



SHUKAKU RIKI “POWER HARVEST”

RICE ORYZA SATIVA USING SHUKAKU RIKI AS ORGANIC FERTILIZER FARMING PROTOCOL

I. LAND PREPARATION

- Flood the field with water to soften the soil and to avoid unwanted weeds from growing. It can be done by either rain fed or by irrigation.
- Plough the land by using either hand tractor or carabao attached with plough. This is done to turn over soil and bury weeds as well as previous crops allowing these materials to be



incorporated to the soil and to be decomposed.

- When the land has been plowed Harel the fields twice at a one-week interval this is done to smoothen the soil and to achieve better tilt for a better growth of the rice plant.
- The field then should be leveled evenly using a wooden plank or leveler this is to make sure that the field is flat and for water to be evenly distributed in all parts of the field

II. SHUKAKU RIKI ORGANIC FERTILIZER APPLICATION

a. PRODUCT APPLICATION OBJECTIVES

1. The main objective of incorporating (SHUKAKU RIKI) as Bio organic, soil activator, and organic matter composition during the land preparation would simply act as restoring the soil thru active organisms that allows them to activate during the process and lesser or normalized soil acidity. SHUKAKU RIKI is a liquid form of Bio organic fertilizer that has composed of active essential organisms, organic fertilizers such as (NPK), very high in contain (%) of processed organic manures, fish oil, sea weeds and more others.

b. APPLICATION METHOD

1. As recommended to use drenching methods during application where this Bio organic fertilizer initiating activation process. Application can be done using spraying with spray can or power spray machine in huge rice field.

c. RECOMMENDED MIXING RATE AND APPLICATION TIMING

Shukaku-Riki should be apply at 4 liters product x 200 liters water (or 12 Knap sacks) per hectare prior to last phase of land preparation and followed by 3-liters product x 200 liters (12 knap sack) right after levelling prior to transplanting. Then follow up application 30 days after transplanting (DAT) apply 1-liter x 200-liter water (or 12 knap sacks) with the total of 6 liters Shukaku-Riki product per hectare per cropping season following above application method

Application Timing	Recommended Product Rate per Hectare	Total Water Volume Solution per Hectare
1. At Land Preparation a. Between second prior to the last ploughing b. After last levelling prior to transplanting/direct seeding	<ul style="list-style-type: none">➤ 5 liters (Last phase land prep.➤ 3 liters (afterlevelling)	200 liters x 2 application total 400 liters
2. 30 DAYS AFTER TRANSPLANTING (DAT)	2 liters	200 liters

MIXING PROCEDURES

Prepare empty containers @ 60- or 200-liters volume capacity where pure solutions and water can be mix. At the recommended rate mention above. There should be enough empty containers for convenient rotations and distribution of stocks solution during application activities. Required to conduct a water PH analysis in every water solution used to determine if the water source has a good PH level as for reference during the actual mixing made.

Calibrate the pure solutions in accordance with the above mention recommendation rate and properly mix into prepare empty container that filled with water. Please note always agitate thoroughly the pure solution prior

or before mixing or incorporate in prepared water in the container and same with the prepare solutions must also agitate as well before in every application made. Apply the prepare solutions on the desired area.

Using chlorinated water as mixing solutions strictly prohibited for us to avoid unnecessary problem when it regards to Bio organism performance. This may disintegrate their structural /physical formation as they are in a form of cell structures. But nevertheless, they can stand /tolerate chemical toxicities as unique family of bacteria that had especial characteristics among bacterial species in nature.

Containers where pure solutions inside must keep in cool and safe place and avoid excessive expose in open sunlight. Must keep the cover cap close tightly before and after used. All utility containers used for SHUKAKU RIKI must keep clean before and after usage. Using it as storage for other chemicals is prohibited.

III. PEST AND DISEASE MANAGEMENT

A. PEST AND DISEASE MONITORING

1. Early monitoring or identifying the common Pests and Diseases of rice could make a big help to control the spread and becoming major constrain in the end.
2. Proper timing application of such control also contribute of good effect to minimize the infestation.
3. Organic Pesticide, bactericide and fungicide is highly recommended as preventive measures. (Kindly ask or inquire the technical personnel for proper guidance and usage.)

TABLE 1. RECOMMENDED RATE AND VOLUME OF SOLUTIONS/HECTARES USE FOR RICE PRODUCTION

CROP	PARTICULAR	METHOD/ APPLICATION	RATE ML/ ILTR WAT	RATE 1 LITER PURE SOLUTION/ 200 LITERS WATER	VOLUME OF SOLUTIONS/LI TERS/HA	DAYS GAP	FREQUEN CY/CYCLE OF APPLICATI ON
INBRID/ HYBRID RICE	AT LAND PREPARATION (Prior to last)	DRENCHING/ SPRAYING	25 ML/SHUKAKU RIKI	5 L	200 LITERS	0	1
INBRID/ HYBRID RICE	AT LAND PREPARATION (After leveling prior to transplanting)	DRENCHING/ SPRAYING	15 ML/SHUKAKU RIKI	3 L	200 LITERS	DAYS AFTER	1
INBRID/ HYBRID RICE	MAINTENANCE/ AMELIDRANCE	FOLIAR SPRAYING	10 ML/SHUKAKU RIKI	2 L	200 LITERS	30 DAYS AFTER PLANTING (DAP)	1
			TOTAL VOLUME =	10 LITERS	600 LITERS/ 3 DRUMS	30 DAYS	3

TABLE 1. ECONOMIC COST, LABOR AND MATERIAL ANALYSIS PER HECTARE FOR RICE PRODUCTION

PARTICULAR	OPERATION	MANPOWER/CULTIVATION/MATERIALS/BIO FERTILIZERS	FREQUENCY/APPLICATION /VOLUME/RATE	DAILY RATE/ UNIT PRICE	AMOUNT
AT LAND PREPARATION	CULTIVATION: A. Plowing B. Limpoiir/ploughing C. Leveling	HAND FARM TRACTORS	2 Passes 1 pass 1 Pass	2,500.00/HAS. 2,500.00/HAS. 1,000.00/HAS.	8,500.00,
BIO FERTILIZER APPLICATION/ AFTER LAND PREP.	BASAL SPRAYING/DRENCHING	4 L	ONCE	750.00	3,000.00
BIO FERTILIZER APPLICATOR	SPRAYING/DRENCHING	2 MP	3	312.00/DRUM	975.00
RICE SEEDS	PLANTING MATERIAL	40 KILOS/HAS.		80.00	3,200.00
PLANTERS	TRANSPLANTING		ONCE	7,000.00	7,000.00
BIO FERTILIZER APPLICATION/after leveling prior to transplanting	BASAL SPRAYING/DRENCHING	3 L	ONCE	750.00	2,250.00
BIO FERTILIZER APPLICATION/after leveling prior to transplanting	FOLIAR SPRAYING	2 L	ONCE	750.00	1,500.00
WEED MANAGEMENT	MANUAL WEEDING AT 4DAYS CYCLE X 2 ENTRY	4 MP	15 DAYS (15 AND 30 (DAT)	400.00	6,400.00
PEST AND DISEASE MANAGEMENT	ORGANIC INSECTICIDES /FUNGICIDES SPRAYING AT 5 CYCLES AT 7 DAYS GAP	1 MP	7 DAYS 7-14-21-28 AND 35 (DAT)	400.00	1,600.00
FOLIAR APPLICATION	SPRAYING AT 4 CYCLES AT 7 DAYS GAP	1 MP	7 DAYS 7-14-21-28 (DAT)	400.00	1,600.00
ORGANIC FOLIAR	SUPPLEMENTAL	4 L		500.00	2,000.00
ORGANIC INSECTIDIE	INSECT CONTROL	2 L		1,000.00	2,000.00
ORGANIC FUNGICIDE	FUNGI DISEASES CONTROL	2 L		1,200.00	2,400.00
HARVESTER	HARVESTING	PAKWAYAN/PACAK GE			8,400.00

LOT/PARCEL	RENTAL/LEASE	ANNUALLY	1 YEAR /CONTRACT	20,000.00/2 CROPPING/ANNUAL	10,000.00
MISCELANEOUS EXPENSES	MOBILIZATION/FUEL/OTHERS				4,500.00
TOTAL COST MATERIAL AND LABORS					65,325.00
GROSS AMOUNT	At 14/kilo x 6,0001 kilos Rice seeds	At 60 KIOLS/SCK x 100 SACK/has.	At 95 % harvest turn over		84,000.00
NET PROFIT BEFORE TAX			PERCENTAGE :	0.22%	18,675.00

COMPUTATIONS OF AVEARAGE COSTS AND RETURNS

The sum of all costs obtained from all sample in the farm comprised the total costs. Then, the total costs of producing corn obtained from sample the area were aggregated to come up with the overall total. Finally, the total costs of producing corn in all area were summed up to get the total from 1st harvest up to the last cropping season.

AVERAGE COTS AND RETURNS WERE COMPUTED PER HECTARE ON PRODUCTION FOLLOWS:

$$\text{PER HECTARE} = \frac{\text{TOTAL VALUE INPUT OT OUTPUT}}{\text{TOTAL HARVEST AREA/AMOUNT}}$$

The indicators of profitability were derived using the following computational procedures:

1. Gross Returns = Production x Farmgate Price
2. Returns Above Cash Costs = Gross Returns - Cash Costs
3. Returns Above Cash and Non-Cash Costs = Gross Returns - (Cash Costs + Non-Cash Costs)
4. Net Returns = Gross Returns - Total Costs
5. Net Profit-Cost Ratio = Net Returns ÷ Total Costs

