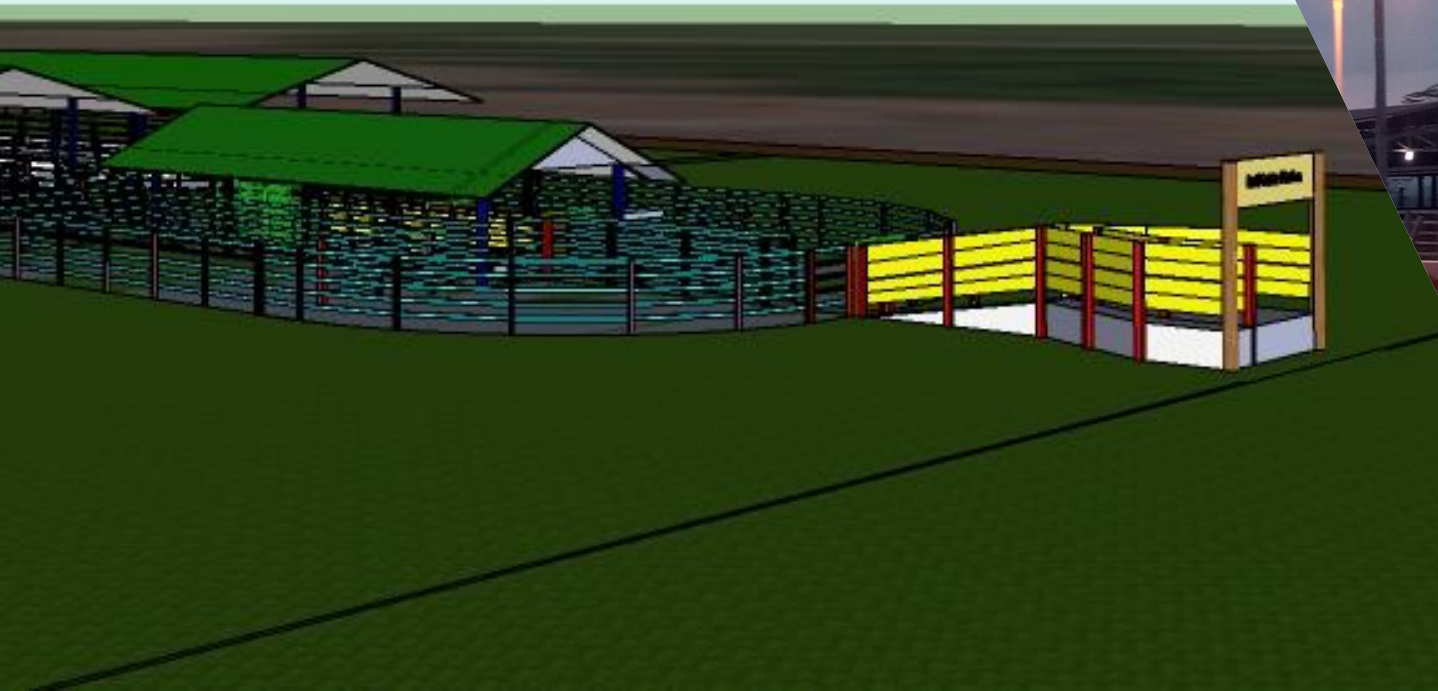




MATA KULIAH

DESAIN PETERNAKAN RUMUNANSIA PEDAGING



Bramada Winiar Putra

Divisi Proterdekat
Departemen IPTP Fakultas Peternakan
IPB University

Tim Pengajar MK. Desain PRP



Dr. Ir. Henny Nuraini, M.Si.



Edit Lesa Aditia, S.Pt, M.Sc.



Dr. Bramada Winar Putra, S.Pt., M.Si



M. Baihaqi, S.Pt., M.Sc.



Prof. Dr. Ir. Rudy Priyanto





DESKRIPSI MATA KULIAH

Membahas tentang konsep desain peternakan ruminansia pedaging sesuai dengan sistem produksi dan output yang dihasilkan, meliputi koefisien teknis produksi ternak ruminansia pedaging, penentuan lokasi dan lahan (site investigation), layout, desain dan model kandang serta fasilitas pendukung, manajemen organisasi dan rencana bisnis serta analisis usahanya.

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Membahas tentang konsep desain peternakan ruminansia pedaging sesuai dengan sistem produksi dan output yang dihasilkan, meliputi koefisien teknis produksi ternak ruminansia pedaging, penentuan lokasi dan lahan (site investigation), layout, desain dan model kandang serta fasilitas pendukung, manajemen organisasi dan rencana bisnis serta analisis usahanya.

Penilaian

Bobot Penilaian Mata Kuliah :

Laporan PJBL Siteplan PRP	30%
Laporan PJBL Masterplan PRP	40%
Kuis & Praktikum	30%

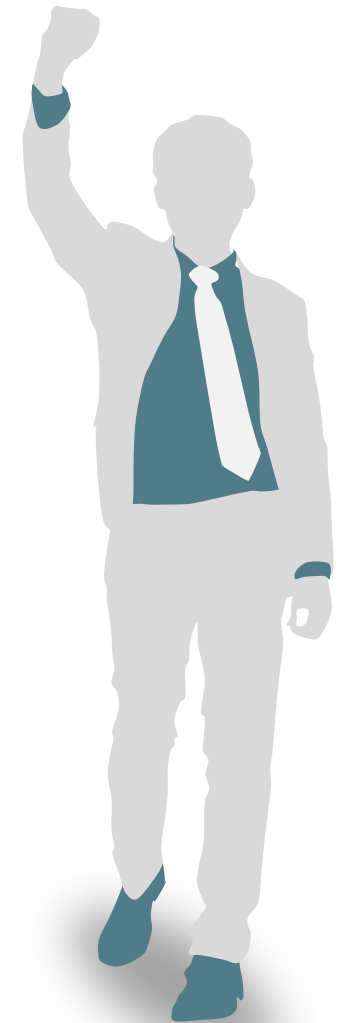
Bobot Penilaian Praktikum / Responsi :

Kuis	40%
Gambar Desain	40%
Keaktifan	10%
Laporan	10%



Standard Nilai

Nilai Angka Mutu	Nilai Huruf Mutu	RANGE NILAI untuk NHM (MAK 100; MIN 0)	
4,0	A	75,0	100,0
3,5	AB	70,0	74,9
3,0	B	65,0	69,9
2,5	BC	60,0	64,9
2,0	C	55,0	44,9
1,0	D	44,9	20,0
0.0	E	< 20,00	



POKOK BAHASAN KULIAH



MINGGU KE-	TANGGAL	TOPIK	DOSEN
1	15.08.2023	Pengantar dan outline siteplan dan masterplan ternak pedaging	RPY
2	22.08.2023	Introduksi Digitalisasi dalam peternakan ruminansia pedaging	BWP
3	29.08.2023	Perkandangan dan fasilitas peternakan ruminansia besar	BWP
4	05.09.2023	Perkandangan dan fasilitas peternakan ruminansia kecil	BWP
5	12.09.2023	Penentuan lokasi dan site plan usaha peternakan	RPY
6	19.09.2023	Koefisien teknis produksi dan proyeksi populasi ternak ruminansia Pedaging	RPY
7	26.09.2023	Layout peternakan ruminansia pedaging	MBQ

UTS : 04-14 OKTOBER 2023

MINGGU KE-	TANGGAL	TOPIK	DOSEN
8	17.10.2023	Sistem Produksi Sapi Pedaging: CCO	HNY
9	24.10.2023	Sistem Produksi Sapi Pedaging: Growing of Stocker	HNY
10	31.10.2023	Sarana dan Fasilitas Penunjang Pembiakan ruminansia pedaging	ELA
11	07.11.2023	Rancangan SDM bidang peternakan ruminansia pedaging	HNY
12	14.11.2023	Komponen biaya masterplan	MBQ
13	21.11.2023	Analisis Finansial usaha ternak ruminansia besar	ELA
14	28.11.2023	Analisis Finansial usaha ternak ruminansia kecil	MBQ

UAS : 04-16 DESEMBER 2023

POKOK BAHASAN PRAKTIKUM



TOPIK	TANGGAL			DOSEN		
	P1 SENIN 13.30-16.30	P2 SELASA 13.00-16.00	P3 RABU 08.00-11.00	P1	P2	P3
Tata-tertib, Materi Praktikum, pembagian kelompok dan topik PBL	14.08.2023	15.08.2023	16.08.2023	ELA	ELA	ELA
Aplikasi Google Sketchup site plan peternakan	21.08.2023	22.08.2023	23.08.2023	BWP	BWP	BWP
Aplikasi Google Sketchup desain perkandangan dan fasilitas penunjang	28.08.2023	29.08.2023	30.08.2023	BWP	BWP	BWP
Aplikasi Google Sketchup desain perkandangan dan fasilitas penunjang	04.09.2023	05.09.2023	06.09.2023	BWP	BWP	BWP
Key Performance Indicator (KPI) dan proyeksi populasi sapi pedaging	11.09.2023	12.09.2023	13.09.2023	RPY	RPY	RPY
Key Performance Indicator (KPI) dan proyeksi populasi kambing domba	18.09.2023	19.09.2023	20.09.2023	RPY	RPY	RPY
Aplikasi GPS & Drone	25.09.2023	26.09.2023	27.09.2023	MBQ	MBQ	MBQ
UTS : 04-14 OKTOBER 2023						

TOPIK	TANGGAL			DOSEN		
	P1 SENIN 13.30-16.30	P2 SELASA 13.00-16.00	P3 RABU 08.00-11.00	P1	P2	P3
Presentasi siteplan usaha peternakan ruminansia pedaging	16.10.2023	17.10.2023	18.10.2023	VAM	ELA	VAM
Kunjungan lapangan: pengayaab materi penyusunan master plan	23.10.2023	24.10.2023	25.10.2023	HNY	HNY	HNY
Desk study penyusunan masterplan usaha peternakan rumped	30.10.2023	31.10.2023	01.11.2023	HNY	HNY	HNY
Praktik dan kerja kelompok penyusunan masterplan usaha peternakan ruminansia pedaging	06.11.2023	07.11.2023	08.11.2023	VAM	ELA	VAM
Praktik dan kerja kelompok penyusunan masterplan usaha peternakan ruminansia pedaging	13.11.2023	14.11.2023	15.11.2023	RPY	ELA	MBQ
Praktik dan kerja kelompok penyusunan masterplan usaha peternakan ruminansia pedaging	20.11.2023	21.11.2023	22.11.2023	MBQ	MB Q	MBQ
Presentasi masterplan peternakan ruminansia pedaging	27.11.2023	28.11.2023	29.11.2023	RPY	ELA	MBQ
UAS : 04-16 DESEMBER 2023						

POKOK BAHASAN PRAKTIKUM

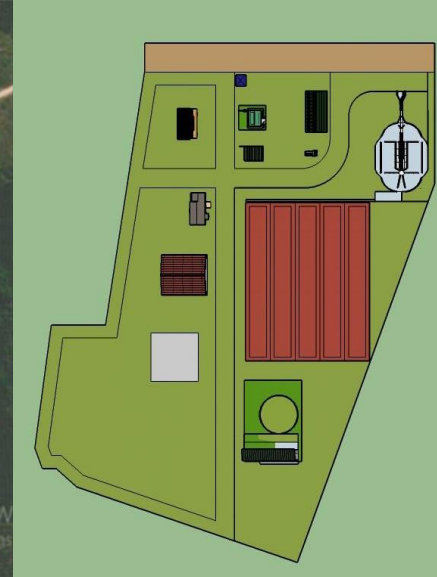
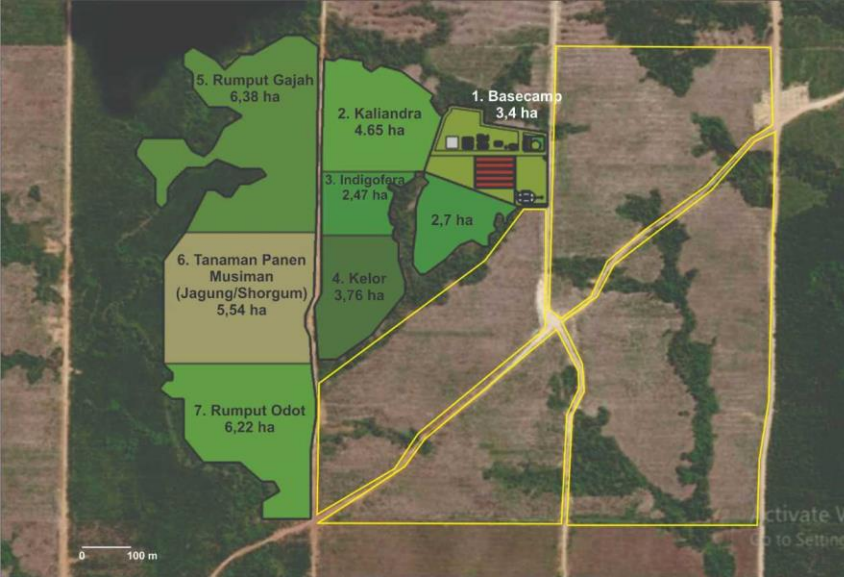
1. Blanchet, K., H. Moeching and J.D. Hughes. 2000. Grazing Systems Planning Guide. University of Minnesota Extension Service.
2. Watts, PJ, RJ. Davis, OB. Keane, MM. Luttrell, RW. Tucker, R. Stafford and S. Janke (2016). Beef Cattle Feedlot: Design and Construction. Meat Livestock Australia.
3. Meat and Livestock Australia. 2010. Manual for South-East Asian cattle feedlots.
4. Meat and Livestock Australia. 2011. Tropical beef production manual.
5. Meat and Livestock Australia. 2016. Covered housing systems.
6. Food and Agriculture Organization of The United Nations. 1988. Farm Structures in Tropical Climates
7. Food and Agriculture Organization of The United Nations. 2018. E-Agriculture in Action: Drones for Agriculture.
8. The Danish Agricultural Advisory Center. 2020. Housing Design for Cattle-Danish Recommendation.
9. University of Minnesota Extension Service. 2002. Pastures for Profit : A guide to rotational grazing.
10. United States Departement of Agriculture. 2002. Sheep and Goat Handling and Facilities Options.



Dalam mendirikan peternakan ruminansia pedaging perlu rancangan atau desain yang baik agar dapat meningkatkan efektifitas produksi dan efisiensi usaha.

Beberapa factor pertimbangan antara lain :

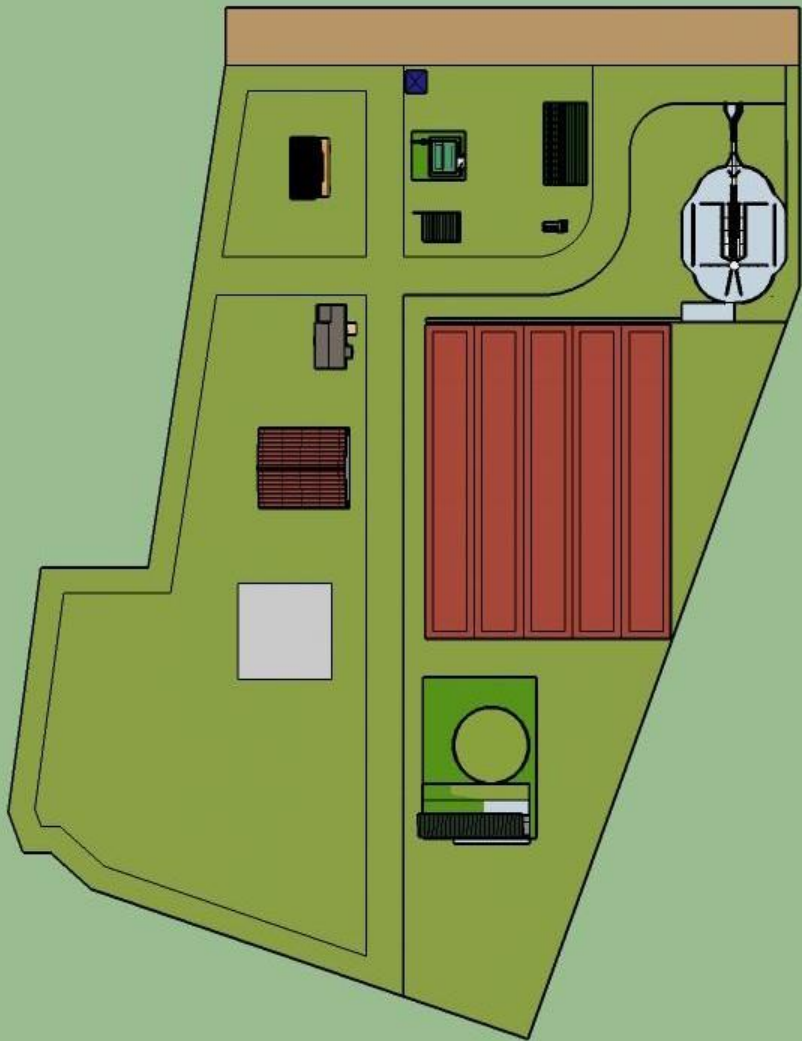


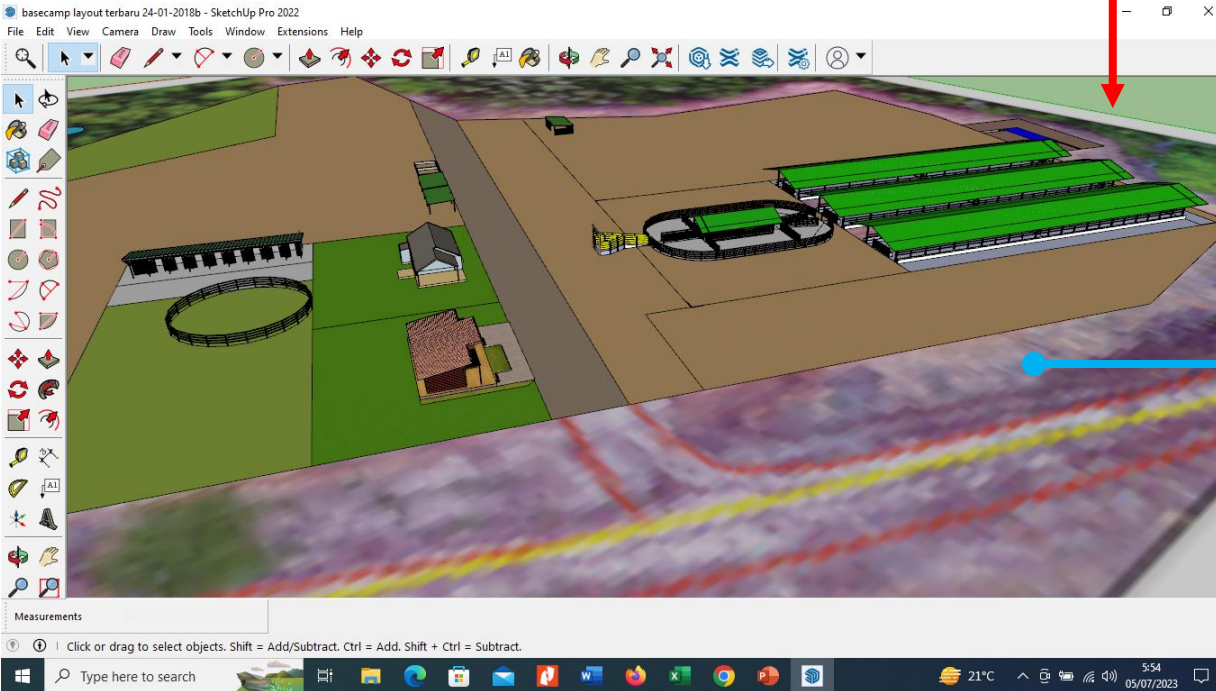
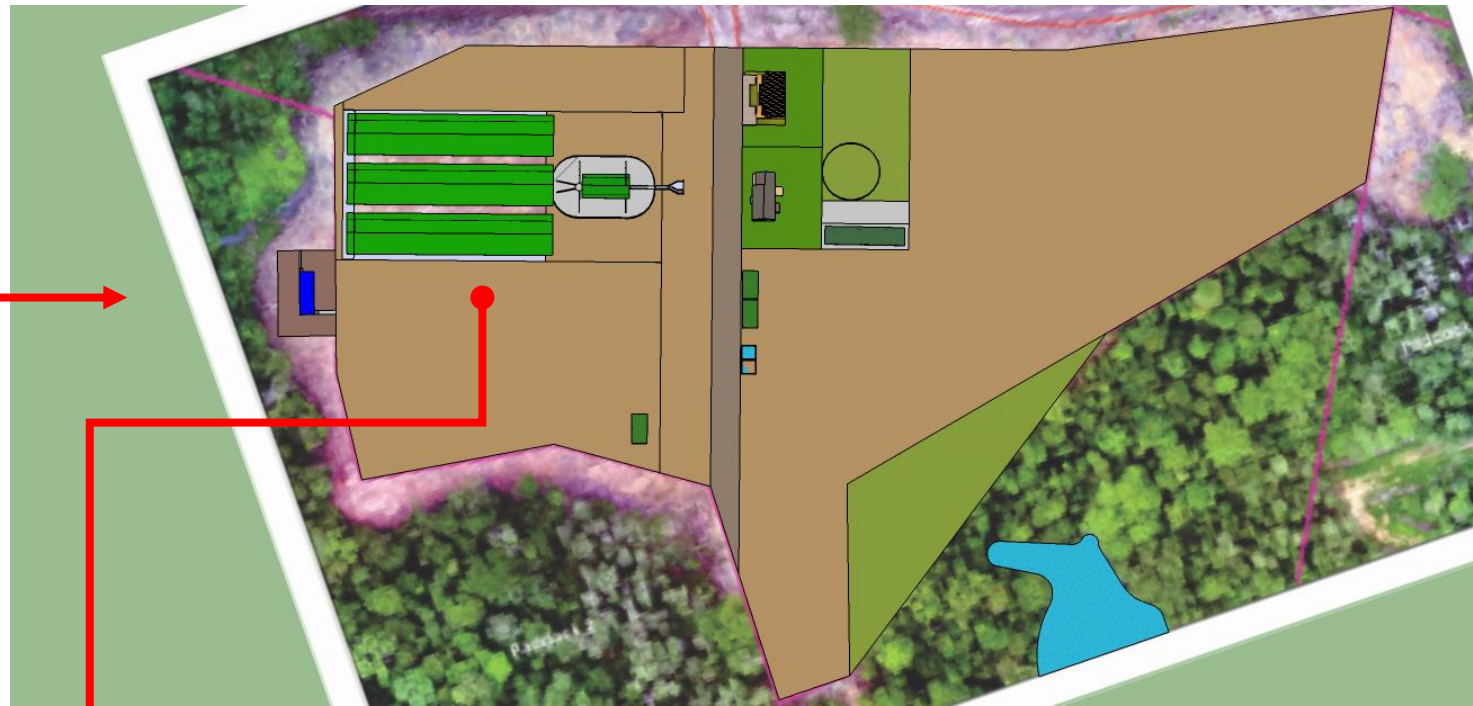


Manfaat Desain Peternakan

- Mendapatkan efisiensi teknis dan ekonomis pembangunan
- Peternakan
- Memaksimalkan Kesehatan, kesejahteraan dan performa produksi ternak
- Menghasilkan keuntungan social (social benefit)
- Meminimalkan biaya perawatan (maintenance cost)
- Meminimalkan dampak negative terhadap lingkungan (environmental impact)
- Mendapatkan usaha peternakan yang layak secara teknis
- maupun ekonomis







Konsep Dasar yang Direkomendasikan

Pengembangan Peternakan Sapi Potong pada area hutan tanaman industri berupa pembibitan dan penggemukan pengembangan pakan berbasis Green Concentrate.



menggambarkan keseluruhan langkah-langkah yang harus diambil



terkait cakupan dan rencana jangka panjang serta perkiraan kinerja dan kapasitas kawasan



nilai investasi yang dibutuhkan dan alokasinya serta proyeksi rugi- laba dan cashflow

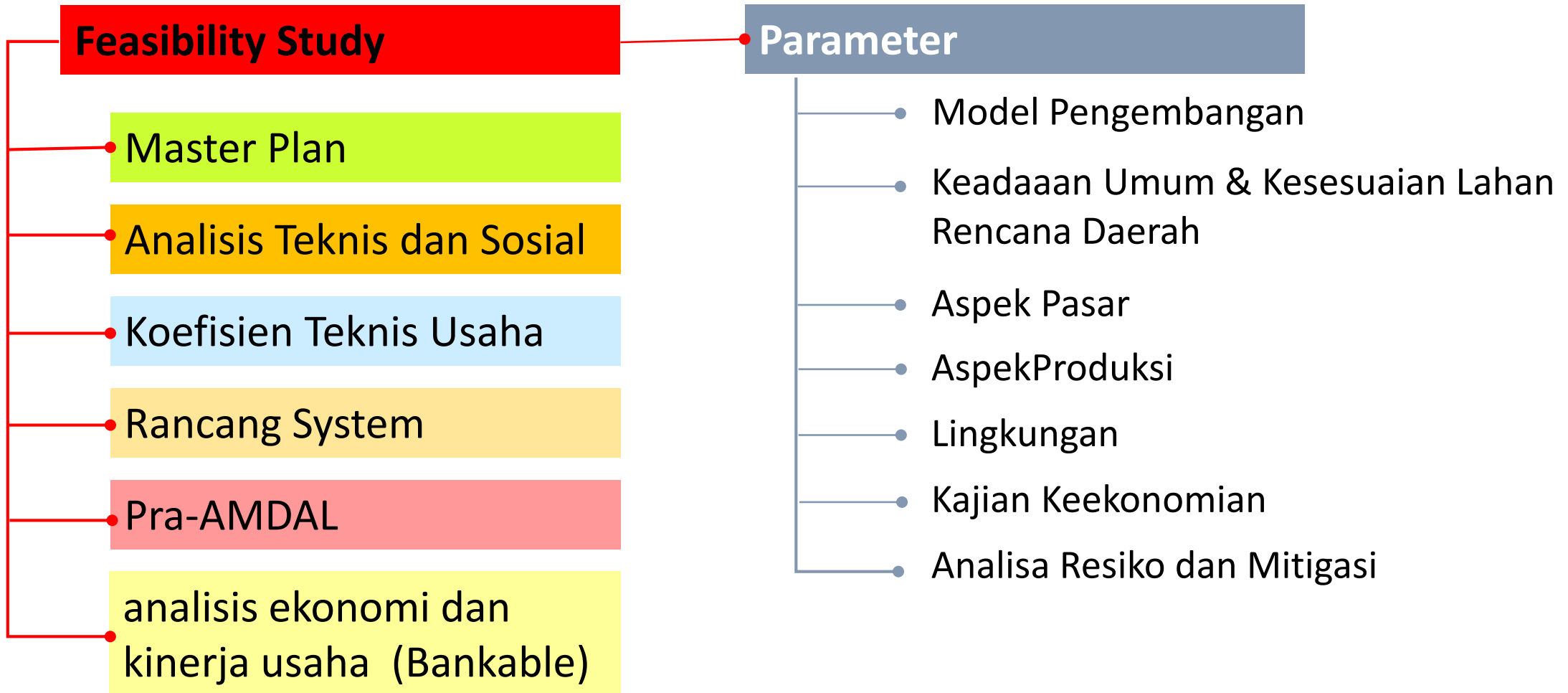


Rancang bangun fasilitas dan sistem yang akan diterapkan



Mitigasi potensi resiko dan alternatif strategi antisipasi resiko

Perlu Dilakukan Feasibility Study Secara Mendetail



Aspek Finansial

- Asumsi untuk analisis keuangan
- Komponen dan Struktur Biaya
- Kebutuhan Dana Investasidan Modal Kerja
- Produksi dan Pendapatan
- Proyeksi Rugi Laba Usaha
- Proyeksi Arus Kas
- Kelayakan Usaha

Project Cattle Breeder & Feedlot
Projected Profit and Loss Statement
(in IDR full amount)

Description	Unit	Year 6			Year 7			Year 8			Year 9			Year 10		
		IDR	USD	%	IDR	USD	%	IDR	USD	%	IDR	USD	%	IDR	USD	
<i>Sapi lokal</i>		0	0		0	0		0	0		0	0	0	0		
<i>Sapi non lokal/import</i>		171,384,831,480	12,241,774		179,954,073,054	12,853,862		188,951,776,706	13,496,555		198,399,365,541	14,171,383	208,319,333,819	14,879,952		
Revenue From feedlot/Pendapatan Feedlot		171,384,831,480	12,241,774		179,954,073,054	12,853,862		188,951,776,706	13,496,555		198,399,365,541	14,171,383	208,319,333,819	14,879,952		
Cost of Goods Sold feedlot /Harga Pokok		124,563,826,008	8,897,416	72.7%	130,639,309,892	9,331,379	72.0%	137,018,567,970	9,787,041	72.5%	143,716,788,952	10,265,485	72.4%	150,749,920,982	10,767,851	72.4%
Gross Profit		46,821,005,471	3,344,358	27.3%	49,314,763,162	3,522,483	27.4%	51,933,208,736	3,709,515	27.5%	54,682,576,590	3,905,898	27.6%	57,569,412,836	4,112,101	27.6%
Operating Expenses		4,532,297,921	323,736	2.6%	4,668,266,859	333,448	2.6%	4,808,314,864	343,451	2.5%	4,952,564,310	353,755	2.5%	5,101,141,239	364,367	2.4%
Operating Income		42,288,707,551	3,020,622	24.7%	44,646,496,303	3,189,035	24.8%	47,124,893,872	3,366,064	24.9%	49,730,012,280	3,552,144	25.1%	52,468,271,597	3,747,734	25.2%
Other Income (Expenses)		0	0		0	0		0	0		0	0	0	0		
a. Revenue from breeder/Pendapatan Pembibitan		55,130,281,959	3,937,877	32.2%	65,340,880,240	4,667,206	36.3%	49,475,062,564	3,533,933	26.2%	60,086,169,516	4,291,869	30.3%	61,669,607,179	4,404,972	29.6%
cost of Breeder/Biaya Pembibitan	IDR	(41,753,547,184)	-2,982,396	-24.4%	(46,558,877,048)	-3,325,634	-25.9%	(31,480,199,513)	-2,248,586	-16.7%	(37,064,136,525)	-2,647,438	-18.7%	(37,184,386,634)	-2,656,028	-17.8%
b. Revenue from By Product/Pendapatan by produk		0	0		0	0		0	0		0	0	0	0		
Electricity/listrik (kwh)		1,569,780,000	112,127	0.9%	1,569,780,000	112,127	0.9%	1,569,780,000	112,127	0.8%	1,569,780,000	112,127	0.8%	1,569,780,000	112,127	0.8%
Pupuk organik padat		872,100,000	62,293	0.5%	872,100,000	62,293	0.5%	872,100,000	62,293	0.5%	872,100,000	62,293	0.4%	872,100,000	62,293	0.4%
Pupuk organik cair		918,000,000	65,571	0.5%	918,000,000	65,571	0.5%	918,000,000	65,571	0.5%	918,000,000	65,571	0.5%	918,000,000	65,571	0.4%
Pupuk urine		-	0	0.0%	-	0	0.0%	-	0	0.0%	-	0	0.0%	-	0	0.0%
Cost of by product/Biaya By produk		(1,679,940,000)	-119,996	-1.0%	(1,679,940,000)	-119,996	-0.9%	(1,679,940,000)	-119,996	-0.9%	(1,679,940,000)	-119,996	-0.8%	(1,679,940,000)	-119,996	-0.8%
Interest Expenses/bunga		(6,292,602,740)	-449,472	-3.7%	(6,292,602,740)	-449,472	-3.5%	(6,292,602,740)	-449,472	-3.3%	(6,292,602,740)	-449,472	-3.2%	(6,292,602,740)	-449,472	-3.0%
Income Before Tax		51,052,779,587	3,646,627	29.8%	58,815,836,755	4,201,131	32.7%	60,507,094,183	4,321,935	32.0%	68,139,382,531	4,867,099	34.3%	72,340,829,402	5,167,202	34.7%
Income Tax/Pajak		(12,763,194,897)	-911,657	-7.4%	(14,703,959,189)	-1,050,283	-8.2%	(15,126,773,546)	-1,080,484	-8.0%	(17,034,845,633)	-1,216,775	-8.0%	(18,085,207,351)	-1,291,801	-8.7%
Net Income/Pendapatan bersih		38,289,584,690	2,734,970	22.3%	44,111,877,566	3,150,848	24.5%	45,380,320,637	3,241,451	24.0%	51,104,536,898	3,650,324	25.8%	54,255,622,052	3,875,402	26.0%
Profit Analysis From feedlot																
Net Income Feedlot		23,232,909,914		13.6%	23,649,934,375		13.1%	25,705,517,587		13.6%	26,402,563,907		13.3%	28,090,461,506		13.5%
Rata2 Bobot awal (kg)		1,575,000			1,575,000			1,575,000			1,575,000			1,575,000		
Rata 2 Bobot akhir (kg)		2,557,800			2,557,800			2,557,800			2,557,800			2,557,800		
Total rata2 pertambahan bobot (kg)		982,800			982,800			982,800			982,800			982,800		
Income per sapi/ekor		3,687,763			3,753,958			4,080,241			4,190,883			4,458,803		
Income per kg		23,640			24,064			26,155			26,865			28,582		
ROI		39%			44%			46%			51%			55%		
ROE		56.28%			57.29%			62.27%			63.96%			68.05%		
Rata harga jual		31,737,932			33,324,828			34,991,070			36,740,623			38,577,654		
Rata2 COGS/ekor		23,067,375			24,192,465			25,373,809			26,614,220			27,916,652		
BEP		1,248			1,200			1,154			1,110			1,069		
BEP/bln		104			100			96			93			89		

ANEH.....

- **INDONESIA IMPORT GARAM DARI AUSTRALIA PROTES**
- **INDONESIA IMPORT SAPI DARI AUSTRALIA DIANGGAP WAJAR**



BRAZIL NEGARA DENGAN POPULASI SAPI TERBESAR DI DUNIA



INDONESIA

