slaughter) cross breed and cross breed heifers. While the improvement in performance may have been achieved under controlled conditions, inevitably the application of the findings in an everyday situation can be impacted by a range of factors often beyond the scope of the objective research. Discussions with farmers on Sumba revealed a negative perception¹¹ of Brahman cattle in terms of fertility and more general capacity to do well under the production system. While there was residual crosses within some of the herds there was a reluctance to entertain future use of Brahman genetics. The tour participants discussed some of the potential factors being related to nutrition. Having said this the Ongole cattle viewed were generally in good condition for the time of year (late dry season) and in many cases still supporting large calves.

4.5 Constraints

- i. Soil fertility and resulting constraints on production.
- ii. Low pasture availability and quality.
- iii. Access to quality feedstuffs for livestock value adding / feed lotting or maintenance.
- iv. Livestock performance and productivity.
- v. Low rainfall and shorter length of season.
- vi. Limited economic and productivity based research able to be applied in a range of business and community situations.
- vii. Lack of Infrastructure and logistics including roads, port facilities, cost effective shipping and transport.
- viii. Formal and informal regulatory burden increasing cost and efficiency of business.

4.5.1 Opportunities

- i. Cost of production and return on capital Low labour and input costs relative to livestock values demonstrates a significant opportunity. For example, Indonesian labour cost per unit is 5% of the Australian unit cost. Indonesian cattle prices are up to 30% higher than Australian prices¹². Other input costs are equivalent to or lower than Australian costs including fuel. Infrastructure costs are considered lower than Australian due to the use of alternative materials such as timber and the lower cost of steel and wire.
- ii. Soil fertility there are areas with very good soil attributes. The cost and capacity to transfer these resources to beef cattle production is high and requires integrated management, infrastructure and consistent resourcing.

¹⁰ Research on the Genetic Potential of Ongole and Brahman Cattle in East

Sumba, East Nusa Tenggara, SUMADI and SILIWOLU, Fakultas Peternakan, Universitas Gadjah Mada,

Dinas Peternakan Kabupaten Sumba Timur, Nusa Tenggara Timur. 2004

 $^{^{11}}$ Pers comms 2013. Discussions with the manager of Kabaru Ranch and farmers operating communal herd (Sumba)

 $^{^{12}}$ Based on Indonesian wage of \$30 per week & Australian wage of \$600 per week. Indonesian cattle price of \$2.50 p/kg and Australian prices of \$1.80 p/kg.



- iii. Pasture selection numerous options exist depending on location, land type, management and investment. Improved management of existing pastures including control of invasive weeds is critical. Weed incursion is likely to increase and become an increasing barrier to production. Investment in pasture improvement and maintenance can provide a return in investment See
 - http://aciar.gov.au/files/node/15437/mn154 integrating herbaceous legumes into crop an 14651.pdf
- iv. Livestock performance there are enormous opportunities to improve livestock performance. Most of this is dependent on genetic selection and animal husbandry. It is understood that while there are long standing practices and conventions in most areas, using existing breeds such as Bali and Ongole cattle there is considerable room for improvement. This needs to be balanced against the constraints of variable management models considering social, cultural and economic factors.
- v. Commercial management advice there appeared to be a number of levels on which advice could be provided from an Australian perspective which may assist in the development of viable cattle breeding enterprises in the region. These broadly fall into technical and operational; institutional / governance; regulatory; and infrastructure / logistics / protocol categories.
- vi. Land tenure In areas where larger tracts of land exist which may be suitable for open range breeding systems mechanisms for improved land tenure security may provide increased commercial opportunities. For example the Kabaru Ranch on Sumba is currently run by a government owned enterprise. It was evident to the tour group that the efficiency of the operation could be improved if it were made available to a commercial operator under a long term lease arrangement that would allow full commercial principals to apply. A confidential report written by Dahlan Iskan (Indonesian Minister State Enterprises) after his visit to the Kabaru Ranch on return from the NT with the Indonesian President Yudhoyono in 2012 was provided to the tour group. The Minister visited the ranch and stayed over night before undertaking an inspection. His report provided a snap shot of the current condition of the ranch from its heyday in 1973 when set up by the Asian Development Bank (ADB) and its management provided by experts from Australia. The report noted that since the 1980s the Ranch had not been taken good care of. He cited the other projects being run by the state owned enterprise such as timber, furniture, fertiliser and business insurance. It was evident to the group that the ranch was in need of a major capital injection and this may have been due to a range of reasons including competing business interests in the overall state owned company. It was evident to the tour group that the land provided great potential which if managed by an industry best regime should be very productive. One model for this would be provided through a long term and secure lease (up to 50 years) to a commercial operator.
- vii. Same market, different farmers, seeking win win the NTT region generally supplies the same market as the Northern Australian cattle industry, namely the high demand areas of Java and Sumatra. This provides an opportunity for greater cooperation and understanding. It also reinforces the importance of a viable and profitable industry for the NTT region, without which economic and other hardship may influence policy change detrimental to Australian producers.



Finding an equitable balance to allow a win for Indonesian farmers and win for Australian farmers is central to the long term prosperity. The oversupply of the Indonesian market with Australian cattle and beef will impact returns for Indonesian farmers and this situation needs to be avoided. A recent draft ACIAR report¹³ provided some commentary on this issue and concluded that even with restrictions being eased on beef and cattle imports the demand for cattle will remain, albeit with a slight correction in price.

5 Market development

The greater metrics of burgeoning economies in the region cannot be ignored. The current consumption of beef in Indonesia is about 2 kg per person per year¹⁴. Any change in this has a profound effect on demand. For example were Indonesian consumption to reach 5kg per person per year this would require 11 million slaughter cattle and a breeder herd of 40 million head¹⁵. This represents the total combined size of the Australian and Indonesian cattle herd¹⁶.

The markets of SE Asia are growing at rapid rates due to population increases, a rising middle class and diminishing domestic protein sources. Although consumption is limited by price and not supply, this is changing due to economic development in the region delivering a growing middle class with greater disposable income. NTCA members and northern Australian cattle producers need to develop productions systems and relationships alongside these market dynamics. Investment in NTT needs to increase to facilitate new relationships, improved output and returns to the region, which in turn will strengthen local resilience while building stronger government to government and Industry to industry links.

5.1 Opportunities and constraints in market development between the north Australian and NTT regions:

- i. Relationship development and market collaboration
 - vi. The fact that northern Australia can efficiently produce light feeder cattle and Indonesia (in Java and Sumatra) can finish these cattle is the basis for the synergistic trade which has flourished over the past 30 years. The entire supply chain represents the best financial model and is truly complimentary across all jurisdictions.
 - vii. This market and relationships have gone hand in hand. As the market evolved, numbers of cattle exported from Australia increased to an all time high in 2009 of 750,000 head. This increased supply drove reduced returns to Indonesian farmers until eventually pressure came to bear on the Indonesian government with restrictions imposed limiting supply via quota and weight restrictions. This has had an

¹³ Draft ACIAR Report. Eastern Indonesia agribusiness development opportunities - analysis of beef value chains, Collins Higgins Consulting Group Pty Ltd 2012. Page 147

¹⁴ While the number varies this is the number generally quoted in most Indonesian government reports and literature.

¹⁵ Calculated on Northern Australian productivity and annual average herd turnoff of 28%.

¹⁶ Based on current national herd estimates (Australia 29m head, Indonesia 12m head).



- ongoing impact on supply and consumer demand, with beef now at record prices. Conversely, Indonesian farmers are receiving record prices for their cattle. Today the Indonesian government is endeavouring to impose mechanisms to keep beef prices down and increase supply. The price and availability of beef is a serious issue in the major cities such as Jakarta where opposition to government policy is simmering within consumer, retail and distributor groups.
- viii. It is in the best interests of Australian and Indonesian participants to assist in improving the supply chain of beef from the consumer perspective. Demand and affordability forecasts clearly indicate that this is achievable without compromising the local cattle farmers to any serious extent. The challenge is to deliver equitable policy to allow affordable protein while also ensuring reasonable returns to Indonesian farmers.
- ix. Development and improvement of existing cattle enterprises in the NTT needs to be accomplished. Although challenging, it is considered important to the market and the Indonesia Australia long term relationship..
- x. Open and frank discussion A clear and frank understanding from both sides needs to be achieved. This is critical before significant investment and effort is made.

ii. Infrastructure

- xi. It must be said that in order to manage and distribute cattle and/or beef from the NTT there needs to be considerable improvement to infrastructure and logistics.
- xii. Port facilities and quarantine facilities inspected were generally adequate but lacked quality maintenance and management. The attributes and the efficiencies of these facilities and other infrastructure will be covered within a separate section of this trip report.

iii. Land tenure

xiii. Discussed above (in 4.6) it is an issue which has the potential to change some of the fundamentals. In particular the opportunity afforded through long term secure lease or purchase of land by commercial interests would enable significant investment and production. Equally the rules applied to foreign equity and control require review in order to maximise the injection of capital, management, technology and knowhow. While there is great room for increased production it is important to note the raw carrying capacity of the Eastern provinces is not of a magnitude that would see Indonesian breeding potential reach what is required to supply Java and Sumatra feedlots and local demand.

iv. Trade barriers

xiv. The WTO are currently hearing evidence with regard to Indonesian trade arrangements and market access for meat, vegetables, fruit and a range of other commodities. Australia and a number of other countries are parties to these hearings.



- xv. There is a view that formal and informal trade policy and practice are counter to the best interests of both Indonesian and Australian industry.
- v. Political, social and cultural factors

Australia and Indonesia have a very different set of fundamentals which influence the way in which the two countries interact at many levels. These include:

- xvi. Developed vs developing country status.
- xvii. Indonesian and Australian history of colonial occupation and development of nationhood, democracy and position in the region.
- xviii. Geographic characteristics and influence.
- xix. Population and land mass.
- xx. Demographics in terms of population, religion and relationships in the region.
- xxi. Ethnic and religious profiles.
- a. As a developing country Indonesia is seeking to raise the level of education, health and associated indicators which are determinants of development and prosperity. Development of increased understanding between Indonesian and Australian people and business is viewed as the best way to manage the opportunities and challenges presented by the similarities and differences identified above.

6 Supply chain logistics

6.1 Introduction

This section of the report will cover the logistical issues that are faced by West Timor and Sumba while at the same time analysing what needs to be achieved to deliver a workable solution to create a more efficient and structured cattle trade from NTT to its markets in Jakarta and Eastern Java.

The islands visited; West Timor, Sumba and Lombok all face similar logistical problems. As an example they are seriously challenged by the quality of the roads outside the metropolitan areas on which the lifelines of agricultural commodity trading depend. As well, transportation of live cattle or produce to Java and Surabaya is problematic. Port and shipping facilities need improvement to develop efficiencies in handling including improved animal welfare through the supply chain.

The mode of agricultural commodity transport is similar over much of Indonesia and Sumba and West Timor are no exception, the same truck is used to transport bricks, motorcycles and cattle and while very basic, do the job adequately. Trucks are generally capable of a 3-5 t load using a 5-7m tray and 1.5 m sides.

The port facilities and quarantine facilities were adequate but lacked quality maintenance and management. The attributes and the efficiencies of these facilities and other infrastructure will be covered within a **separate section of this trip report.**



There appears to be regular shipping routes that trade within the islands of NTT and back into Java. None of the ships seem to be purpose built to carry livestock but have adequate facilities to cope with local Bali and Ongole cattle that leave the province on their way to the major markets in western and central Indonesia. Loading facilities require development to meet welfare standards.

The facilities that service the logistics chain appears to be adequate and with very little additional work could be brought up to a level that would create some efficiencies.

6.2 West Timor

i. Roads

The road network within West Timor is poor and would appear to be inadequately funded. While major link roads cope with the traffic, they are narrow, winding and variable quality, presenting a challenge for heavier transport and particularly livestock. This makes the roads dangerous with erratic driving, the inability to pass and very few long straight sections of safe road. Roads outside the major centres are very basic, however appear adequate for most traffic. If traffic flow was to increase or larger, longer, wider or heavier vehicles were to start using these secondary roads then issues would undoubtedly be incurred.

ii. Transport

Transport vehicles in West Timor are practical with the capacity to transport as wide a variety of products as possible. There would be very few efficiencies gained from specific cattle transport trucks or trucks of larger scale due to the inadequacies of the roads to accommodate these larger vehicles. There are very few larger semi-trailer type trucks almost all are small-ridged trucks, due to the practicalities that these smaller trucks provide to the owners/drivers.

iii. Ports

The main port in Kupang, West Timor, is a typical smaller regional port that can accommodate ships of reasonable size but it would be unlikely that ships of capacity of over 2,500 cattle could utilise this port. More investigation into the draft capacity of the shipping channel into the port is needed.

iv. Shipping

Shipping capacity back to the main markets and supply networks of Java and Surabaya appears to be adequate however the quality of the ships to accommodate livestock is limited. This is due to the ships being multi-purpose vessels and the practicalities of needing to carry both general cargo and livestock. These ships quarter the livestock on open decks above the cargo in portable panel type arrangements.

v. Facilities

Quarantine facilities are located close to the port and are currently used for domestic/interisland quarantine but with some relatively minor upgrades and maintenance the facility could be brought back into efficient working order. However on farm, there is still very basic stock handling facilities that would need to be altered and or adjusted. No processing facilities were visited in West Timor.



6.3 Sumba

i. Roads

The major road links that connect the trading hubs of Sumba are adequate in their ability to move goods around the island. These roads appear to have regular up keep and are able to ensure that traffic moves freely. However once these major links are left and secondary roads are engaged the quality of the roads diminishes rapidly and in some cases are no more than bush tracks. The entry level secondary roads are in need of repair and lack basic engineering but are able to cope with the traffic that they encounter.

ii. Transport

The vehicle situation in Sumba is identical to West Timor and the rest of provincial Indonesia. The trucks that are used to transport agricultural commodities are basic light ridged trucks that serve a range of purposes from transporting sand to moving cattle. The ability to gain efficiencies from purpose built trucks or large semi-trailers would be negligible, due to the practicalities of the environment in which they would be operating.

iii. Ports

The main port in Waingapu, Sumba, is a regional port that can cope with ships of a reasonable size but it would be unlikely that ships of capacity of over 2,500 cattle could utilise this port. More investigation into the draft capacity of the shipping channel into the port is needed.

iv. Shipping

Shipping capacity back to the main markets and supply centres of Java and Surabaya appear to be adequate however the quality of the ships to accommodate livestock is limited. This is due to the ships being multi-purpose vessels and the practicalities of needing to carry both general cargo and livestock. These ships quarter the livestock on open decks above the cargo in portable panel type arrangements.

v. Facilities

The quarantine facility once again was not of a good standard in terms of facility or operation, however it could easily become so. With Australia's last involvement the facility was used as cattle were quarantined for 14 days. There was a long race constructed from the port to the yard which we were told worked well.



Quarantine Facility at Sumba Port



Port



7 Trip report

7.1 West Timor

Kupang (832km from Darwin NT) is the capital of NTT. It is a bustling transport hub situated on the harbour.

The agricultural sector is made of predominantly subsistence farmers and villagers growing rice and maize and other food crops.

The livestock industry is based largely on native Bali cattle (some minor Zebu crosses) which are tethered and fed mainly Leucaena on a "cut and carry" basis. The Leucaena grows wild and in plantations. Soy, mung beans and related trash are grown for cattle feed. The local Bali cattle appear hardy fertile and well suited to the farming systems.

7.2 NTT Village Cooperatives (PUSKUD) based at Kupang:

PUSKUD, is a contract fattening arrangements with small-holders community based microfinancing model and has been supported by an NGO cooperative and benefactors such as Dicky Adiwoso. Dicky is an experienced cattle business operator with a long history in Indonesia and Australia, and the founding chairman of APFINDO (the Indonesian Feedlotters Association). The project aims to add economic multipliers to villagers in the region and allow them to trade cattle while maintaining other enterprises and activities. It appeared that without external resources these people would not have the financial resources to purchase and trade cattle. While the capital cost of livestock is very high, with the assistance of start up micro finance the operations are clearly profitable. The model and system underwrites the initial purchase of cattle (max 2) which are then grown and fattened for sale approximately 12 months later. The farmers are paid by weight and have access to the micro finance facility only once, allowing start-up and cycling of capital through the village. The capital is secure and a 5% yield is paid.

Key attributes of PUSKUD include:

- vi. Currently supporting 8,000 households with 400 waiting for capital and sponsorship
- vii. Investment in feeder Bali cattle which are grown out from less than 200 kg LW to more than 250kg kg LW generally over a 12 month period.
- viii. Farmer receives 60% of LW gain value.
 - ix. Investors can return up to 38% based on past deliveries
 - x. The project is supported by APFINDO founder Dicky Adiwoso, and were NTCA investors interested in participating then it could be safely facilitated.
- xi. Current barriers to expansion of the program include a lack of feeder replacements as village breeding systems are less attractive to farmers and improved breeding incentives are required to increase cattle numbers.
- xii. Improved water access and feed management could potentially improve the productivity of the village cooperatives visited.
- xiii. For NTCA investors, downside is that West Timor is restricted to local cattle breeds unless special permission is granted from the provincial Governor,



- moreover Brahman cattle are less suitable for small-holders as they require more feed.
- xiv. Investment in initiatives such as this need to be considered in the wider context of supporting the greater Australian live export trade

Opportunities in West Timor:

- xv. With less than 2 days shipping time from Darwin, a barge trade could include cement, handcrafts, furniture, breeding cattle, livestock inputs, medical supplies and other produce.
- xvi. It is likely that there will be enhanced trade and tourism to Dili with the opening of a new road.
- xvii. Agriculture based R&D projects and facilities need rejuvenating and this presents an opportunity for Australian business and agencies.
- xviii. With the close proximity of Darwin and West Timor there are a range of opportunities for closer cooperation and trade including young cattle, nutrition and feeding systems. Continued growth of PUSKUD both in the current male fattening regime as well as into a breeder type regime to provide more cattle to PUSKUD farmers.
- xix. PUSKUD and programs like it present an opportunity for NT producers to contribute funds (philanthropic) and thus provide a reason and justification to visit and develop relationships with local farmers and villagers. While the contribution may be a donation the program is set up to allow for the return of capital with a dividend to the investor. In real terms less than \$1,000 AUD is enough to finance 1-2 farmers.

Constraints:

- i. Investment in or contribution to the program does have risk although the amounts involved are low. The program utilises a 5% finance (interest) component which does contribute to a return on the capital employed. The program, like other micro-finance models relies on the recycling of capital. Thus there is great pressure and support for each participant to succeed and in so doing allow the next person in line to access the capital to get a start.
- ii. Breeder herds are not considered profitable and thus do not encourage participation.





Bali Cattle at Kapang saleyard



Delivery Scales at PUSKUD

Bali Cattle on feed at PUSKUD



Loading PUSKUD sale cattle

Meeting PUSKUD farmers

7.3 Sumba

Sumba has extensive native grasslands that flourish on fertile rocky limestone soils originating from uplifted coral reefs. The island appears to predominantly run cattle, with some buffalo, goats and sheep. The local Ongole cattle appear well suited to the conditions and various family groups run large mobs of cattle, pooling resources and raising levels of



security (against theft) However, from the areas visited, there are certainly many areas where improved management could deliver benefits to livestock production and revenue capture at market levels.

Under the "Sumba Contract" government has been providing contracts with villagers to improve production and build up numbers. This is facilitated under the government livestock distribution program, where local DINAS (livestock services) provide 2 breeder heifers to local farmers who must return 3 female progeny over 5 years. The other progeny, and usually the original heifers are retained by the farmer. There are many variations of the principle and a number of commercial contracts with cattle traders which allow access to finance.

A live export trade to Java and Surabaya has been long established by the Sumba contracts with various exporters.

Currently, there are positive moves to build an abattoir that will slaughter local and Australian cattle and re-export chilled carcases to Java and Surabaya. Australian parties are involved in this venture.

Considerations:

- i. Waingapu (the capital) has a good port with cattle export facilities. To bring to ESCAS /OIE compliance would require upgrading.
- ii. Buffalo are used for low land cultivation of rice and form a critical role in ceremonial activities such as weddings.
- iii. Horses are integral to many aspects of Sumba life with a strong tradition of racing, and work. Horses are also exported to other parts of Indonesia and are highly regarded.
- iv. Seaweed is another export commodity from the island.
- v. Importation of Swamp Buffaloes The Head of Eastern Sumba Regency indicated that he would like to see the importation of Australian Swamp Buffalo (1000 hd) to boost current numbers for ceremonial purposes that focus on dowries and horn attributes. ESCAS requires horns to be tipped for transportation; therefore importation would need to be conducted under a breeding protocol which has not yet endorsed by the Indonesian government. This would be a good commercial proposition to be followed up NT Buffalo Industry backed by NTCA.
- vi. For NTCA investors, any commercial contract with farmers would need to be facilitated by a trusted trader. Farmers are also wary of perceived poor performance of imported Brahman cattle and this would need to be managed by significant technical support

7.4 Kabaru Ranch, Sumba

Kabaru Ranch is approximately 10,000 ha, has a rainfall of 1400mm with a distinct dry season not dissimilar to the NT's Top End. At the time of inspection it was very dry yet cattle looked well in comparison to typical NT breeders.

Kabaru Ranch and was set up by the Asian Development Bank (ADB) in 1973 under Australian expertise and management. Unfortunately, and for a number of reasons it has not gone well. It was handed over to an Indonesian state owned enterprise in about 1976. Since this point the ranch has become inundated with weeds (mainly Siam Weed *Chromolaena odorata*, and Grader Grass *Themeda quadrivalis*, and Bellyache Bush *Jatotropha gossypifolia*),



livestock are not managed as well as they could be, and infrastructure is in need of maintenance and upgrades. Currently 2,500 Ongole cattle are running on about 1/3 of the property. These are managed on a similar basis to NT herds.

In the past, the Government has unsuccessfully tried to joint venture the property with the private sector, and has been keen for investment (up to 49%). It may transpire that it will transfer to another state owned enterprise (SOE). While this could invite Australian interest in cooperation and R&D close attention would need to be paid to the security and longevity of any investment of capital, time, resources, or expertise.

For interested NTCA investors, the ranch is the closest thing to managing a NT cattle property and therefore has good potential for developing into a commercial entity also using imported Brahman cattle. It would also provide demonstration of grazing management, breeding and improvement in supply chain operations to the market. It would be advisable to talk to the NT Government's Minister for Agriculture regarding Government assistance in rolling out any program. Once again any investment must be acknowledged and considered in supporting the greater Australian live export trade





Kabaru Homestead and infrastructure

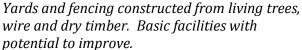




Ongole Cattle











Stockmen and stockhorses



Major weed incroachment (Siam Weed)

7.5 Lombok

The contrast between Lombok (NTB) and the NTT provinces couldn't be more striking. Mataram has all hallmarks of Bali number 2 with tourism obviously the main economic driver. The visit to Lombok was brief and primarily to visit a cattle project which had drawn on the University of Matram and ACIAR to improve cattle production rates in a farmer cooperative system. Observations included:

- i. Agriculture is practiced on fertile volcanic soils.
- ii. Bali cattle are the dominant breed and farmers also operate as collectives for security reasons.
- iii. Controlled mating has helped raise weaning weights from 65 to 90 kg per calf
- iv. Weaning percentage has risen from 55% to 85%.
- v. The feedlot visited had 2 year old Bali bulls weighing up to 350kgs.
- vi. The ACIR project farm visited is a breeding project that operates a controlled mating system. The bulls are all sold after mating and new bulls purchased from the market the following year.







Cut and carry, breedlots (Lombok)





Bull feedlot (Lombok) achieving 300kg in 2 years

Livestock 'Livelihood Source' Farmer Groups

Lombok has become a centre of cattle breeding and fattening largely through ongoing ACIAR programs that have become a reference point for maximising cattle production at the village level. The *Sumber Rezeki* livestock farmer groups demonstrate the result of an ACIAR/Mataram Uni project to improve existing breeder/feeder Bali cattle production management systems. Reproduction and growth rates of progeny have improved substantially through controlled mating and feeding better rations, and by processing waste for fertiliser and fuel. Calving rates are high and feeder cattle are achieving more than 400 kg LW at sale or 30% more than West Timor fattening systems at the same age. With the restriction on importation of exotics cattle into NTB, there is little commercial opportunity for NTCA in this region. There is an opportunity the develop relationship initiatives and research and extension activities.

Bali Cattle Genetic Improvement

Historically, Bali cattle herds (*Bos sondaicus*, *Bos javanicus*, *Bos/Bibos banteng*) have remained regionally isolated and subjected to inbreeding with little potential for mixing of the Bali genetic pool. More recently due to demand for beef, there has been little opportunity to select for superior breeding bulls as they have already gone for slaughter. ACIAR has an ongoing project in Lombok to look at improving the genetics of Bali cattle for productivity and disease resistance; however there is some resistance to selective breeding programs with Bali cattle



because of their ability to adapt to different environments and production systems at the small-holder level.

Dicky Adiwoso has embarked on a mission to collect semen from Bali cattle herds around Indonesia to increase genetic diversity in test herds which would enhance this ability to adapt. He asked the NTCA delegation if there were still Banteng bulls (originally from Timor) accessible in the NT to collect semen from as part of his program. DPIF Technical Services can assist with the semen collections if a suitable donor is found.

8 Conclusion

Based on current considerations the ability of West Timor or Sumba to create a safe investment platform for Australian commercial producer investment is limited. Without significant infrastructure / logistics development and maintenance it would be very difficult to gain efficiencies or required economies of scale due to the inability of the logistics chain to cope with the extra pressure, large scale cattle investments may bring.

Aside from normal pastoral and business aptitude, any Australian investor would need to have a very comprehensive understanding of Indonesian culture, formal and informal regulations and protocol along with sound legal foundations to ensure security of land, capital and licence to operate.

An Australian investment must consider:

- i. The macro effect on Indonesia and Australia cattle and beef trade relationships as a break-square or small loss in an NTT program could have considerable benefits in developing the greater trade between the two countries. Therefore any investment should consider external support due to the fact that the Australian market position as a nation could be improved as a result.
- ii. To invest in West Timor or Sumba one must understand road, port, and shipping links to market from both hard asset and human bases.
- iii. Animal Welfare must be as per ESCAS and/or OIE standards.
- iv. R&D needs to be funded (outside the operation) and undertaken to identify those areas that need improvement and rectification. For example mating programs, genetics, animal husbandry, Australian breeds infusion, actual fertility drivers, staff and livestock education, operating facilities ie yards, paddocks and waters. There are many areas where productivity could be improved.
- v. The operation needs to have the scale required to be efficient.
- vi. Staff need to be reliable enough to be trained to become as productive as possible.
- vii. Security of assets and property needs to be sound.
- viii. Funding needs to be available to implement the planned program for its' duration which should be for at least 20 years.
- ix. Source and allocation of funds. Sources need to be identified. There have been several commitments by Australian Government. Particularly the \$25m and \$60m commitments made by previous Gillard and Rudd governments. As well as those that may be available under ACIAR. Note that ACIAR has past, present and future projects on improving Bali cattle production, for example:
 - Strategies to improve Bali cattle in eastern Indonesia (report), genetics component ongoing at Grati Research Station, East Java.
 - Strategies to increase growth of the weaned Bali calf (concluded).



- Developing an integrated production system for Bali cattle in the eastern islands of Indonesia (concluded).
- Improving smallholder cattle fattening systems based on forage tree legume diets in eastern Indonesia and northern Australia (ongoing).
- Improving reproductive performance of cows and performance of fattening cattle in low input systems of Indonesia and northern Australia (ongoing).
- Building capacity in the knowledge and adoption of Bali cattle improvement technology in South Sulawesi.
- Increasing supply of beef and livelihood of smallholder farmers in Indonesia (Indobeef) (proposed).
- x. DPIF is also seeking a collaboration agreement with NTT-Naibonat (they will visit Darwin in Jan 2014) and future technical support for NTCA backed research in Sumba or elsewhere could also be assisted by their researchers / extension officers and be written into the DPIF/Naibonat agreement.

9 Where to from here

It is recommended that NTCA members consider a number of key opportunities as a platform to assist in cementing the long term relationship and trade between the two countries. There are two relatively simple opportunities:

- 1. To expand PUSKUD and build NT producer involvement as part of a relationship building activity. This can take place immediately and it is recommended that by doing so it provides a platform for due diligence in matters detailed below.
- 2. Redevelopment and operation of Kabaru Ranch.
 - i. Participate in improving the R&D platforms and sites throughout NTT.
 - ii. Invest in Ongole cattle and the improvement of the Sumba herd.

Although the concepts require further detail and due diligence only achieved through further in-country exploration and enquiry, it establishes some broad principles to assist in defining further work. It is recommended that follow up research be organised and to visit the sites outlined here as well as other similar possibilities.

Governments of both jurisdictions have indicated a desire to support the types of initiatives outlined in this report. The NT Department of Primary Industry and Fisheries recommend engagement in Sumba as the best option for commercial development involving Territory livestock, however recommend that a detailed review be conducted on previous R&D and other activities to ensure there is no duplication.

Any investment interest by NTCA must take into account overcoming downstream supply chain issues in relation to ESCAS and generally animal welfare considerations.

Finally, it is recommended that NTCA immediately identify interested parties and how much maybe available for investment, identify sources of Government funding, confirm real opportunities in Indonesia, and commence the process to realisation by way of committed funding, further research trips, and final commitment to developing Business Plans and engaging good and sustainable management.



10 Appendices

Tour Delegates

N	T	C	4

Luke Bowen Exec Director NTCA Tracey Hayes **Exec Officer NTCA** Libby Downey **Program Coordinator** Robi Augustier NTCA Indonesia Yogi Sidik **Student Program** Jisnu Adiwoso **Student Program** Marcus Rathsman **NTCA Executive** NTCA Member Garry Riggs Rohan Sullivan NTCA Member Lach McKinnnon **NTCA Member**

NT Government

David Ffoulkes Scott Wauchope

Indonesian Consulate

Pak Ade Pak Oki

Austrade (Indonesia)

Ibu Deviana Nugraemo

Other

Dicky Adiwoso

Itinerary - NTCA trip to Nusa Tenggara Timor

No	Date / Time	Activity	
	15 th October	Tuesday – overnight Bali	
	7.30pm	Fly to Denpasar - JQ81	
		Check into hotel : Ida Hotel, Kuta Square, Kuta	
	16 th October	Wednesday – overnight Kupang	
	11.05am - 12.50pm	Fly To Kupang : Garuda flight GA438	
1 1 00nm = 3 30nm 1 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3		Check in and lunch Hotel: Hotel On The Rock, Kupang	
	4.00pm – 6.00pm	Stakeholder meeting - NTT Provincial Government - NTCA delegation - KADIN - Local business representatives	
	6.00pm - 9.00pm	Dinner with KADIN and stakeholders	
	17 th October	Thursday – overnight Kupang	
	6.00am - 7.00am	Breakfast	
	7.00am - 08.30am	Depart for cattle market	
	8.30am - 10.30am	Field trip at cattle market	
	10.30am - 12.45pm	Return to Kupang and lunch	
	1.00pm - 2.30pm	Meeting with the Govenor	
	3.00pm - 5.00pm	Field trip to port	



7.00pm	Dinner function
18 th October	Friday – overnight Kupang
6.00am - 7.30am	Breakfast
7.00am	Depart for Dicky Adiwoso's investment project
9.30am - 11.30am	Field trip at investment project
11.30am - 2.00pm	Return to Kupang and lunch
2.00pm - 4.30pm	Possible field trip to pastures project for interested delegates
2.00pm - 4.30pm	Visit Nusa Cendana University for some delegates
7.00pm - 9.00pm	Dinner
19 th October	Saturday – overnight Waingapu
4.30am - 5.00am	Check out and depart to airport
6.20am -7.35am	Fly to Sumba (Waingapu) : Merpati MZ 6435
10.30am - 4.00/5.00pm	Sumba field trips - Karabu Ranch etc
7.00 pm - 9.00pm	Dinner
20 th October	Sunday – overnight Waingapu
800am - 8.30am	Breakfast
8.30am - 5.00pm	Sumba field trips - Sumba Contract
7.00pm -9.00pm	Dinner
21st October	Monday – overnight Lombok
8.00am - 9.00am	Breakfast with Bupati on Sumba
10.00am - 10.30am	Depart for airport
11.50am - 1.25pm	Fly to Denpasar with Lion Air/Wings Air MW 1885
3.45pm - 4.15pm	Fly to Lombok With Lion Air/Wings Air MW 1848
5.00pm - 7.00pm	Check in and rest - Hotel: Novatel Lombok
7.00pm	Dinner
22nd October	Tuesday – return to Darwin
8.00am - 9.00am	Breakfast
9.00am - 10.00am	Check out and depart for field trip to ACIAR breeding project
10.00am - 11.30am	Field trip at ACIAR Project
12.00am - 1.30pm	Lunch
1.30pm - 4.00pm	Trip to Sasak House
4.00pm - 4.30pm	Depart to Airport
5.50pm - 6.40pm	Fly to Denpasar with Garuda: GA 437
11.15pm - 3.20am	Fly to Darwin with Jetstar , JQ 58



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12 Disclaimer

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