

5-IN-1 RICE MILLING MACHINE



A 5-in-1 rice mill machine is a complete rice processing system that combines many tasks into a single device. It is intended to increase efficiency, improve output quality, and simplify the rice milling process, making it a valuable tool for rice millers and farmers.

5 PROCESSES OF 5-IN-1 RICE MILLING MACHINE

Rice Husk Removal

Impurity Separation

Polishing

Stone Separation

Rice Bran Separation

BENEFITS OF USING 5-IN-1 RICE MILLING MACHINE

Cleaning and Purification:

The machine is designed to clean the paddy by removing stones and impurities, ensuring that the rice produced is of high quality and free from contaminants. This initial cleaning process is essential for the overall quality of the rice.

High Productivity:

The machine's capacity to process 300 kg of rice per hour, coupled with its efficient cleaning, husking, and separation capabilities, significantly enhances productivity in rice milling operations. The 5-in-1 machine streamlines the processing workflow, reducing manual labor and increasing output.

Versatility:

The 5-in-1 rice mill machine is a versatile piece of equipment that offers multiple functions in a single unit, eliminating the need for separate machines for cleaning, husking, bran removal, and polishing. This versatility saves space, reduces operational costs, and simplifies the rice milling process.

TECHNICAL SPECIFICATIONS

Operation Mode:	Automatic operation for ease of use
Electricity Connection:	Single Phase
Rice Hopper Volume:	40 kg
Main Motor Power:	220 V / 60 Hz / Single Phase / 5 hp (3.7 kW)
Sub Motor Power:	220 V / 60 Hz / Single Phase / 0.34 hp (0.25 kW)
Dimensions (cm):	116 x 85 x 157 (L x W x H)
Weight (kg):	210
Input Capacity:	300 kg/hr of palay

DAGDAG OPORTUNIDAD PARA KUMITA NG PERA SA 5 IN 1 RICE MILL MACHINE

Assumptions Used:

Input Capacity:	300 kg/hr input of palay
Power Consumption:	3.7 kW ~ 4 kW
Milling Fee:	1.5 Php / kilo of polished rice
Electricity Fee:	12.06 Php / kWh
Operation Duration:	8 hours per day
Total Days of Operation:	26 days
Milling Efficiency:	62.81%
Husk Removal Efficiency:	21.11%
Bran Removal Efficiency:	16.08%
Approx. Price of Urethane Huller:	1,400 Php / piece



Toll Milling

(Renting Out the Machine)

"Paparentahan mo yung machine sa mga farmers"

Note:

1. Rice Bran and Husk are part of the payment for milling. Ang bran at husk ng palay ay parte ng ibinabayad ng mga nagpapa-mill ng bigas at naiwan sa may-ari ng rice mill.
2. Change Urethane Huller every 3600 kg of production

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Daily Production (Milled Rice)	$300 \text{ kg/hr} \times 8 \text{ hr} \times 62.81\% = 1,507.44 \text{ kg/day}$
Milling Fee Income (One Day):	$1,507.44 \text{ kg} \times 1.5 \text{ Php/kg} = 2,261.16 \text{ Php/day}$
26 Days Income from Milling Fee:	$2,261.16 \text{ Php/day} \times 26 \text{ days} = 58,790.16 \text{ Php}$
Total Rice Husk (26 Days):	$300 \text{ kg/hr} \times 8 \text{ hr} \times 21.11\% \times 26 \text{ days} = 13,172.64 \text{ kg}$
Rice Husk Income:	$13,172.64 \text{ kg} \times 2 \text{ Php/kilo} = 26,345.28 \text{ Php}$
Total Rice Bran (26 Days):	$300 \text{ kg/hr} \times 8 \text{ hr} \times 16.08\% \times 26 \text{ days} = 10,033.92 \text{ kg}$
Rice Bran Income:	$10,033.92 \text{ kg} \times 10 \text{ Php/kilo} = 100,339.2 \text{ Php}$
Total Income:	$58,790.16 \text{ Php} + 26,345.28 \text{ Php} + 100,339.2 \text{ Php} = 185,474.64 \text{ Php}$

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Power Consumption (kWh):	$4 \text{ kW} \times 8 \text{ hr} = 32 \text{ kWh}$
Electricity Bill (One Day):	$32 \text{ kWh} \times 12.06 \text{ Php/kWh} = 385.92 \text{ Php/day}$
Total Electricity Bill (26 Days):	$385.92 \text{ Php} \times 26 \text{ Days} = 10,033.92 \text{ Php}$
Note: Change Urethane Huller every 3600 kg production	
Total Paddy Input (26 Days):	$300 \text{ kg/hr} \times 8 \text{ hr} \times 26 \text{ days} = 62,400 \text{ kg}$
Approx. No. of Urethane Used:	$62,400 \text{ kg} / 3600 \text{ kg per urethane} = \sim 18 \text{ urethane hullers}$
Approx. Expenses for 18 pcs Urethane Hullers:	$1,400 \text{ Php/piece} \times 18 \text{ pieces} = 25,200 \text{ Php}$
Total Expenses:	$10,033.92 \text{ Php} + 25,200 \text{ Php} = 35,233.92 \text{ Php}$

Summary (26 Days per Month):
Profit: 185,474.64 Php - 35,233.92 Php = 150,240.72 Php/month

Assumptions Used:

Input Capacity:	300 kg/hr input of palay
Power Consumption:	3.7 kW ~ 4 kW
Paddy (Palay) Price:	23 Php / kilo
Milled Rice Price:	42.92 Php / kilo
Rice Husk Price:	2 Php / kilo
Rice Bran Price:	10 Php / kilo
Electricity Fee:	12.06 Php / kWh
Operation Duration:	8 hours per day
Total Days of Operation:	26 days
Milling Efficiency:	62.81%
Husk Removal Efficiency:	21.11%
Bran Removal Efficiency:	16.08%
Approx. Price of Urethane Huller:	1,400 Php / piece

Milling Self-Procured Paddy

"Kung ang customer ay bumili ng SATO 5 in 1 Rice Mill Machine at gustong mag negosyo ng pag mill at polish para magbenta ng bigas."



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Total Well-Milled Rice (26 Days):	$300 \text{ kg/hr} \times 8 \text{ hr} \times 62.81\% \times 26 \text{ days} = 39,193.44 \text{ kg}$
Milled Rice Income:	$39,193.44 \text{ kg} \times 42.92 \text{ Php/kilo} = 1,682,182.45 \text{ Php}$
Total Rice Husk (26 Days):	$300 \text{ kg/hr} \times 8 \text{ hr} \times 21.11\% \times 26 \text{ days} = 13,172.64 \text{ kg}$
Rice Husk Income:	$13,172.64 \text{ kg} \times 2 \text{ Php/kilo} = 26,345.28 \text{ Php}$
Total Rice Bran (26 Days):	$300 \text{ kg/hr} \times 8 \text{ hr} \times 16.08\% \times 26 \text{ days} = 10,033.92 \text{ kg}$
Rice Bran Income:	$10,033.92 \text{ kg} \times 10 \text{ Php/kilo} = 100,339.2 \text{ Php}$
Total Income per Month:	$1,682,182.45 \text{ Php} + 26,345.28 \text{ Php} + 100,339.2 \text{ Php} = 1,808,866.93 \text{ Php}$

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Power Consumption:	$4 \text{ kW} \times 8 \text{ hr} = 32 \text{ kWh}$
Electricity Bill (One Day):	$32 \text{ kWh} \times 12.06 \text{ Php/kWh} = 385.92 \text{ Php}$
Electricity Bill (26 Days):	$385.92 \text{ Php} \times 26 \text{ Days} = 10,033.92 \text{ Php}$
Note: Change Urethane Huller every 3600 kg production	
Total Paddy Input (26 Days):	$300 \text{ kg/hr} \times 8 \text{ hr} \times 26 \text{ Days} = 62,400 \text{ kg}$
Approx. No. of Urethane Used:	$62,400 \text{ kg} / 3600 \text{ kg per urethane} = \sim 18 \text{ urethane hullers}$
Approx. Expenses for 18 pcs Urethane Hullers:	$1,400 \text{ Php/piece} \times 18 \text{ pieces} = 25,200 \text{ Php}$
Expenses for Paddy Rice:	$62,400 \text{ kg} \times 23 \text{ Php/kilo} = 1,435,200 \text{ Php}$
Total Expenses:	$10,033.92 \text{ Php} + 25,200 \text{ Php} + 1,435,200 \text{ Php} = 1,470,433.92 \text{ Php}$

Summary (26 Days per Month):
Profit: 1,808,866.93 Php - 1,470,433.92 Php = 338,433.01 Php/month