Ministry of Agriculture, Livestock and Irrigation

Department of Agriculture, Kayah State

Study On Different Methods of Monsoon Paddy Cultivation

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Introduction …..

- Paddy and maize are main crops in Deemawsoe Township
- To improve paddy production

  (1) Area expansion

  (2) Vertical improvement (Yield)

  - Use Quality Seed
  - Appropriate Techniques
- To study and evaluate the different methods of monsoon paddy cultivation focus on maximum benefits and reduction of cost without affecting yield .

Purpose .....

❖ To study a paddy cultivation methods that can reduce costs and maximize profits and to demonstrate appropriate cultivation methods under the socio-economic background of local farmers .

Geographical and Climatic Condition of Deemawso Township

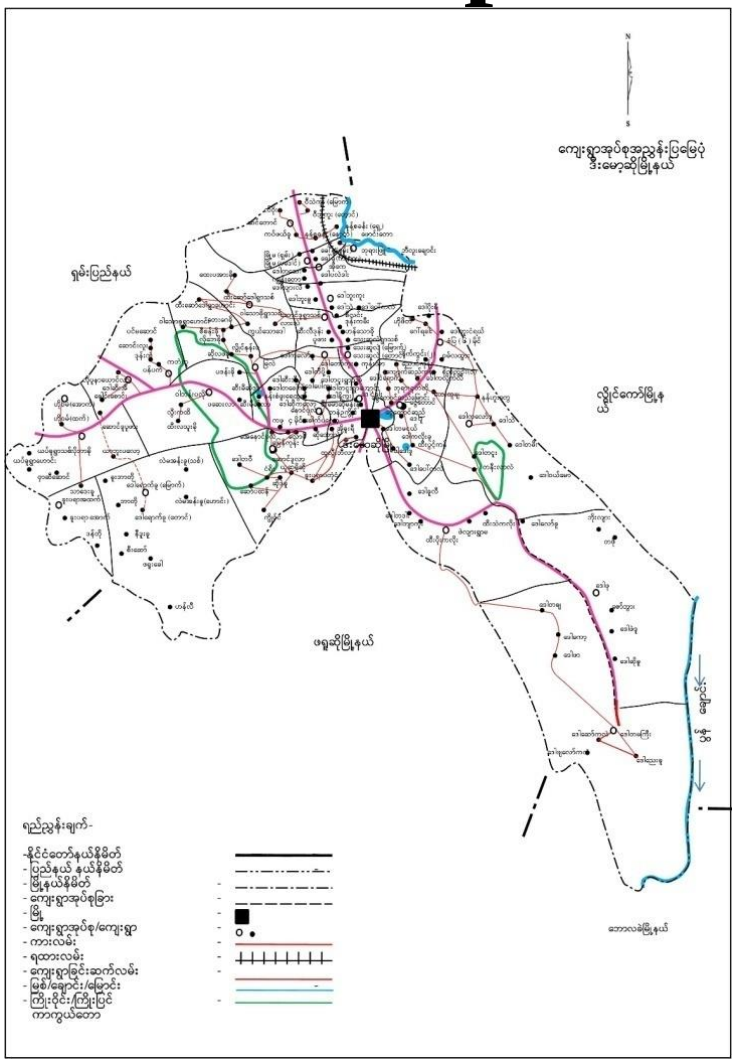
North Lattitude - 19˙ 55″

East Longitude - 69˙ 55″ From 97˙ 25″

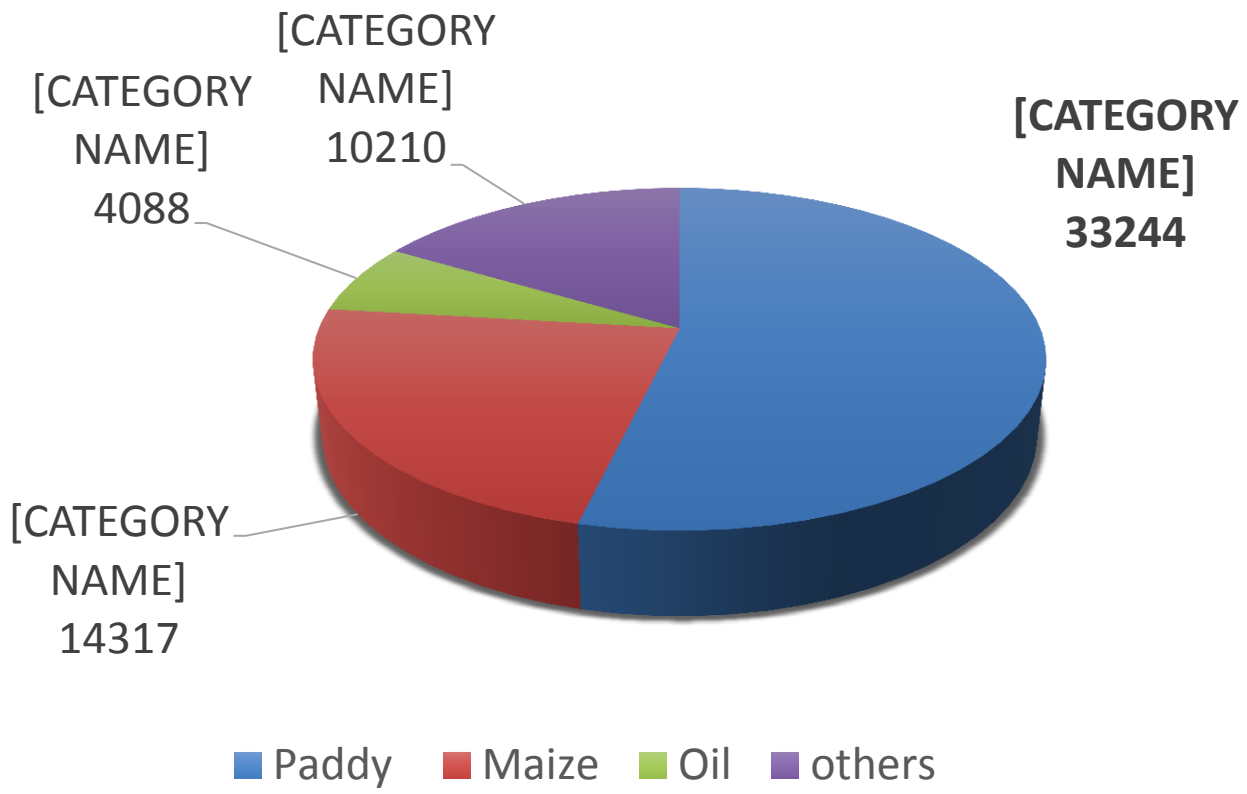
Area - 459.69 Sq miles

Above sea Level - 2983 Ft

Average Rainfall - 36.24″ / 86 days



Major Crop of Deemawsoe Township (Acre)



Activities

- Experiment Name – Study on different methods of Monsoon Paddy Cultivation .
- Crop Name – Paddy (Shwe Yin Aye SR–456)
- location – Deemawso Township
- Farmer's Name – U Thein Lwin and U Bo Tun Win
- Season – Monsoon Season

Activities

- ❖Experiment design– (5 x 1)
- ❖Total Plot Size– (2.50) acre
- ❖Date of Cultivation– 2.8.2018
- ❖Date of Harvest – 5.12.2018 and 12.12.2018

- ✓ Cultivation Methods

(1) System of Rice Intensification (S R I)
(2) Transplanter
(3) Raised Bed
(4) Seeder
(5) Broadcasting

(1) System of Rice Intensification (S R I)

(2) Transplanter

(3) Raised Bed

(4) Seeder

(5) Broadcasting

Care and Management

Methods	Sowing Date	Transplanting Date	Spacing	Herbicide Application	Weeding	Pesticide Application	Fungicide Application	Fertilizer Application
				DAS (Days After Sowing)				
SRI	2.8.2018	16.8.2018	10 x 10 inches	-	31 / 54	47 / 59	75	Basal / 25 / 49 / 69
Transplanter	2.8.2018	16.8.2018	12 x 5 inches	-	31 / 54	47 / 59	75	Basal / 37 / 49 / 69
Raised bed	2.8.2018	20.8.2018	8 x 5 inches	-	31 / 54	47 / 59	75	Basal / 37/ 49 / 69
Seeder	2.8.2018	-	8 x continuous	14 / 35	31 / 54	47 / 59	75	Basal / 20 / 49 / 69
Broadcasting	2.8.2018	-	Broadcast	14 / 35	-	47 / 59	75	Basal / 20 / 49 / 69

❖At the time of planting, the same amount of fertilizers were added, plant care, anti– microbial, anti–pest control and all of the systems were unplugged.

Care and Management

❖Fertilizer rate – Urea 50 Kg / acre

– Compound 100 Kg/acre

. – Potash 37.5 Kg / acre

– Gypsum 50 Kg / acre

Results

- Plant Characters Data

N0.	Methods	Days of 50% flowering	Date of 50% flowering	Plant High (cm)	Harvesting	Growth duration
1	SRI	3.11.2018	93	95	12.12.2018	133
2	Trans planter	1.11.2018	91	93	12.12.2018	133
3	Raised Bed	30.10.2018	89	92	12.12.2018	133
4	Seeder	25.10.2018	84	91	5.12.2018	126
5	Broadcasting	25.10.2018	84	92	5.12.2018	126

Results

Yield Component Data

No.	Methods	Population	No. of tiller/ plant	No. of grain / Tiller	filled grain (%)	No. of filled grain / tiller	1000 grains weight	Y – Method Yield (bsk)	Yield/ acre (bsk)
1	SRI	62000	14.00	132.47	82.15	108.83	28.90	127.50	125.00
2	Trans planter	91000	11.56	86.91	79.68	69.25	28.90	100.80	93.00
3	Raised Bed	168000	8.19	87.27	81.38	71.42	29.20	138.01	133.50
4	Seeder	-	-	74.02	80.15	59.33	28.60	-	87.50
5	Broadcasting	-	-	82.96	81.60	67.70	29.70	-	88.00

Results

Cost and Benefits

No.	Particulars	SRI	Trans planter	Raised bed	Seeder	Broadcasting
1	Seed Rate	0.187 bsk/ acre	1.09 bsk/ acre	0.5 bsk/ acre	1.0 bsk/ acre	1.5 bsk/ acre
2	**Total Cost/ acre** - Labour - Inputs	**438500** 242000 196500	**598500** 344000 254500	**446500** 230000 216500	**430500** 161000 269500	**440500** 139000 301500
3	Yield/ acre	125	93	133.50	87.50	88
4	Total return	1,076,950	801,250	1,150,180	753,860	758,170
5	**Net Profits**	**638,450**	**202,750**	**703,680**	**323,360**	**317,670**
6	Cost & benefits Ratio	1:2.45	1:1.34	1:2.57	1:1.75	1:1.72

Field day Activities

Field day Activities

Summary of Finding

- Raised Bed cultivation method had given the highest yield (133.50 bsk / ac) among all cultural practices.
- System of Rice Intensification (SRI) method when compare with raised bed, (SRI) (125.00 bsk / ac) slightly lower yield than raised bed method.
- The lowest grain yield (87.50 bsk/ac) from Seeder method.
- Raised Bed cultivation method was the highest cost and benefits ratio (1 : 2.57) (SRI) was the second.
- Transplanter method has highest total production cost than another methods and cost and benefits ratio(1 : 1.34) is very different.
- Seeder and Broadcasting methods were a few labour costs but input costs was higher than other methods.

Summary of Finding

- Broadcasting cultivation method had given the highest 1000 grain weight among all cultural practices.
- Seeder cultivation method was found lodging.
- Seeder and Broadcasting cultivation methods were shorter growth duration than other methods.
- Raised Bed cultivation method is easy for management.
- We can control to false smut disease and other fungal diseases by application with fungicide (Cupromax) before heading state.

Conclusion

- Raised bed was found prefer by farmers of Deemawsoe Township according to selection of among cultural practices in field day, Seeder method is second.

- SRI method should be cultivated in good drainage and irrigation area.

- Seeder method should be cultivated in Summer Paddy season because to prepare the time is fixed next cultivation season this method is shorter growth duration than other methods

- Due to every cultivation techniques has strong point and weak point, farmers should select the suitable technique to make sure the benefits.

Activitied at 2018-2019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Thank You!