Ministry of Agriculture, Livestock and Irrigation
Department of Agriculture
Shan State

Review on Hybrid Seed Production of Sunflower (Shan State YSI)

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Outline

- Introduction
- Objective
- Climate conditions of Nam San Township
- Facts on hybrid seed production
- Crop management
- Estimating Yield per acre
- Conducting Field day Demonstration
- Suggestion and Conclusion

Introduction

Current Situation of Shan State Sunflower Production

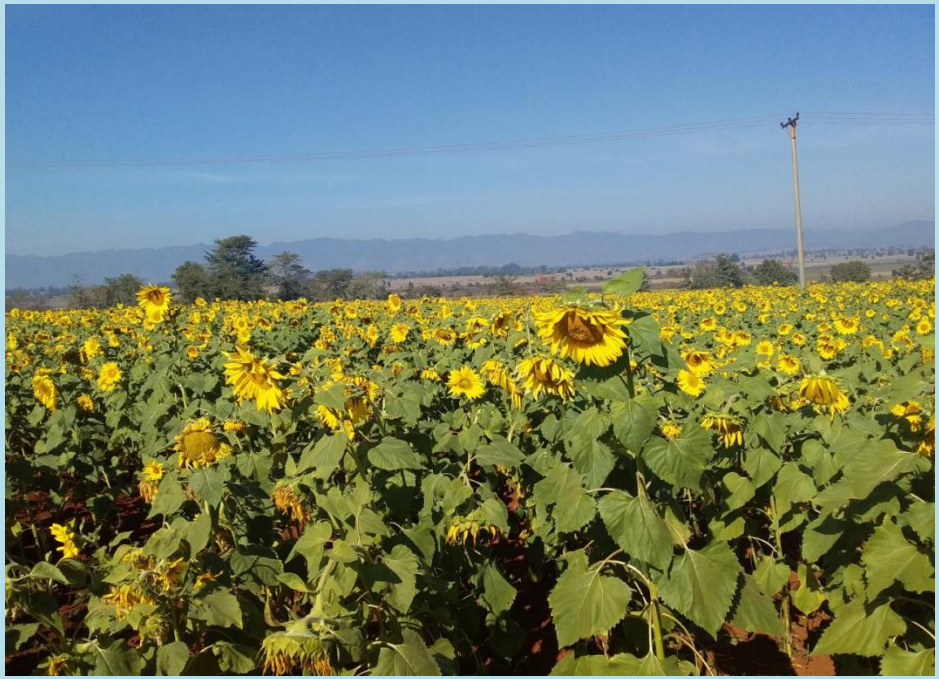
No.	Season	Sown ac	Harvest ac	Yield (bsk/ac)	Yield Output
1	Monsoon	19364	19364	31.29	605894
2	Winter	10621	10621	32.30	343039
	Total	**29985**	**29985**	**31.65**	**948933**

Introduction(Cont.)

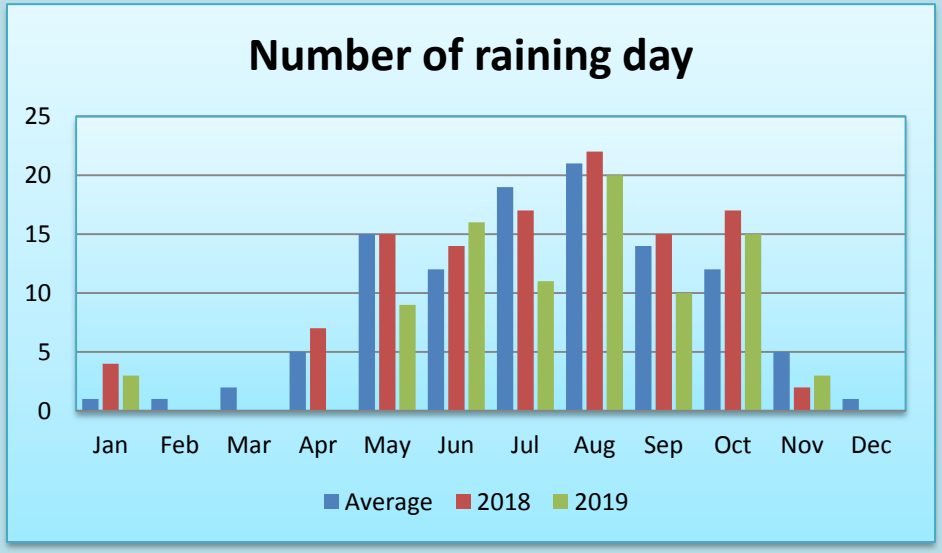
- Sunflower is one of the potential oil seed crops for Shan State.
- To get the most profitable yield using hybrid seed is crucial
- To meet the seed demand of Shan State and other parts of Myanmar, seed production is essential

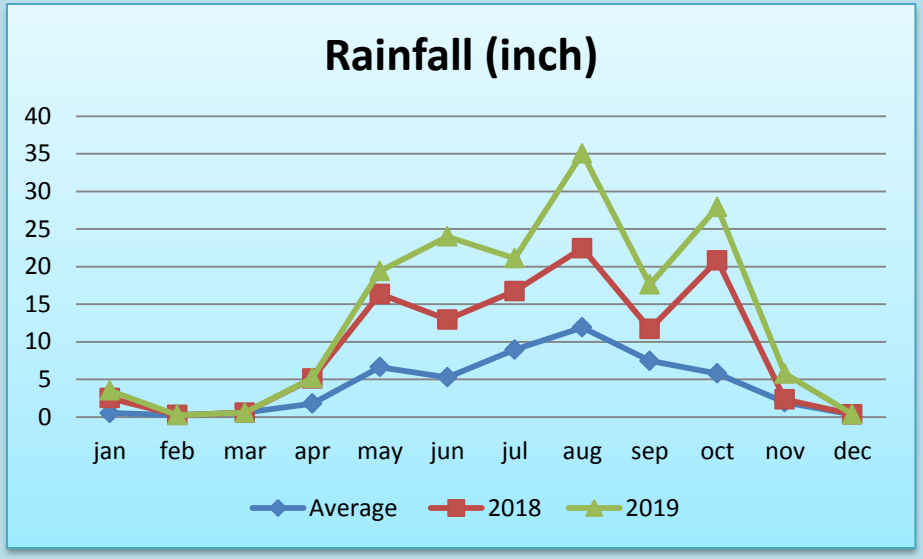
Objective

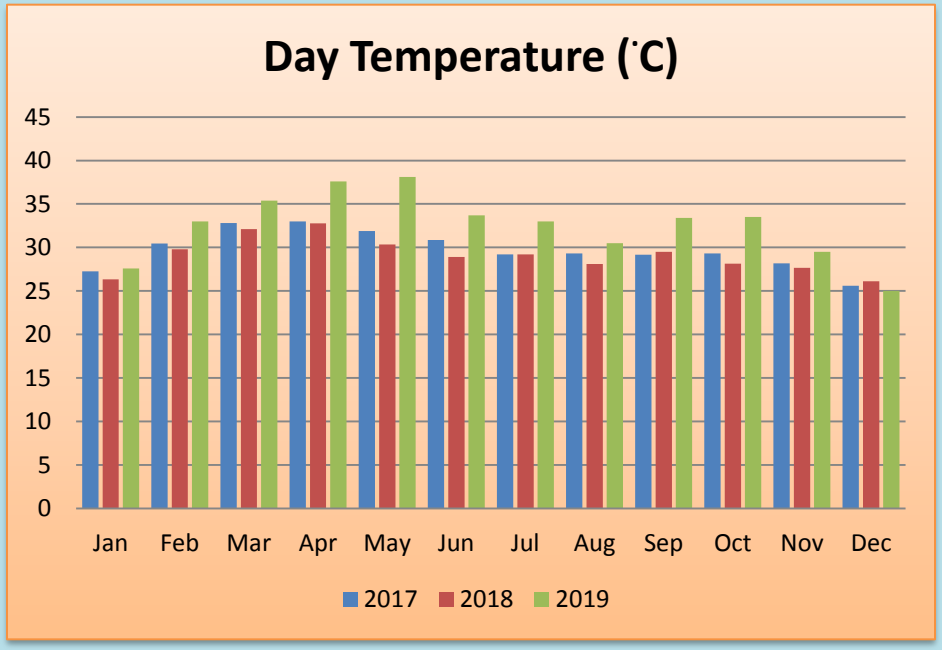
- ✓ To supply the seed demand of Shan State
- ✓ To practice YSI members participating and getting experience in Hybrid seed production
- ✓ To make sense local farmers growing sunflower as winter crop

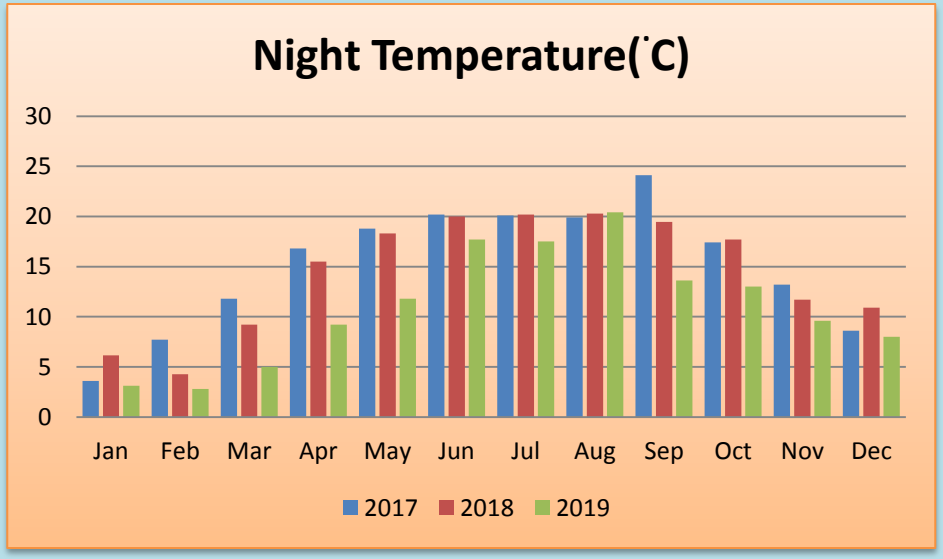


Climatic conditions of Nam San Township









Facts on hybrid seed production

Location – At Namsang farm, Namsang Township

Facts on hybrid seed production

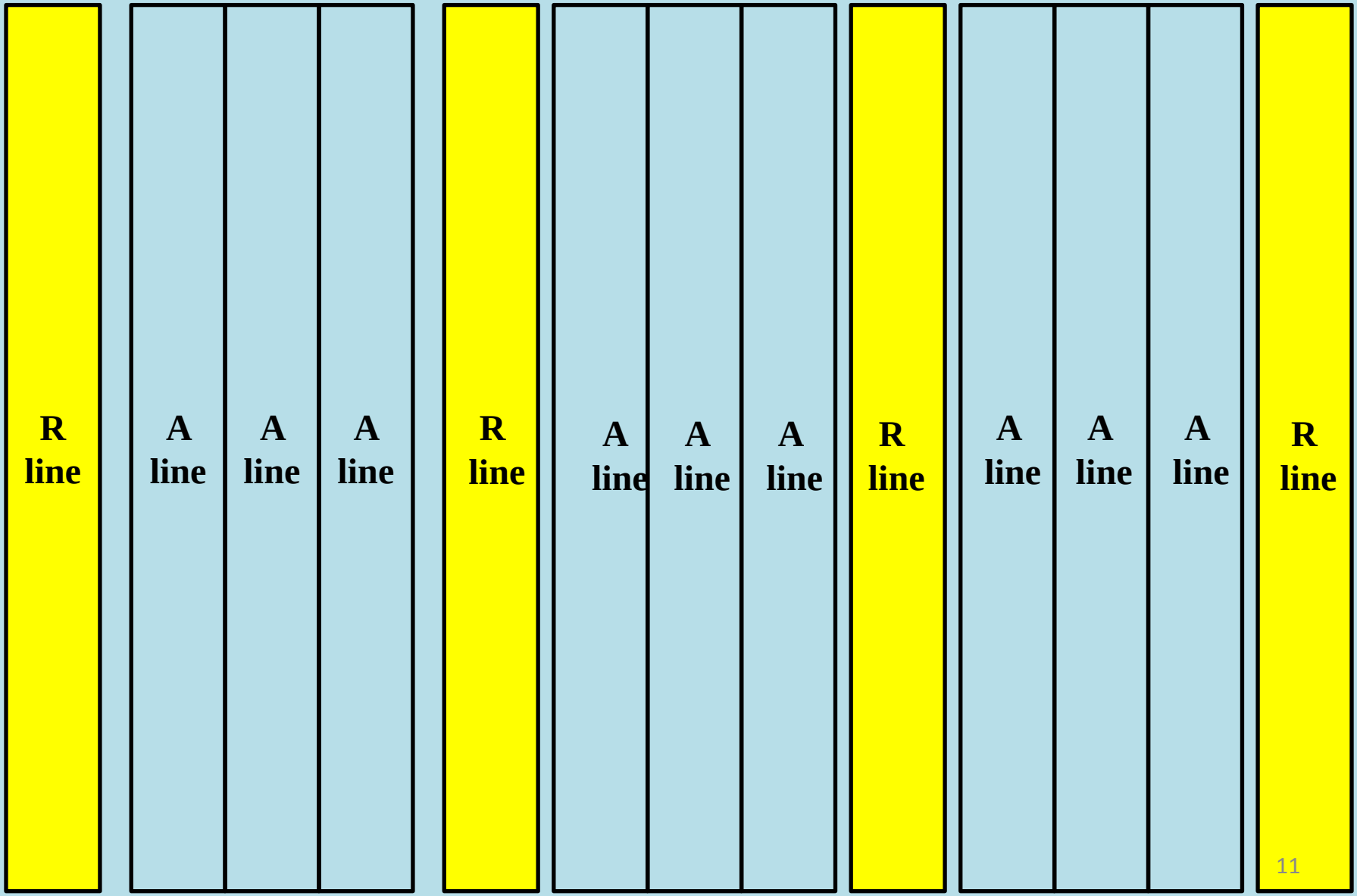
- Hybrid sunflower – Yezin–1
- Seed source – Tatkon Seed Farm
- Seed rate – A:R, 3:1 by volume
- Plant population – 23232 plants/ac
- Area – 50 acres
- Method of planting – (30 x 9)inch (A:R–3:1)
- Crop Period – Oct–Jan
- Soil pH – 6.1
- Estimated yield – 11–12 bsk/ac

Facts on hybrid seed production

- Sowing date – 29.9.2019 – 1.10.2019
- 50% Emergence date – 10.10.2019
- Thinning date – 25.10.2019–1.11.2019
- First flowering date – 11.11.2019
- 50% flowering date – 21.11.2019
- Rouging – 12.11.2019–30.11.2019
- Harvesting – 21.1.2020 (R)
  – 26.1.2020 (A)

Facts on hybrid seed production

Planting Ratio (A:R)



Crop Management

• **Land preparation**	– **2 times harrow after 1 time plough and 1 time rotavator**
✓ **green manure**	– **Sunn hemp**
✓ **Basal (15:15:15)**	– **50kg/ac.**
• Thinning	– after 15days of 50% germinating
• Inter cultivation	– after 30 days of germinating
• Side dressing	– Compound 50kg/ac, Urea 25kg/ac
• Foliar spraying	– Comet–1 (15:15:30)
• Fungicide spraying	– Dicozeb(1kg) /ac
• Supplementary pollination	– 100 beehives (12.11.2019)
• Field Inspection	– 3 times(before, during and after flowering)

Crop Management

Land preparation

Direct seeding

Crop Management

Thinning

Inter cultivation

Crop Management

Rouging

Beehives

Estimating Yield

Sr. no	Article	Sample 1			Sample 2			Sample 3		
		1	2	3	1	2	3	1	2	3
1.	Seed wt. of 50 flowers (g)	311	734	415	1047	342	223	420	537	664
2.	av. seeds wt. in a flower(g)	6.22	14.68	8.3	20.93	6.84	4.46	8.4	10.47	13.28
3.	Row X plant (ft.)	1.91 x 1.09	1.75 x 0.86	1.91 x 1.01	2 x 1.17	2 x 0.79	1.91 x 1.75	2 x 1	1.91 x 0.94	1.91 x 1.09
4.	75% plt. Population	15692	21707	16935	13961	20676	9774	16335	18195	15691
5.	Yield (bsk./ac)	6.72	21.97	9.69	20.16	9.75	3	9.47	13.47	14.38
	av. yield (bsk./ac)	12.79			10.97			12.44		
	Estimated yield	12.07 bsk/ac								

$$\text{Yield} = \frac{\text{Average seed wt./flower(g) x 75\% plt population x lb/kg}}{\text{g/kg x lb/bsk}}$$

Estimating Yield

Conducting Field day Demonstration

- At 25.12.2019
- 50 farmers from nearby villages including both sunflower growers and other crops growers
- Disseminating Information
- Educating Farmers

Suggestion and Conclusion

- By growing sunflower as sequential crops, farmers can earn more money from one unit land area.
- Seed requirement of farmers can be fulfilled.
- Farmers can be persuaded by field day.
- Capacity of YSI can be increased by participating in sunflower hybrid seed production

Thank You