Ministry of Agriculture, Livestock and Irrigation, Myitkyina Township, Myitkyina District, Kachin State

Four different kinds of cultivation methods on monsoon rice in Year 2017-2018

Presented by
Daw Chaw Su Khaing(Assistant Staff Officer)
Department of Agriculture (DOA)

Introduction

- Location - lie between north latitude 24°32’ and 26°12‘, east longitude 96°40’ and 97°32’.
- Area - 6229km²
- Sea level - 476ft
- Annual rainfall-110.26 inches / 110 days
- Temperature -7.3°C (Low) ,38.8°C (High)
- Four different cultivation methods-SRI, Raised-bed, Seeder, Broadcast
- Village name - Pamatii, Myitkyina
- Farmer name -U Du Kar

Objectives

- To choose and apply the best method that obtain high yields, adapted to ecology and local climatic condition .
- To evaluate cost and benefit ratio in each method
- To compare yield and yield component in each method.

Activities

Title	SRI	Raised - Bed	Seeder	Broad cast
Nursery Date	25.6.2017	17.6.2017	-	-
Transplanted Date	6.7.17	6.7.17	6.7.17	6.7.17
Plot size	0.50ac	0.50ac	0.50ac	0.50ac
Spacing	10"×10"	8"×6"	-	-
Plant population	62500	102000	198000	250000
Life span (days)	140	145	135	135
Harvesting Date	15.11.2017	15.11.2017	15.11.17	15.11.17

Germination Test

- Germination % -92%
- Variety - sin akari-3
- Life span - 135 days
- (1000) grains weight -27.9g
- Amylose % -18.9

System of Rice Intensification (SRI)

Seed -bed preparation

Nursery Management

- Seed rate -10 tin/acre
- Seed class- Certified seed(CS)
- Wooden frame size-(2´× 1´), (80)plots
- Transplanting time-12 days (DAS)
- Record plant data- 10 days (DAS)
- Data collection- leaf number, plant high, tiller number
- Inter-cultivation - (2) times

Raised- bed Method

Germination

Land preparation

- Seed rate - 8 pyi/acre
- Seed class - Certified seed(CS)
- Seed-bed size - (120´× 30´)
- Transplanting time-20days (DAS)
- Record plant data - 10 days(DAS)
- Data collection - leaf number, plant high, tiller number
- Inter-cultivation - (2) times

Nursery Management

Seeder Method

Seed Preparation

- Seed rate - 1 bsk/acre
- Seed class - Certified seed(CS)
- Land preparation- Leveling
- Seed preparation-Pre-germinate the rice seed
  do not let shoot become too long
- Record plant data - 10 days (DAS)
- Data collection - leaf number, plant high,
  tiller number
- Hand weeding - (3) times

Broadcast Method

Seed Preparation

- Seed rate - 2 bsk/acre
- Seed class - Certified seed(CS)
- Land preparation - Leveling
- Seed preparation - Pre-germinate the rice seed do not let shoot become too long
- Record plant data - 10 days (DAS)
- Data collection - leaf number, plant high, tiller number
- Hand weeding - (2) times

Fertilizer Application

Title	SRI	Raised Bed	Seeder	Broad cast
Compound15:15:15 and manure as basal	50kg/ac 4bags/ac	50kg/ac 4bags/ac	50kg/ac 4bags/ac	50kg/ac 4bags/ac
25 days (DAS)	N25kg/ac	N25kg/ac	N25kg/ac	N25kg/ac
45 days (DAS)	N25kg/ac	N25kg/ac	N25kg/ac	N25kg/ac
50% of flowering date	20.10.17	20.10.17	20.10.17	20.10.17
50%of flowering days	115	120	105	105

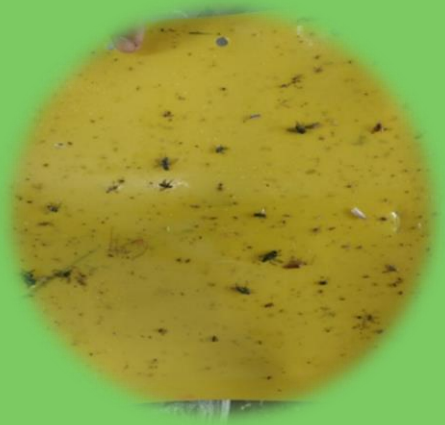
Remark-Fertilizer recommendation is soil analysis.

Checking panicle initiation

- Checking panicle initiation at 75 days.
- We found panicle stage 2 at Leaf number 15.
- End of panicle at 95-105 days.

Pest and disease control

yellow and blue sticky trap



Field Days

Roughing

Yield sampling

Result of yield and yield components

Sr.	Title	SRI	Raised -bed	Seeder	Broad cast
1	Leaf number	18-19	18-19	16-17	16-17
2	Plant Height(cm)	133	128.25	124.5	124.5
3	Tiller number	13	8	4	3
4	No. of grain per panicle	108	115	94	80
5	Fill grain per panicle	100	106	80	75
6	Grain yield(bsk/acre)	109	115	85	75
7	Cost and benefit	339000/ 424000	333000/ 472000	257000/ 338000	258000/ 267000

Discussion

Sr.	Content	Advantages	Disadvantages
1	SRI	Low seed-rate,high tillering,easier weeding,aeration	High labour cost, well drainage system, suitable in fertile land , rich FYM
2	Raised-bed	Nomal seed rate, high tillering, high yield,aeration	High labour cost
3	Seeder	Low labour cost, not required nursery management	High seed rate, expose to rat and birds attack ,crowding plant population,difficult weeding
4	Broadcast	Low labour cost, not required nursery management	High seed rate, difficult weeding ,low tillering and lodging, leveling

Conclusion

- Raised bed and SRI methods get high yields.
- SRI method is suitable for small scale farmers, systematic and interested farmers.
- However the most farmers prefer to Seeder and Broadcast but these methods can be damaged in seeding time for heavy rainfall region.
- Raised -bed method obtain high yield and its more adaptable to local .
- Raised-bed method is high cost but high benefit and good condition for yield component.


THANK YOU