

INDONESIA AUSTRALIA
RED MEAT & CATTLE
PARTNERSHIP



INDONESIA - AUSTRALIA COMMERCIAL CATTLE BREEDING PROGRAM

Annual Plan
February 2020 - February 2021

The Indonesia – Australia Commercial Cattle Breeding Program is managed by Coffey, a Tetra Tech company, supported by the Australian Government under the Indonesia-Australia Partnership on Food Security in the Red Meat and Cattle Sector

IACCB
Indonesia-Australia Commercial Cattle Breeding Program

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Abbreviations

ASG	Advisory Support Group
BPPT	Badan Pengkajian dan Pengembangan Teknologi
BNT	Bio Nusantara Teknologi
BKB	Buana Karya Bhakti
DFAT	Department of Foreign Affairs and Trade
ESCAS	Exporter Supply Chain Assurance System
Gol	Government of Indonesia
GAPUSPINDO	Gabungan Pelaku Usaha Peternakan Sapi Potong Indonesia
IACCB	Indonesia-Australia Commercial Cattle Breeding program
JJAA	Juang Jaya Abdi Alam
M&E	Monitoring and Evaluation
MES	Monitoring and Evaluation System
MLA	Meat and Livestock Australia
MoA	Indonesia Ministry of Agriculture
MoT	Indonesia Ministry of Trade
PPR	Project Progress Report
STA	Short Term Advisers
SO	Service Order
SOE	State Owned Enterprise
SOP	Standard Operating Procedure
SISKA	Sistem Integrasi Sapi dan Kelapa Sawit
SPR	Sentra Peternakan Rakyat/Small Farmer Group
KPT	Koperasi Produksi Ternak Maju Sejahtera
RMCP	Red Meat Cattle Partnership
KPI	Key Performance Indicator
KAL	Kalteng Andinipalma Lestari
TL	Team Leader
TA	Technical Assistance
TOC	Theory of Change
VfM	Value for Money

1 Executive Summary

The IACCB Program, managed by Coffey International, commenced 5 February 2016. It was established as a three-year program under the auspices of the Indonesian-Australian Partnership for Food Security in the Red Meat and Cattle Sector. A two-year no-cost project extension was granted until 5 February 2021.

The extension focuses on:

1. conclusively determining the commercial viability of three¹ cattle breeding models, and
2. promoting the successful models to industry and government stakeholders and informing them of the potential of, and barriers to, industry growth.

This Annual Plan details IACCB activities to be conducted between February 2020 – February 2021, and associated challenges, risks, and budget.

Year 5 - Key Challenges and Tasks for 2020

- » **Ensuring the continued commercial sustainability** of partner enterprises will be very dependent on sustainably maintaining high herd productivity, specifically calving intervals, weaning rates and weaner growth rates, which remain a challenge for all partners. Achieving these KPIs is closely related to professional herd management, proactively resolving emerging issues, and the continuity of quality feed throughout the year.

Key actions to ensure continued commercial sustainability is as follows

- ✓ Capacity-building and technical assistance to improve staff and manager capacity
- ✓ Consolidating feed availability strategies and expanding pastures to support stable Body Condition Scores (BCS) throughout the year
- ✓ Conducting calf mortality analysis in collaboration with Catherine Research Centre (NT) and Indobeef's PalmCow
- ✓ Completing BPPT (Badan Pengkajian dan Pengembangan Teknologi) research on the impact of fresh fruit bunch production in SISKAs

- » **Strengthening management capacity and effectiveness** is still required across most partners if commercial sustainability is to be maintained. A key weakness is data management and analysis that supports enterprise decision-making in SISKAs enterprises (BKB, KAL and SUJ). IACCB will support partners to develop Enterprise Scale-up Plans based on available data and partner priorities. For BKB this will include supporting the establishment of a cattle breeding learning centre and consultancy service, that allows them to commercialise their 3-years of commercial cattle breeding experience and knowledge.

Key actions to strengthening management capacity and effectiveness will be as follows.

- ✓ Improving management skills and optimizing the use of the data management systems by synchronising CALPROF with partner plantation software and building capacity for data analysis.
- ✓ Developing Enterprise Scale-up Plans based on data and partner plans
- ✓ Conducting one SISKAs-partner workshop to exchange experiences between SISKAs-partners.

- » **Maintaining smallholder enterprise (SPR, KPT, CAP and P4S) management** capacity post IACCB, without external support, will be a key challenge. Smallholder cooperative leadership and members must consistently take ownership of business planning and the development and the execution of business strategies.

¹ In the original design IACCB was to assess three models but recently, due to changes in the way partner SUJ manages their herd, IACCB will be able to present findings on 4 models.

Key actions to achieve this goal will be as follows

- ✓ Complete Commercial Viability Assessments (CVA), hand-over cattle if commercially viable and animal welfare guaranteed and develop well founded recommendations for project scale-up for CAP and P4S.
- ✓ On-going support and technical assistance provided by Gita Pertiwi
- ✓ Targeted support delivered by IACCB staff
- ✓ Two small-holder workshops that facilitate peer to peer learning

- » **Attracting new investment in the sector:** The successful dissemination of the commercial viability findings throughout 2019² attracted substantial interest from both government and private sector. This interest was driven from IACCB results that confirmed that cattle breeding in Indonesia can be profitable, and by the new Big Ruminant legislation that obliges feedlots to import breeders at 5% of the number of feeders imported. However, many investors are hesitant to invest due to the reduction in cattle prices, partly due to the import of cheap Indian buffalo and Brazilian meat. Consequently, a core challenge for IACCB will be to translate investor interest into real investment, and to share experiences that encourage a more enabling regulatory environment.

Key actions to achieve this goal will be as follows

- ✓ Confirming the commercial viability of the four breeding models³
- ✓ Promoting IACCB key-outputs: Regularly update IACCB website and distribute the IACCB Quarterly Update to Australian and Indonesian audiences
- ✓ Communicating relevant IACCB information to identified potential investors (see 6-monthly Progress Report)
- ✓ Disseminate IACCB findings and results of the breeding model analysis to interested parties
- ✓ With provincial livestock agencies conduct two multi-stakeholders focus group discussions involving the private sector, government and smallholders, to discuss BX cattle breeding experiences

- » **Ensuring the availability of IACCB learning, post IACCB,** will be critical to industry growth. This will be achieved through partner initiatives and IACCB efforts.

Supporting Partner initiatives as follows:

- ✓ The development of partners learning centres and consultancy services
- ✓ Partner-led engagement with MoA and industry bodies

Documenting IACCB's five-years of cattle breeding experience will include:

- ✓ Updating BX Cattle Breeding Manual and finalizing industry software CALFIN, CALPROS and CALPROF
- ✓ Partner Journey Maps that visually present enterprise growth timelines
- ✓ Breeding Model Summary papers highlighting key learning from each breeding model
- ✓ Compilation of partner three-year datasets for investors or researchers
- ✓ Program Completion Report

² See 7th IACCB Progress Report: July – December 2019

³ Five of the partners will have at least three year of BX cattle breeding experience by the middle of 2020, which will provide additional data to strengthen IACCB conclusions

Medium to Long-term Risks

- » **Ensuring animal welfare, may be challenging**, when more investors, including the private sector, farmer groups and government initiatives, invest without sufficient support. New investors unaware of the great effort and support that has been invested in successful IACCB partner enterprises, might try to replicate beyond their management ability. Climate change may increase the incidence of prolonged dry seasons, which now often last for more than 6 months. Feed resources are severely depleted, significantly impacting on cattle condition and animal welfare, if no mitigation measures are in place. Highlighting these risks to all interested parties should be a continuing industry priority. IACCB will ensure the clear articulation of risks, and investment prerequisites, in manuals, tools, discussions and presentations. Communicating realistic information post-IACCB, ideally by industry associations, is of great importance.
- » A major challenge hampering industry growth is a **lack of experienced staff and managers**, which is likely be a key disincentive to new investment. IACCB support to the SSKA Centre of Excellence, small-holder enterprise peer-to-peer learning sites, and student internship places, will mitigate this risk, however on-going industry effort is required.
- » **The import of Indian buffalo and Brazilian meat**, both cheaper than the current government regulated market price, has very likely decreased investor appetite. Long-term prospects for a profitable cattle breeding business are now under question. This is acutely felt by smallholders engaging in breeding or fattening activities, whose small margins are being undercut. These beef import policies directly counter the government's goal of increasing the availability of locally produced meat.
- » **The sale of cattle** produced by our partners in more remote regions, to other locations, might be unprofitable due to the lack of suitable inter-island shipping.

2 Introduction

This Annual Plan fulfils the requirements of Clause 8.1 (e) of the Service Order No. 07 – Deed 65315 amendment No. 3 between the Department of Foreign Affairs and Trade (DFAT) and Coffey International Development Pty Ltd (Coffey). The Annual Plan was prepared in December 2019 through January 2020 by the IACCB Program Director, in consultation with the IACCB team, and representatives from Coffey.

2.1 Content and Purpose of the Annual Plan

This Annual Plan details IACCB activities, key challenges and risks, an updated Risk Management Plan, and a February 2020 - February 2021 budget. The key purpose of the Plan is to:

guide IACCB team efforts over the planning period; and

provide a point of reference for evaluations, Progress Reports and subsequent Annual Plans.

2.2 Program Approach

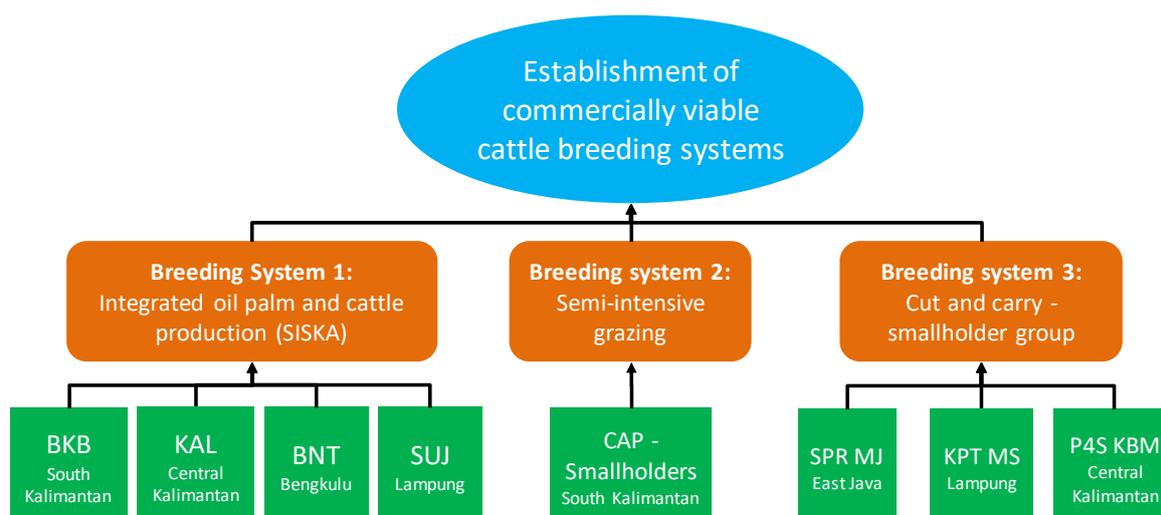
The IACCB Program, managed by Coffey International, commenced February 5th, 2016 and was established as a three-year program under the auspices of the Indonesian-Australian Partnership for Food Security in the Red Meat and Cattle Sector. A two-year no-cost project extension was granted until 5 February 2021.

The extension focuses on:

1. conclusively determining the commercial viability of three cattle breeding models, and
2. promoting the successful models to industry and government stakeholders and informing them of the potential of, and barriers to, industry growth.

The project design covered three breeding models i.e. (i) Integrated Oil Palm and Cattle Production (SISKA); (ii) Open Grazing; and (iii) Cut-and-Carry in different locations in Indonesia (see Figure 1).

Figure 1: IACCB Program Structure



Over time the design of the SISKAs-model, in the Lampung Siska partner site, evolved to a semi-breedlot model, where cattle are in the breedlot pre-calving up to weaning, and then grazed in the palm plantation.

Figure 2 provides a graphic view of the IACCB BX Cattle Breeding Models.

Figure 2: IACCB BX Cattle Breeding Models



In summary, the program provides support to its partners for piloting specific breeding systems adapted to the local conditions. The support aims to improve the partner's capacity (knowledge, skills and operational capacity), that results in changes in their cattle breeding and farm management practices. With these changes, and effective monitoring and recording of data, the partners obtain evidence that the business of breeding cattle is commercially viable. This encourages the partners to further invest in the expansion of their cattle breeding business beyond the project phase.

IACCB's responsibility is to provide enough support to each partner, tailored to their needs, so that their breeding system has a high probability of achieving sustainable commercial outcomes. Of importance will be to ensure that the breeding models remain commercially viable without IACCB support.

Besides confirming commercial viability, IACCB promotes the findings of its adapted research trials to potential investors and interested stakeholders including (but not limited to) government, associations of oil palm plantations and the feedlot industry.

Increasing the interest of potential investors is challenging given the import and wide distribution of cheap Indian Buffalo Meat (IBM) and Brazilian meat, which is also reducing the profit margins of many Indonesian farmers and feedlots owners.

3 Program Update

Now in its final year of operations, IACCB is working with seven out of its original eight partners, in four provinces. Detailed information on each partner, the number of cattle, and investments made by partners and IACCB up to end of Year 4, are provided in Annex 2.

Two of the four original SISKAs-partners, BKB and SUJ are heavily investing (\$500,000 or more) to expand their SISKAs-enterprises. KAL is focusing on maintaining productivity and commercial targets. BNT in Bengkulu, feeling the brunt of the low palm oil prices, decided to solely focus on oil palm and mill operations, and moved out of cattle breeding in August 2019.

The two longer term small-holder cut-and-carry partners, KPT and SPR, are keeping herd numbers at manageable levels, in line with their carrying capacity, whilst selling year-old progeny to support cash-flow. P4S, which received cattle in February 2019, is raising its 2019 progeny, and now has heifers pregnant again for their second calves. CAP, the one open-grazing partner, is expanding its improved pasture acreage to sustain its increasing herd numbers.

Six of the seven current partners have undergone CVAs, with five being assessed as "potentially commercially sustainable". These include two SISKAs-partners (BKB and KAL), two small-holder partners (SPR and KPT), and the semi-breedlot partner SUJ. CAP will be re-assessed in the first quarter of 2020, as it is still struggling to

professionally manage the herd, with birth rates of only 50% and ADGs of 0.23kg/hd/d, which is significantly below the target of 0.4kg/hd/d. P4S will be assessed after 18 months of operations, in August or September 2020.

Most partners still require support to improve efficiency and to meet KPI and herd development targets. All also need market analysis support, which is not surprising considering most are new to the industry. Several partners will soon produce 300 head of slaughter cattle annually, including progeny or cows being culled, which may exceed local demand.

Refer to Progress Report July-December 2019 for a detailed Program update.

4 Key Challenges

IACCB's key challenge in its final year will be to encourage potential investors to translate their interest in cattle breeding into real investment. A further challenge will be to ensure the long-term commercial sustainability of the partner enterprises, and to prepare them to take up a key-role in providing services and information to industry and/or to government. Overcoming both will support the achievement of the IACCB End of Program Outcome - expanding the cattle breeding sector in Indonesia.

These key-challenges are elaborated below.

- » **Ensuring the continued commercial sustainability** of the partner enterprises will be very dependent on sustainably maintaining high herd productivity, specifically calving intervals, weaning rates and weaner growth rates, which remain a challenge for all partners. This is closely related to professional herd management and proactively acting or quickly resolving emerging issues, as well as the continuity of quality feed throughout the year. Availability of cut-and-carry grass and improved pastures, as well as availability of agricultural by-products, has proven to fulfil nutrition demands, if available in sufficient quantity and quality.
- » **Strengthening management capacity and effectiveness** is still required across most partners to maintain commercial sustainability. A key weakness is data management and analysis that supports enterprise decision-making in SISKAs enterprises. IACCB will support the partners to develop Enterprise Scale-up Plans, based on the available data and partner priorities, and to establish cattle breeding learning centres and consultancy services that draws on their 3-years of commercial cattle breeding experience. The aim of the support will be to ensure partners optimize their investments and commercialise their knowledge and experience.
- » **Maintaining smallholder enterprise management** capacity post IACCB, without external support, will be a key challenge. Of particular importance will be ensuring smallholder cooperative leadership and members consistently take ownership of business planning and the development and the execution of their business strategies.
- » **Attracting new investment in the sector:** The successful dissemination of the commercial viability findings throughout 2019⁴ has attracted substantial interest from both government and the private sector. This interest is driven from IACCB results that confirm that cattle breeding in Indonesia can be profitable, if managed well. It is also driven by the new Big Ruminant legislation that obliges feedlots to import breeders at an amount of 5% of the number of feeders imported. However, many investors are hesitant to invest due to the reduction in cattle prices, partly due to the import of cheap Indian buffalo from Brazil meat. Consequently, a core challenge for IACCB will be to translate investor interest into real investment, and to share experiences that encourage a more enabling regulatory environment.
- » **Ensuring the availability of IACCB learning, post IACCB, is** critical to ensure long term benefits. This will be through partners training and consultancy initiatives, as described above. IACCB will also need to document and ensure the long-term availability of program lessons, data, and knowledge.

⁴ See 7th IACCB Progress Report: July – December 2019

Key tasks and associated outcomes over the coming year, as follows, are aimed at overcoming these challenges.

1. **Ensuring continued commercial sustainability** of the partner enterprises will be very dependent on professional herd management that drives high herd productivity, specifically calving intervals, weaning rates and weaner growth rates. This still remain a challenge for all partners.

Key actions to achieve this goal is as follows. (More detail in Section 4.1.).

- ✓ Capacity-building and technical assistance to improve staff and manager capacity
 - ✓ Consolidating feed availability strategy and expanding pasture to support a stable BCS throughout the year
 - ✓ Conducting calf mortality analysis in collaboration with Catherine Research Centre (NT) and Indobeef's PalmCow
 - ✓ Completing BPPT research on the impact of fresh fruit bunch production in SISKA
2. **Strengthening management capacity and effectiveness** is still required across most partners to maintain commercial sustainability. A key weakness is data management and analysis that supports enterprise decision-making in SISKA enterprises, including the ability to develop scaling-up plans and broadening of the income-base of the enterprise by monetizing knowledge and experience.

Key actions to achieve this goal is as follows. (More detail in Section 4.2.)

- ✓ Improving management skills and optimizing the use of the data management systems by synchronising CALPROF with the partner plantation software, and building capacity for data analysis, both essential to grow the business
 - ✓ Developing Enterprise Scale-up Plans based on data and partner plans
 - ✓ Conducting one SISKA-partner workshop to exchange experiences between SISKA-partners.
3. **Improving smallholder cattle breeding capacities and enterprise management** to ensure smallholder cooperative leadership, and members, consistently take ownership of business planning, and the development and execution of a business strategy.

Key actions to achieve this goal is as follows. (More detail in Section 4.3.).

- ✓ On-going support and technical assistance provided by Gita Pertiwi including organizing two small-holder workshops that facilitate peer-to-peer learning
 - ✓ Targeted support of IACCB staff including completing CVAs, hand-over of cattle if commercially viable and animal welfare guaranteed and develop well founded recommendations for project scale-up for CAP and P4S.
4. **Attracting new investment** in the sector by translating investor interest into real investment, and to share experiences that potentially encourage a more enabling regulatory environment.

Key actions to achieve this goal is as follows. (More detail in Section 4.4.).

- ✓ Confirming the commercial viability of the four breeding models⁵
- ✓ Promoting IACCB key-outputs: Regularly update IACCB website and publish the IACCB Quarterly Update and distribute widely to an Australian and Indonesian audience
- ✓ Targeting identified potential investors (See 6-monthly Progress Report) through a targeted approach communicating relevant IACCB information
- ✓ Disseminate IACCB findings and results of the breeding model analysis to interested parties

⁵ Five of the partners will have at least three year of BX cattle breeding experience by the middle of 2020, which will provide additional data to strengthen IACCB conclusions on the commercial viability of the four models

- ✓ Conducting two multi-stakeholders focus group discussion workshops co-organized with provincial livestock agencies, and involving private sector, government and smallholders, to discuss BX cattle breeding experiences, and to support industry expansion

5. Ensuring the long-term availability of IACCB knowledge, tools and guidance.

Key actions to achieve this goal is as follows. (More detail in Section 4.5.).

- ✓ Supporting IACCB partners to develop learning centres on their sites and consultancy services, that draw on their 3-years of commercial cattle breeding experience
- ✓ Partner-led engagement with MoA and industry bodies
- ✓ Updating BX Cattle Breeding Manual and finalizing industry software CALFIN, CALPROS and CALPROF

Documenting IACCB's five-years of cattle breeding experience via the following documents:

- ✓ Partner Journey Maps that presents a visual timeline of enterprise growth
- ✓ Breeding Model Summary papers highlighting key learning from each breeding model
- ✓ Partner three-year datasets based on the IACCB dashboard/CALPROS for investors or researchers studying the business potential of each model
- ✓ Program Completion Report

5 IACCB Key tasks

5.1 Ensuring continued commercial sustainability of the partner enterprises

Commercially sustainable enterprises require capable staff and management. Whilst there have been capacity improvements as a result of IACCB efforts, staff and management capacities, in general, still require considerable development. There are still substantial capacity gaps in optimizing herd management to ensure the main KPIs - calving intervals, weaning rates and weaner growth rates, are achieved in an expanding enterprise. To support capacity-building IACCB will:

- » Work closely with Advisory Support Group (ASG) and the RMCP to take up opportunities for partner involvement in industry training efforts such as the Cattle Breeding Manager Training.
- » Provide skills training for animal health paramedics and/or veterinary doctors, with a focus on 'prolapse' and avoiding calf mortality. Veterinary services through the livestock department are often limited and partner skills in this area almost non-existent, resulting in ineffective treatment and high calf mortality.
- » Continue supporting peer-to-peer learning workshops - one SSKA and two smallholder – that allow the sharing of lessons learnt among partners and the strengthening of professional networks. This will be instrumental in facilitating further exchange between partners post IACCB. (Detail in Section 4.2. and 4.3.)
- » Provide capacity-building in data collection and analysis, tailored to the needs of the individual partners, with the view to improving management decision making. (Detail in Section 4.2.)

Maintaining Herd Productivity and BCS⁶ - To achieve high herd productivity IACCB will continue to provide high quality technical assistance and field support to all partners. The focus will be on ensuring partners can meet KPIs and sustainable commercial viability whilst ensuring animal welfare, post IACCB. This will include the completion of standard operating procedures for all partners and associated training, and the provision of technical assistance in nutrition and health management.

⁶ Ideal BCS figure for productive heifers/bulls is 3 out of a ranking between 1 (too skinny) and 5 (too fat)

A significant challenge for all BX cattle breeding enterprises is maintaining herd BCS throughout the year, as the nutrition of feed products differ in different seasons. IACCB will support its partners to overcome this challenge in 2 main ways (1) develop feed plans, and (2) expand improved pastures acreage.

1. IACCB will work with its partners to consolidate the nutritional advice provided to date, and thereafter to develop and implement realistic feed plans that ensure the use of locally available feed materials, such as agricultural by-products. Plans will consider the changing availability of feed components throughout the year and the different feeding requirements of weaners, growers, feeders, dry, pregnant and lactating cows and bulls.
 2. IACCB will work with its partners to further develop improved pastures. Despite good efforts, most partners are not expanding improved pastures fast enough⁷, resulting in the need to procure high cost feed supplements, especially during the dry season. IACCB will provide TA in pasture development for the specific sites and supply Mulatto and Paspalum Ubon seeds, which have proven to be the best options with great DM production.
- » **Conducting calf mortality research.** Calf mortality is severely impacting commercial outcomes, as it increases the cost of a weaner and impacts on the final costs of feeders for sale. IACCB, in collaboration with Catherine Research Centre (NT) and Indobeeff's PalmCow, using IACCB partner data over a 2- to 3-year timeframe, will analyse the causes of this high calf mortality. Research results, expected mid-2020, will be used to develop and implement mitigation alternatives.

Completing BPPT research on the impact of fresh fruit bunch (FFB) production in SISKa. IACCB is collaborating with BPPT in the research on FFB production in two sites in Kalimantan. Final results will be available in the first quarter of 2020. Results will allow commercial viability assessments that providing an overall picture of the SISKa enterprise, combining commercial benefits for both the plantation and the ranch.

5.2 Strengthening management capacity and effectiveness

Improving management skills - By the end of IACCB in February 2021, partner management and staff should be able to take full ownership of business planning and its execution. This includes the timely and effective identification of emerging issues and the delivery of correct resolutive actions.

For SISKa-partners IACCB will deliver the following:

- » Strengthening management effectiveness by integrating CALPROF software with SISKa-partner software to ensure a truly integrated plantation and ranch business. The combined data, in one system, will allow for regular analysis of KPIs and costs.
- » On-the-job capacity building to improve technical and commercial data analysis skills, including the recording, storing and analysis of KPIs.

Developing Enterprise Development/Scale-up plans - Five partners have passed the Commercial Viability Assessments (CVA) and SISKa partners (BKB, KAL and SUJ) are interested in growing their businesses. The two smallholder partners, KPT and SPR, have site specific restriction to scale-up, including the difficulty in accessing additional land, limited access to finance, and the inherent limitations of the smallholder model⁸. IACCB will provide support for the development and implementation of Enterprise Scale-up Plans, which consider herd productivity, financial data and partner goals, and will build business planning capacities.

⁷ Developing pasture under palm has proven to be ineffective due to the high cost of developing shade-tolerant species. IACCB will provide support to improved pastures in ex-mining locations (BKB) and intercropping with newly planted palms (SUJ). Support to KAL, which has limited open areas, will focus on optimizing palm fronds as an additional source of green fodder. IACCB's open-grazing partner, CAP, has expanded its improved pasture area to 140 ha which is permanently fenced providing enough quality feed for weaners, growers and lactating cattle

⁸ Management difficulties associated with a cooperative model are due to the many small-scale "owners", with varying financial capacities and skills, who must collaborate and cooperate and share profits and costs.

Conducting one SISKAs-partner workshop in the middle of 2020 to provide an opportunity for SISKAs partners to witness progress in other SISKAs sites and discuss enabling and blocking factors they encounter and how to optimally address them.

5.3 Improving smallholder cattle breeding capacities and enterprise management

IACCB small-holder partners are in different stages of their development, with SPR and KPT having around three years' experience, CAP two years, and P4S slightly less than one year. Challenges have lessened for the more experienced partners, but all still benefit from technical assistance. IACCB will keep providing (although with less intensity) necessary technical assistance and field support to maintain high herd productivity KPIs, animal health and welfare, and commercial viability.

Smallholder partners will continue to receive training and mentoring initiatives delivered by Gita Pertiwi⁹. Gita Pertiwi's 2019 capacity building efforts substantially improved smallholder financial transparency, which resulted in more cohesive small-holder cooperatives, and improved understanding of good governance. The activities this year will build on these skills, with a focus on commercial returns. Two small-holder workshops, facilitated by Gita Pertiwi and attended by the four partners, will be held in February and June 2020, to encourage peer-to-peer learning.

IACCB staff and advisers will provide targeted support as follows.

- » KPT in Lampung has gained most from the IACCB support and recently received 20 pregnant cows, via a MoU with the Juang Jaya Abadi feedlot. After splitting their herd of 100 cows and offspring into five heifer and two progeny groups, KPT is maintaining good herd BCS. Working with the local livestock agency, support from IACCB will focus on emerging animal health issues.
- » SPR, in East Java, have reduced their cooperative herd to about 60 heads (cows and bulls) with progeny being raised by individual farmers. IACCB will provide some technical support to finalize procedures for the new operating conditions, support the local livestock service conduct pregnancy tests, and finalize KPI data collection up to the end of year three.
- » CAP and P4S have not yet passed their CVA. IACCB will support the two partners to ensure improved KPIs for CAP, and to maintain performance for P4S. Cattle will be handed over to these two partners if both pass their CVAs, animal welfare can be guaranteed, and Enterprise Scale-Up Plans developed.

5.4 Attracting new investment in the sector

IACCB aims to support increased investment in cattle breeding in Indonesia. To achieve this objective IACCB will focus on a number of strategies as follows.

Confirming the commercial viability of the four breeding models - Five of the partners will have at least three year of BX cattle breeding experience by the middle of 2020, which will provide additional data to strengthen IACCB conclusions on the commercial viability of the four models. To fully comprehend SISKAs commercial viability, BPPT will release the final data on FFB in first quarter of 2020.

Promoting IACCB key-outputs and results and communicating the availability of cattle breeding tools, will be delivered as follows.

- » Close collaboration with ASG to ensure results and key outputs are effectively promoted through RMCP related activities
- » Monthly update of the IACCB website, with new developments and information

⁹ A consultancy NGO providing organization strengthening support for farmer organizations and small-and-medium enterprises

- » **Participate in the Livestock Export Program Expo 2020**, which is expected to bring together more than 700 trade visitors and delegates. IACCB will have a trade booth and deliver a presentation on its experiences to date and results
- » IACCB Quarterly Update published and distributed to the Australian and Indonesian audience
- » Participate in the 15th Indo-Livestock Expo and Forum
- » In collaboration with ASG, deliver an IACCB Lessons Learnt Event¹⁰ to share lessons learnt with a wide stakeholder group.

Targeting identified potential investors (See 6-monthly progress report): Directly approach potential investors to fully understand their interest and knowledge, communicate information about IACCB results and tools, and to invite them to key-events.

Disseminating breeding model analysis to financial institutions, palm-oil plantations, feedlot companies, potential investors, the private sector and government through direct communication, meetings, farm visits, and selected livestock events. Meetings will also be held with the Ministry of Agriculture (MoA) and industry bodies (Indonesian and Australian).

Conducting two multi-stakeholders focus group discussions: In collaboration with the Provincial Livestock Agencies in Lampung and South Kalimantan IACCB will deliver two **Provincial Focus Group Discussions on Small-holder Cattle Breeding. The events will** enrich MoA's and investor knowledgebase on small-holder breeding, particularly on private partnerships (feedlots-smallholders; banks-smallholders; etc).

5.5 Ensuring the availability of IACCB learning post IACCB

IACCB will use a three-pronged approach to support the industry post IACCB closure as follows.

1. **Peer-to-peer learning sites.** IACCB will support the development of BKB's Siska Centre of Excellence in South Kalimantan, that will offer 3-day and 7-day introductory courses in Siska and 3-month internships; small-holder learning sites at our small-holder partner enterprises¹¹ where other farmers can view or have on-the-job experience, and the P4S-sites in Central and South Kalimantan which are offering internships for vocational school (livestock, agriculture) students.
2. **Partner led engagement** - IACCB is encouraging its well performing partners, BKB and SUJ, to be involved, and subsequently lead, interaction with interested parties, including GAPKI, GAPUSPINDO and MoA. Strengthening these interactions supports post IACCB investment in smallholder cut-and-carry breedlots¹² and collaboration between oil palm plantations and plasma smallholders¹³.
3. **Industry support tools** – CALFIN, for financial modelling of cattle breeding enterprises, and CALPROS and CALPROF for monitoring small to larger cattle breeding enterprises, summary papers of IACCB lessons learned for the four models, and the BX Breeding Manual, will be available for interested investors after IACCB closure. Discussions are on-going with BKPM, Indobeef's PalmCow and ACIAR to ensure that their websites can host these materials.

¹⁰ This is tentative/ to be confirmed.

¹¹ KPT is in the process of obtaining training institute recognition by the government but is already hosting peer-to-peer learning visits. CAP has obtained P4S status and is now recognized and supported by the government. Recently the head of the Bojonegoro district government and her advisors visited SPR-MJ to gather lessons learned from the BX cattle enterprise in support of plans, in Bojonegoro, to expand breeding cattle population with 2,500 head.

¹² MoA requested IACCB to compile simple information sets with the do's and don'ts of BX cattle breeding and testimonies from small-holder farmers, to be used by local governments and other stakeholders.

¹³ To support Siska expansion the MoA is offering six Siska-companies (including the three IACCB Siska partners) the opportunity to be involved in a MoA scheme where the companies provide technical support in cattle breeding to their plasma farmers and the government loans for expanding cattle breeding, through a KUR (Kredit Usaha Rakyat) scheme. In return the Siska-enterprises would be able to claim a tax deduction.



IACCB’s five-years of cattle breeding experience will be documented by collating via the following documents.

- » Partner Journey Maps presenting a timeline of enterprise growth, challenges and mitigating action. The Journey Maps will help potential investors better understand the efforts needed for success.
- » Breeding Model Summary Papers highlighting key learning from each breeding model, and KPI results leading towards commercial sustainability. These documents will provide valuable information for interested parties who are planning to do similar research, so that they can build on IACCB data and experiences.
- » Partner Three-year Datasets based on the IACCB dashboard/CALPROS for two SISKA-partners; two Cut-and-Carry partners, one Semi-breedlot and one Open-grazing partner. The datasets will provide an overview of KPIs on a monthly basis and will be useful for investors or researchers studying the business potential of each model.
- » Program Completion Report

6 Medium and Long-term Risks

Several key challenges may jeopardise the achievement of IACCB goal of “encouraging investment in the Indonesian cattle breeding sector”. Several challenges are inherent to the business of cattle breeding in Indonesia, which compared to cattle fattening, is less lucrative, highly capital intensive, a long-term investment, and prone to policy changes.

Ensuring animal welfare, may be challenging, when more investors, including private sector, farmer groups and government initiatives, invest without sufficient external support. The success and commercial viability of the well managed partner enterprises in SISKA and cut-and-carry and the success of IACCB in promoting the results (Refer to the 6-monthly progress report) presents a risk to expansion. New investors might not recognize the great effort that has been invested in these enterprises and might try to replicate beyond their management ability. Climate change may increase the incidence of prolonged dry seasons, which sometimes last for more than 6 months. Under these conditions feed resources are severely depleted, significantly impacting on cattle condition and animal welfare, if no mitigation measures are in place. Highlighting this risk to all interested parties should be a continuing industry priority.

A major challenge hampering industry growth is the **current lack of experienced staff and managers**. This will likely be a key disincentive to new investment. Investors need to understand that there is a significant learning period prior to the management of larger herds. IACCB’s efforts to support the SISKA Centre of Excellence and the small-holder enterprises as peer-to-peer learning sites and student internship places, will assist, however ongoing industry efforts will be required.

The import of Indian buffalo meat or Brazilian meat, both cheaper than the current government regulated market price for locally produced meat, has very likely decreased investor appetite. Long-term prospects for a profitable cattle breeding business are now under question. This is acutely felt by smallholders engaging in breeding or fattening activities, whose small margins are being undercut. These beef import policies directly counter the government's goal of increasing the availability of locally produced meat.

A lack of suitable shipping to move cattle inter-island to other markets may hamper industry growth, particularly where the number of slaughter cattle, produced in the more remote regions, exceed local demand. The cost of alternative transport is often prohibitive.

7 Management and Operations

7.1 Project Structure and Staffing.

The final year of the Program will see an increased focus on the promotion of the IACCB applied research results and support for initiatives to expand the cattle breeding industry. Partners already have an improved capacity to manage their herd. IACCB resourcing for the remainder of the program will focus on key challenges, as outlined above, and consider partner technical needs, as well as IACCB project management and promotional requirements. The limited IACCB budget will require a strong focus on efficiencies as follows.

- » Field Officer, Ellentika Damayanti, who is on maternity leave until the end of her contract, will not be replaced; Field Officer, Ucu Wahidin, will be contracted only until mid-2020, and the third field officer, Cut Dara Permata Sari, will fulfil the role of Junior Investment Manager. Only key personnel will be retained towards the end of the program.
- » IACCB Indonesian staff, after three years of IACCB experience, now have the required knowledge and skills to take up several tasks that were previously handled by STAs and external service providers. Following the small-holder organizational development training delivered by Gita Pertiwi, follow on mentoring support will be provided by IACCB Investment Managers and the Financial Advisor. The inputs of key short-term advisers, Ben Mullen (agronomist and science advisor) and Ross Ainsworth (herd management) will focus on resolving key challenges related to long-term sustainability.

An updated Organizational Chart is attached in Annex 9

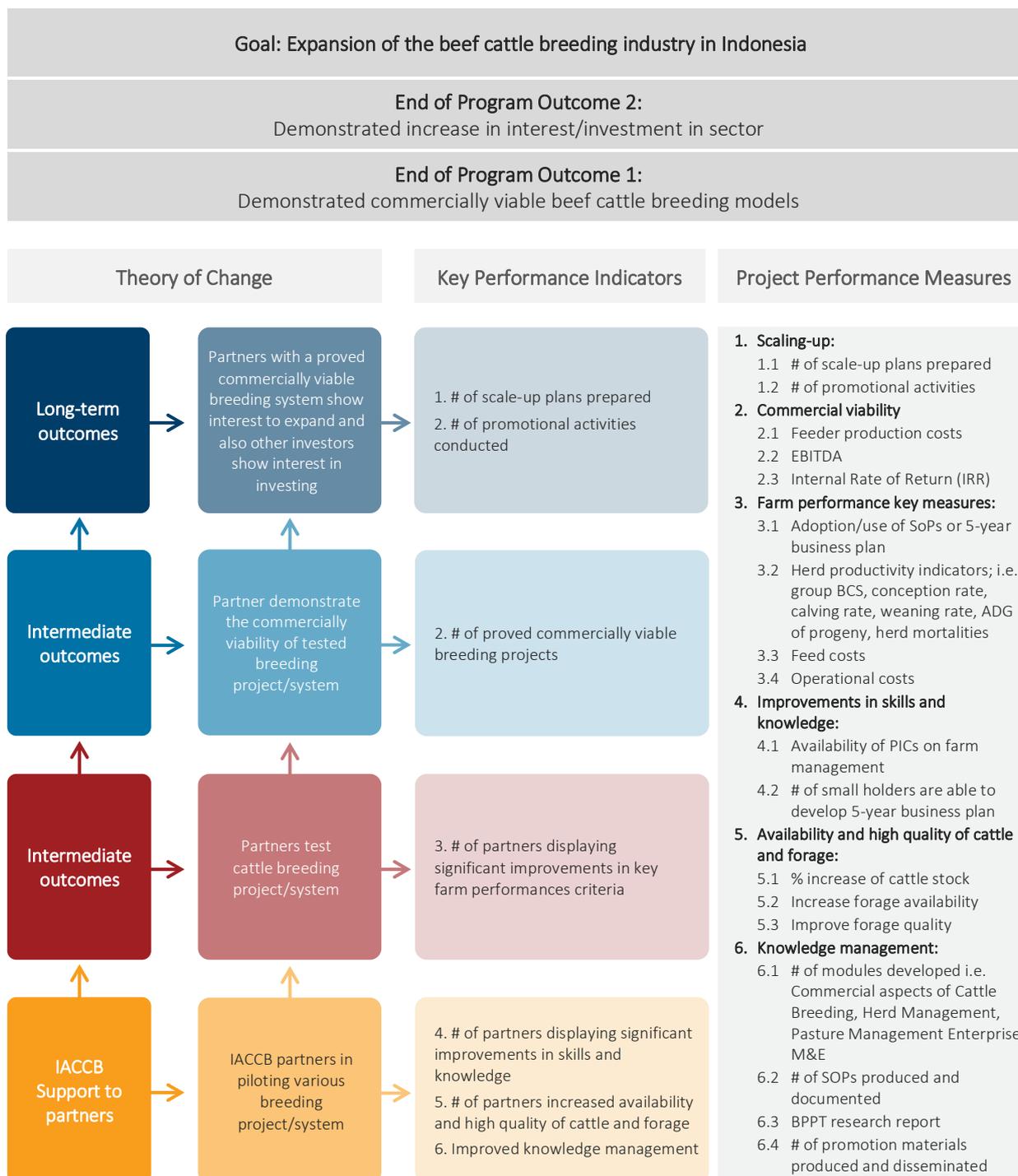
7.2 Monitoring and Evaluation

The following M&E activities will be implemented.

- » Commercial Viability Assessment of projects CAP and P4S.
- » **Six-monthly Project Performance Assessments** will be implemented for each project which have passed CVAs. The focus will be on analysing productivity and commercial data and improving the capacity of the partners to implement performance assessments on their own, and to report to Board/Management. Three months after the performance assessment a monitoring visit will be conducted to discuss issues and progress on identified actions.
- » **Monthly technical monitoring visits** will be held during the first 6 months of 2020 to support the small-holder partners (SPR, KPT, CAP and P4S), to improve their technical capacity and to ensure attention to animal welfare.
- » **Weekly monitoring of herd condition** through photos sent via Whatsapp will be implemented. Although not as effective as on-site monitoring, it will provide an opportunity for IACCB staff to regularly discuss observations and to provide advice to partner staff.
- » **Responding to requests from the industry**, as mentioned in the Progress Report (July-December 2019) will focus on provide limited support to the new cattle breeding enterprises. The support intensity will depend on the availability of resources, both time¹⁴ and funds, to carry out the visits (beyond the IACCB current focus sites).

¹⁴ IACCB will be winding down its activities in the last quarter of 2020 which will influence the capacity to provide support.

Annex 1: Theory of Change



Annex 2: IACCB Partner Profile Summary Update

	Partner	Breeding System	Province	Cattle delivered			IACCB & Partner Investment ¹⁵ (AUD)			MoU signed	MoU Extension
				Received cattle ¹⁶	Number	Total	IACCB	Partner	Total		
1	Buana Karya Bhakti (BKB)	1. SISKA	South Kalimantan	Oct '16	300 Heifers	300 Heifers 30 Bulls	744,988 (48%)	812,398 (52%)	1,557,386	16.08.16	01.02.19
				Dec '16	12 Local Bulls						
				Jan '17	8 Imported Bulls						
				Aug '18	10 Imported Bulls						
2	Kalteng Andinipalma Lestari (KAL)	1. SISKA	Central Kalimantan	Nov '16	200 Heifers	250 Heifers 25 Bulls	697,065 (58%)	514,248 (42%)	1,211,313	31.10.16	01.02.19
				Dec '16	9 Local Bulls						
				Feb '17	50 Heifers						
					6 Imported Bulls						
				Aug '18	10 imported Bulls						
3	Bio Nusantara Teknologi (BNT) ¹⁷	1. SISKA	Bengkulu	Jan '17	246 Heifers	246 Heifers 22 Bulls	643,306 (49%)	656,318 (51%)	1,299,625	01.11.17	01.02.19
					13 Imported Bulls						
				Jul '18							
					9 Imported Bulls						

¹⁵ The \$ amounts indicate the total investment to date by both parties over the life of the project as per the feasibility assessment. This includes cattle, infrastructure, fixed and variable costs and a number of estimates including lease of land etc.

¹⁶ Marks project commencement, which is calculated from the time partners receive their cattle.

¹⁷ Bio Nusantara Teknologi decided to focus on key-business i.e. palm oil production and ceased cattle and organic fertilizer.

4	Sentra Peternakan Rakyat - Mega Jaya (SPR MJ)	3. Cut and carry	East Java	Jan '17	100 Heifers	100 Heifers 5 Bulls	254,586 (61%)	163,659(39%)	418,245	10.01.17	01.02.19
					3 Imported Bulls						
				Apr '17	1 Imported Bull						
				Aug '18	1 imported Bull						
5	Koperasi Produksi Ternak Maju Sejahtera (KPT MS)	3. Cut and carry	Lampung	Apr '17	100 Heifers	100 Heifers 6 Bulls 3 Calves	253,739 (54%)	213,200 (46%)	418,245	12.04.17	01.02.19
					5 Imported Bulls						
					3 calves						
				Jul '18	1 Imported Bulls						
6	Superindo Utama Jaya (SUJ)	1.SISKA/ Breedlot	Lampung	Apr '17	196 Heifers	196 Heifers 14 Bulls	485,049 (30%)	1,110,059 (70%)	1,595,108	24.04.17	01.02.19
					10 Imported Bulls						
				Jul '18	4 Imported Bulls						
7	Tugu Vanilla Jaya (TVJ) ¹⁸	2.Open grazing	NTB	Technical Assistance Only			18,949 (26%)	55,000 (74%)	73,949	02.05.17	
8	Cahaya Abadi Petani (CAP)	2.Open grazing	South Kalimantan	Aug '17	103 Heifers – 8 Imported Bulls	103 Heifers 11 Bulls	366,444 (65%)	195,586 (35%)	562,030	03.07.17	01.02.19
				Aug '18	3 Imported Bulls						
9	Pusat Pelatihan Pertanian dan Perdesaan Swadaya Karya Baru Mandiri (P4S)	3.Cut and Carry	Central Kalimantan	Feb '19	20 Heifers 1 Bull (KAL)	20 Heifers 1 Bull	71,814 (72%)	29,398 (28%)	101,211	07.11.19	
All cattle delivered since Program commencement				1,315 Heifers, 114 Bulls - Total 1,429 Cattle			3,535,940	3,749,866	7,285,805		

¹⁸ Collaboration with TVJ was ceased at the end of the third year due to technical difficulties in the ranch site.

Annex 3: Challenges/Risks and Mitigation

Risk	Impact	Probability			Risk mitigation approach	Entity Responsible
		L	C	R		
Political risks						
Indonesia maintains a policy of allowing Indian buffalo meat and Brazilian meat to be imported	Imported Indian buffalo meat and Brazilian meat is sold at a lower price and as Indonesian produced meat and is distributed beyond the main cities. Local cattle prices drop and local cattle breeding becoming unviable. Interest in investment in breeding cattle enterprises is greatly reduced as profit margins become marginal.	5	5	H	IACCB to support partners to develop efficient cattle herd production models with a focus on commercial efficiencies. Promote commercially viable models to interested parties. Red Meat and Cattle Partnership support the message that well-managed cattle breeding enterprises can be profitable and lobby the MoA on the negative implications of the policy on their goal to expand the cattle breeding industry in Indonesia.	IACCB IACCB Red Meat & Cattle Partnership
Institutional risks						
Uncertain regulatory framework for investment	Reduced number of investors interested in cattle breeding sector.	4	4	H	Communicate the impact of policy uncertainty on attracting investment to MoA via Board members	Red Meat and Cattle Partnership
Financial and operational challenges						
Partners find it difficult to obtain the finance required to properly support their cattle breeding business	Animal welfare compromised due to inability to manage their health leading to poor outcomes for the herd and poor commercial outcomes	2	4	M	Provision of high-quality technical assistance, training, mentoring and support to secure finance	IACCB
Final commercial analysis confirms low projected IRR and NPVs	Failed IACCB investments Partner projects complete without continuation or expansion. Reducing investor investment appetite	2	3	M	Intensify efforts to develop the feed base in the 6 grazing projects. Provide high quality advice to improve herd productivity	IACCB
Unable to establish a year-round viable feed supply	Poor calving rates and long calving intervals, low production – unprofitable outcomes.	2	4	M	Increase efforts to establish better pastures and optimize the use of agricultural by-products	IACCB

Risk	Impact	Probability			Risk mitigation approach	Entity Responsible
		L	C	R		
Environmental / social risks						
Local community off-side stemming from poor partner community relationships unrelated to the project	Security issue for cattle (theft) impacting profits, which is seen as a major deterrent for investors.	2	2	L	Working very closely with local village heads to ensure increased security for IACCB cattle	IACCB and partners

Legend:

- » Category: L – likelihood, C – Consequence, R – Risk
- » Intensity Scoring: 1 lowest, 5 highest
- » Risk scoring: Low, Medium, High)

Annex 4: Program Deliverables in 2020

Name of document/event	Deadline
7 th Progress Report (Period July – Dec 2019)	31 January 2020
5 th Annual Plan period 1 Feb 2020 – 31 Jan 2021 (including Risk Management Plan)	1 February 2020
Partner Scaling-up plans	March 2020
8 th Progress Report (Period Jan – Jun 2020)	31 July 2020
Draft Handover Plan	31 July 2020
Smallholder Development Workshops	February & June 2020
Quarterly Update	March, June, September, December
Web-site Updates	Regularly
SISKA Workshop	July 2020
Manual and Tools Update	September 2020
Breeding Model Summary Documents	September 2020
IACCB Lessons Learnt Workshop (tentative)	October 2020
Draft Completion Report	15 January 2021

Annex 5: Short Term Advisors Inputs

Name	Proposed Position	Estimated input days Jan '20-Jan '21
Ross Ainsworth	Animal Husbandry Specialist	30
Ben Mullen	Pasture Specialist/Science advisor	40
Matthew Callaghan/ Steve Sutherland	Animal Nutrition Specialist	13
Dewi Rosiana	GESI Specialist	8
Citra Lestari	Communication Officer	30
	TOTAL	121

Annex 6: Program Work Plan

IACCB Program Work Plan 2020	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan'21
Monitoring and Technical Assistance												
Partner Project Closure												
Partner Performance Monitoring and Assessment (three-monthly)												
Small-holder Breeding Provincial FGDs		15/3			15/6							
Quarterly IACCB Updates		30/3			30/6			30/9			30/12	
Livestock Export Program Expo			7-8/4									
Manual and Tools – Updated and Final version			30/4					30/9				
Commercial Viability Assessment		CAP						P4S				
SISKA Partner Workshop												
Smallholder Capacity Building Ws (GP)												
Indo Livestock						8-10/7						
Promotion Visits and Targeted Activities												
IACCB Lessons Learnt Workshop												
IACCB Reports					Hand-over	Progress					Draft CR	Final CR
End of program physical wrap-up												31/01

Annex 7: Partner Activity Plan 2020

Project Name	Management	Productivity	Viability and Sustainability
BKB	<ul style="list-style-type: none"> » Improve herd data recording and analysis by providing assistance in the use of CALPROF and staff training on data-base analysis » Suggest to BKB management that they recruit a Junior Manager to support the Ranch Manager » Strengthen capacity of animal health services by suggesting to BKB management that they recruit a paramedic, and provide staff training in animal health » Support the development of scaling-up plan based on management expectations and expansion plans 	<ul style="list-style-type: none"> » Improve weaner performance (ADG) by assisting in the development of a better feed formulation » Reduce calf mortality by developing a strategy to deliver in a nursery paddock » Select and cull unproductive cows » Ensure forage supply by developing 10- 20 hectares of open pasture (ex-mining and nursery areas) 	<ul style="list-style-type: none"> » Analyze cost efficiency and financial sustainability by providing close assistance in the use of CALFIN » Encourage owner/CEO to sustain and up-scale the business model » Support market analysis » Support the development of training packages to be delivered by BKB to interested parties who apply for the courses with main target other oil palm plantations and government
KAL	<ul style="list-style-type: none"> » Support management to ensure that what has been practiced with IACCB is applied consistently and to ensure full working integration of plantation and livestock management teams » Improve herd data recording and analysis by providing assistance in the use of CALPROF and staff training on data-base analysis » Support development of scaling-up plan based on management expectations and expansion plan 	<ul style="list-style-type: none"> » Assist management and staff to improve productivity (calving rate, weaning rate, ADG of growers) and reduce calf mortality by analyzing the calf mortality causes in collaboration with Catherine Research Station. » Reduce unnecessary feed cost by strict selection and culling of unproductive cows and replacing them with new pregnant heifers » Ensure forage supply by utilizing open areas to grow forage and the utilization of palm fronds » Encourage expansion of grazing areas to other estate divisions to address the limited availability of pastures biomass 	<ul style="list-style-type: none"> » Analyze cost efficiency and financial sustainability by providing close assistance in the use of CALFIN
BNT	<ul style="list-style-type: none"> » Follow-up with management on the sale of the remaining herd in accordance with ESCAS and other standards. 		

Project Name	Management	Productivity	Viability and Sustainability
SPR	<ul style="list-style-type: none"> » Improve administrative capacity and improve financial management via coaching provided by Gita Pertiwi and IACCB staff » Build market networking capacity by introducing to cattle traders, butchers, etc. 	<ul style="list-style-type: none"> » Improve BCS stability by improving Good Husbandry Practices » Improve productivity, calving and weaning management by ensuring consistent feed supply, feed management and the development of forage production 	<ul style="list-style-type: none"> » Engage Local Government now to ensure support after IACCB closure
KPT	<ul style="list-style-type: none"> » Improve financial and administrative management by coaching provided by Gita Pertiwi and IACCB staff » Improve staff and management capacity to anticipate and plan for organizational growth by providing hands-on training 	<ul style="list-style-type: none"> » Improve long term animal health outcomes by involving local government in the provision of health services » Improve feed supply management and support further expansion of forage production 	<ul style="list-style-type: none"> » Improve data analysis capacity of staff by providing hands-on training in data base analysis » Response market analysis to optimize cattle sales profits » Increase investment in growing the herd by facilitating third parties investment » Develop KPT site as a peer-to-peer learning site for other small-holders
SUJ	<ul style="list-style-type: none"> » Improve herd data recording and analysis by providing assistance in the use of CALPROF » Encourage greater engagement of high-level management in supporting field staff » Support development of scaling-up plan based on management expectations and expansion plans 	<ul style="list-style-type: none"> » Improve forage availability by establishing pasture development in Nakau replanted areas » Improve forage supply by establishing contract farming with small holders surrounding the plantation » Optimize local cattle productivity by applying strict selection of high productivity cattle » Improve quality of conservation feed (silage) by provided hands-on training of silage production 	<ul style="list-style-type: none"> » Improve data analysis capacity of staff by providing hands-on training in database analysis » Support market mapping
CAP	<ul style="list-style-type: none"> » Increase human resource capacity at all levels: management, technical staff and administration and finance via coaching provided by Gita Pertiwi and IACCB staff 	<ul style="list-style-type: none"> » Improve feed availability by the 20ha expansion of pasture development » Expand permanent fencing 	<ul style="list-style-type: none"> » Ensure viability by developing and implementing farm business plan » Implement strategy to develop and retain valuable staff

Project Name	Management	Productivity	Viability and Sustainability
	<ul style="list-style-type: none"> » Improve capacity in record keeping by providing assistance in the use of CALPROS » Increase skills in good husbandry practice by providing intensive observation and support in the field 	<ul style="list-style-type: none"> » Improve calving and weaning rates & ADG of weaner/growers by implementing good husbandry practices » Ensuring feed supplement supply by improving feed supply management 	<ul style="list-style-type: none"> » Institutional strengthening by conducting coaching provided by Gita Pertiwi
P4S KBM	<ul style="list-style-type: none"> » Increase skills in good husbandry practice by providing intensive observation and support in the field. » Improve capacity in record keeping by providing close assistance in the use of CALPROS » Ensure stockmen/ laborers are available at all times for daily cattle feeding and rearing » Improve financial management by providing hands on training 	<ul style="list-style-type: none"> » Improve productivity of cows by stabilizing BCS » Improve weaners performance (ADG) by consistently providing good quality feed » Ensuring continuous supply of feed by applying professional feed supply management 	<ul style="list-style-type: none"> » Enhance commercial viability by developing a Farm Business Plan » Institutional strengthening via Gita Pertiwi coaching



