



AB 1

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OUTLINES OF SMALL SCALE PROJECTS

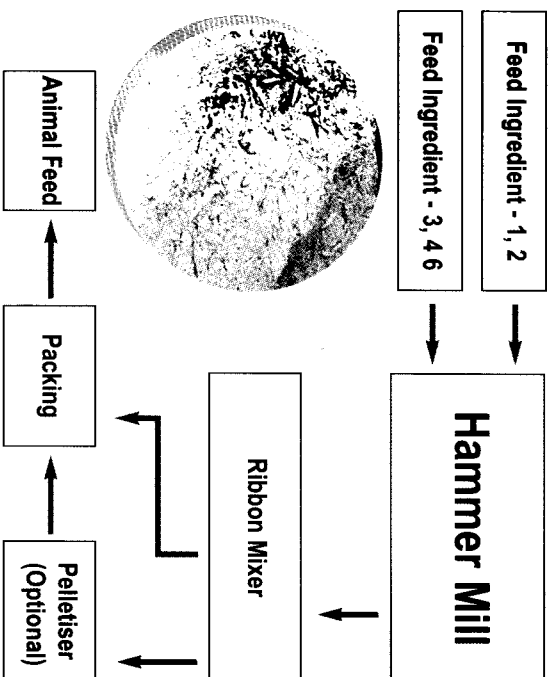
For AGRO-BASED FOOD PRODUCTS



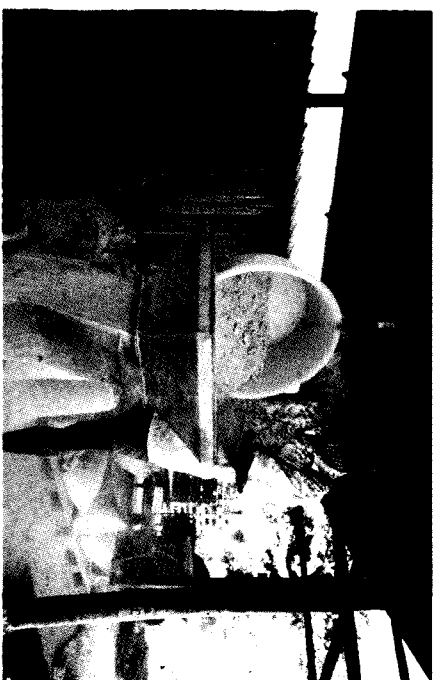
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Flow Diagram for Animal Feed Manufacture



Animal Feed ingredients include: Oil seed cakes, Residues from Food factories, Cereals, Rice bran, Molasses, Vitamins and minerals



The competition for land to produce food on the one hand and for green fodder on the other is leading to increasing importance of feeds with balanced nutrition to supplement green fodder and fibrous crop residues.



Similarly for pig production an integral part of the production system is the availability of feed, particularly as pig production is of vital importance as part of the national diet and as a source of supplementary income to rural households. Supply of animal feeds makes it possible for small and medium farmers to gradually increase their productive asset through good animal management.

Most of the ingredients for making feed are locally available making this activity additionally attractive.



Activity: Manufacture of Pig feed
Capacity: 1.6 tons/ day

Equipment	Quantity	Rate Riel	Cost Riel	
Equipment				
1 Balance, 0-100 kgs scale	1	100000	100000	
2 Diesel oil engine,.HP	1	1000000	1000000	
3 Feed mill(730 mm x 500 mm x1240 mm), 5 HP	1	800000	800000	
4 Bag sewing machine	1	100000	100000	
5 Plastic vessel (50 L)	5	8000	40000	
6 Palm leave clo, local made (500 L)	5	10000	50000	
7 Aluminium funnel	2	5000	10000	
Total			2100000	
Raw materials				
Ingredient	Percent	Qty/day kg	Rate Riel	Cost Riel
1 Soybean press cake	30	480	500	240000
2 Rice bran	20	320	400	128000
3 Corn	40	640	400	256000
4 Rice broken	8	128	400	51200
5 Mineral & trace element	2	32	4000	128000
Total				803200
Packaging				
Description	Unit	Quantity /day	Rate Riel	Cost Riel
1 Poly/propylene bag	Bag(50 kg)	32	350	11200
2 Nylon sewing string	Piece	2	4000	8000
Total				19200
Utilities				
Description	Unit	Quantity/ day	Rate Riel	Cost Riel
1 Diesel oil	L	12	1600	19200
2 Water	m ³	1	750	750
Total				19950
1 Unskilled and 1 semiskilled worker needed				

Feed mill is available in Phnom Penh, which is from China, Vietnam and Thailand
 Needs 5 HP power . Dimension: 730 mm x 500 mm x 1240 mm , capacity/200 kg/h

Profitability Estimate

Requirements	Unit
Equipment - see list	2100 000 Riel
Unskilled workers	1 No
Semi-skilled workers	1 No
Production Capacity	
Per day	1.6 tons
Per year of 250 days	400 tons
% utilization assumed	67 %/yr
Costs per year	
Rent	1800 000 Riel
Semiskilled	1712 000 Riel
Unskilled workers	978 000 Riel
Electricity	0 000 Riel
Other utilities	3342 000 Riel
Transport	0 000 Riel
Repair and maintenance	141 000 Riel
Others	0 000 Riel
Distribution	21937 000 Riel
TOTAL A	29910 000 Riel
Raw materials - see list	
	134536 000 Riel
Packing	3216 000 Riel
TOTAL B	137752 000 Riel
Revenue and Profit	
Market Unit Price Riels	800000 Riel/unit
Revenue	214400 000 Riels
Cash Profit per year -	
Revenue minus A and B	46738 000 Riels
Cash Profit per month	3895 000 Riels

Basic Hygiene - Precautions for Food Processing

- The presence of rodents, insects, and other animals in the facility should not be allowed because they are sources for the contamination of food with foreign material, filth, bacteria, etc.
- The facility and grounds should be free of uncut weeds, brush or tall grass.
- Improper storage of unused equipment or materials, presence of litter, waste refuse and stagnant water should be avoided.
- Unhygienic conditions in and around the shop floor can allow contamination to enter the food processing plant airborne, adherence to personnel clothing and other means
- All persons, in food preparation and handling should wear clean outer garments, and conform to hygienic practices
- Persons affected by disease in a communicable form, or while affected with boils, sores, infected wounds, or other sources of microbiological contamination, should not work in the food factory.

Process water must be of high quality as it becomes a part of or affects the quality of the product

NOTE

1. The estimates are based on standardized values for several cost items such as wages, rental for space, utilities, input-output ratios, sale price etc. and as such may not be accurate with reference to a given production circumstance and location
2. The outlines are meant to give an idea of available avenues of profitable investment and the likely profitability. Those interested in pursuing any selected activity are advised to make accurate estimates of cost and revenue with reference to their local circumstances, using this guide if necessary, to assess likely returns before embarking on investment.
3. Those interested in starting any activity could approach DAI at the following address for assistance.



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