



MINISTRY OF AGRICULTURE, LIVESTOCK AND IRRIGATION

DEPARTMENT OF AGRICULTURE

STATE AGRICULTURE AND LIVESTOCK INSTITUTE, PATHEINGYI



COMPARISON OF YIELD COMPONENTS AND ADAPTATION OF THREE DIFFERENT VARIETIES OF GREEN GRAM

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Demonstrator

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Introduction



- ❑ Pulses are the second most important food crops after cereals and are the main source of vegetable protein
- ❑ Pulses provide energy , dietary fiber , protein , minerals , and vitamins required for human health
- ❑ Green gram can be grown on a variety of soils ranging from sandy loam to black cotton soils having good drainage capacity
- ❑ Cultivation of green gram is however common in all the three seasons
- ❑ Green gram is very sensitive to water logging conditions



Objectives



- ❖ To investigate the most suitable variety of green gram for the study area
- ❖ To find out the most economical benefits variety which resistant to pest and diseases
- ❖ To share the knowledge of green gram cultivation to the farmers



Materials and Methods

- Variety
- Sowing methods
- Sowing date
- Layout
- Data collection
- Harvesting

- Green Gram
- Direct sowing method
- 15.6.2023
- 16 rows per treatment (1 row = 260 ft)
- 40 days after sowing two time par week
- 28.8.2023





Methods

- ❖ Experimental site - Department of agricultural chemistry Y-3
- ❖ Experimental design - Simple trial
- ❖ Replications - 30 times per treatment
- ❖ Treatment - 3 varieties

Treatments

- ❖ T₁ - Yezin -15
- ❖ T₂ - Kyauk Sein
- ❖ T₃ - YAU-4



Land Preparation



- Y-3 plots (DAC)
- 0.33 acre per treatment
- Ploughed by 3 plows
- Ground cleaning
- Rotor
- Land leveling





Basal application

- Compound fertilizer (15:15:15)
- Organo Phosphate



Seed Sowing

- Direct sowing
- Sowing green bean seeds in rows





Care and Management



- Watering (one time per day)
- Weeding and earthing up were done twice a week
- Monitoring pests and diseases
- Green gram were checked twice a week



Pests And Diseases Control

Pesticide spraying

- ❖ Ta-Phyote-Phyote -50g (two times)
- ❖ Emarben - 30cc (two times)
- ❖ Akosu - 30cc
- ❖ Fife Fife - 50cc/30cc



Chemical foliar Application

- ❑ Tonic - 30cc (four times)/10cc
- ❑ Kenfolan Bloom - 30cc and 40cc (two times)
- ❑ Commando - 500g (two times) /45g



Data Record

- ❖ Plant height (cm)
- ❖ Number of pods per plant
- ❖ Length of pod (cm)
- ❖ Number of seeds per pod
- ❖ Collected data (total 30 sample plants in each treatment)



Harvesting

- ❑ Depending on the variety and the weather should be ready to harvest in 60 to 70 days after seed sowing
- ❑ The mature pods were first plucked at 8th weeks
- ❑ The second time were picked within 7-10 days after the first time



Results and Discussion

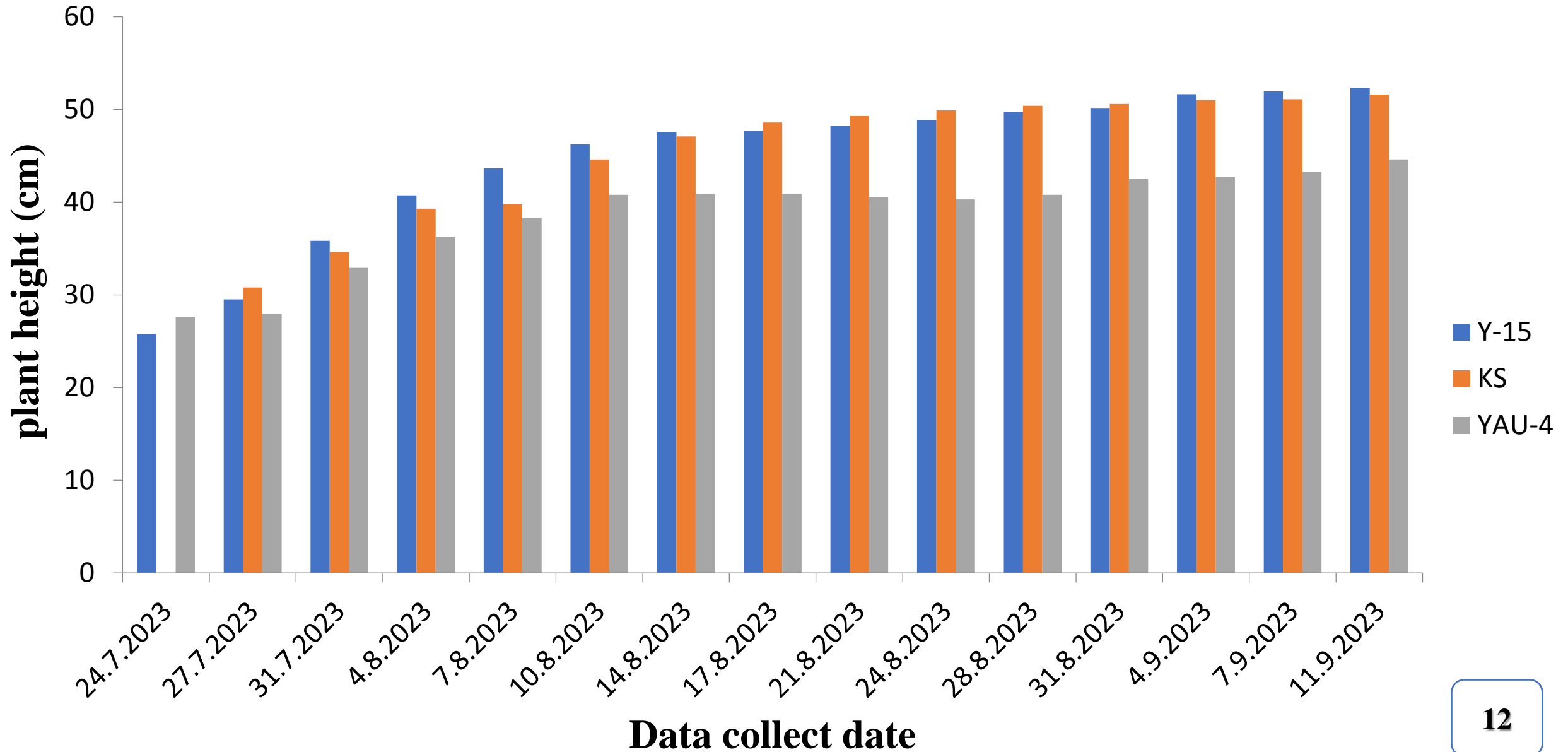
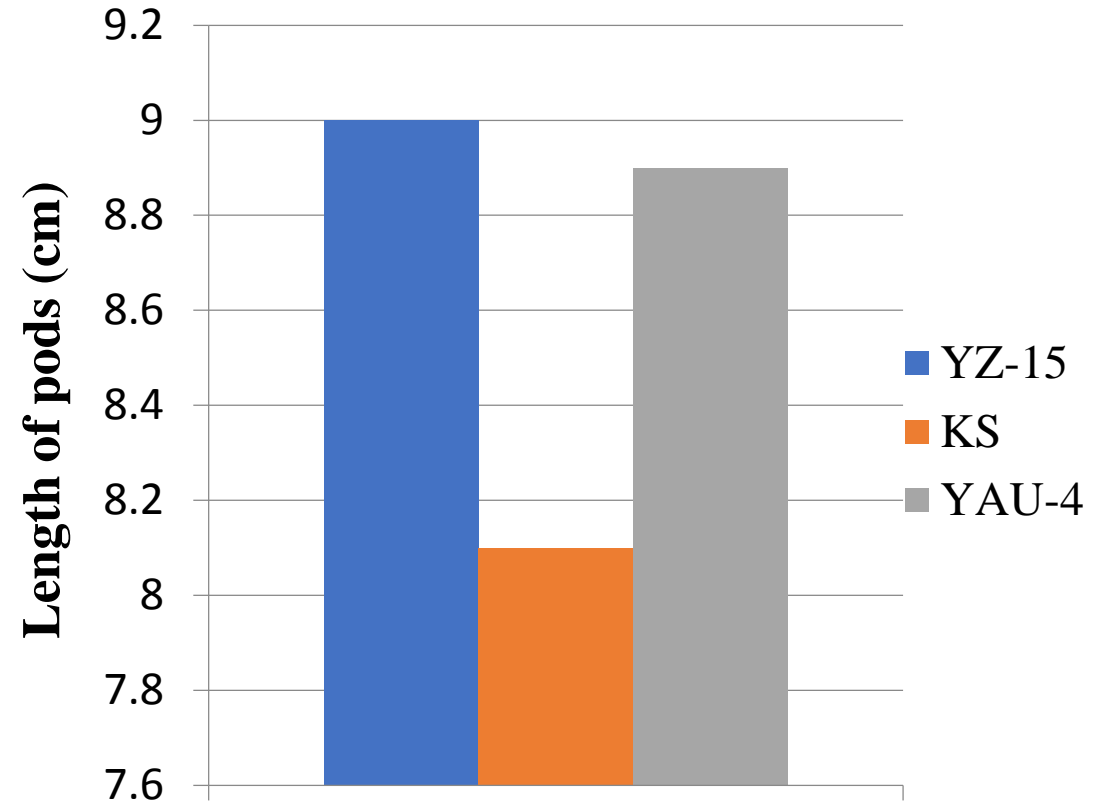


Figure 1. Comparison Of Plant Height For Three Varieties

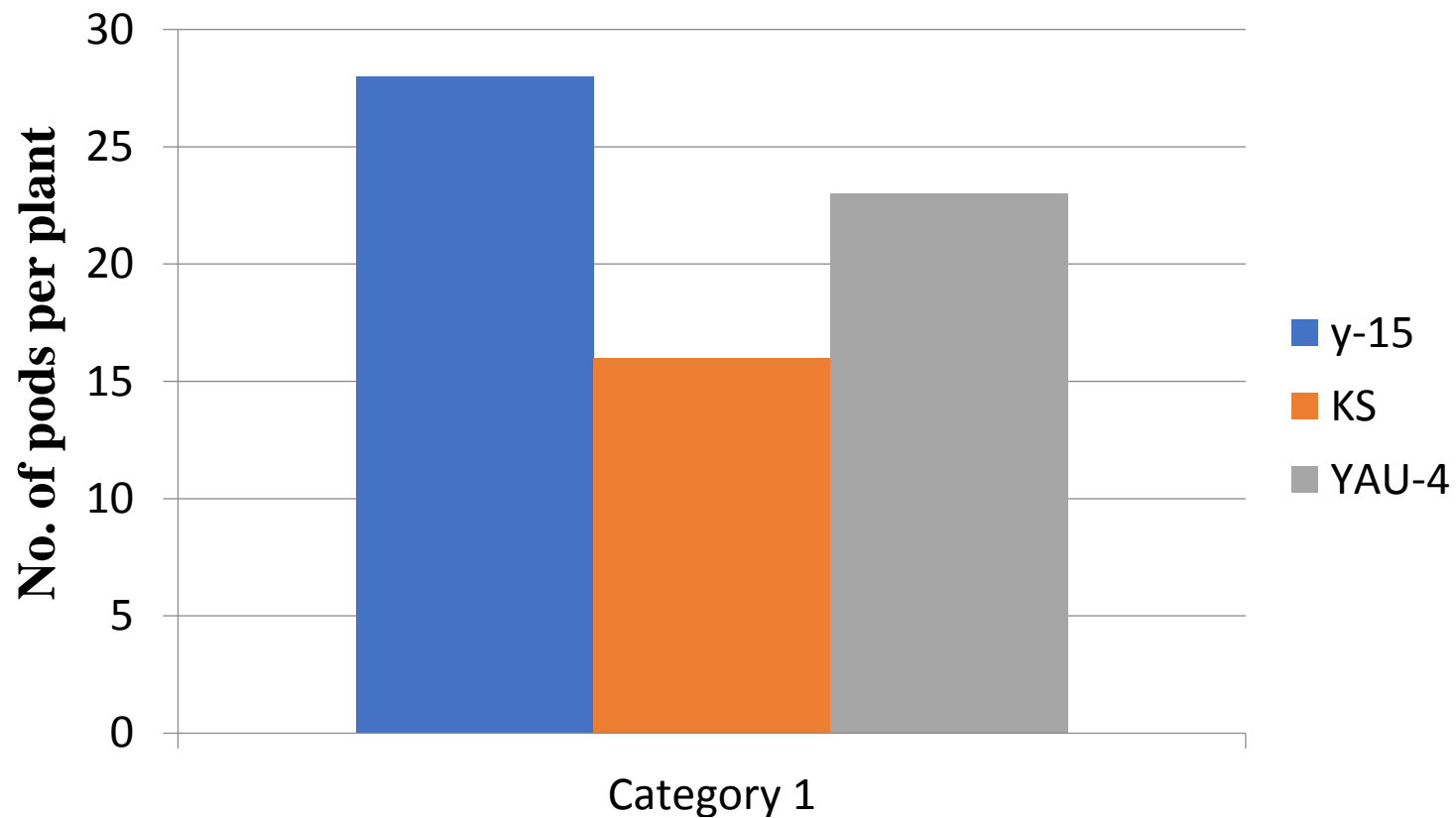
Total Length of Pod (cm)

| Varieties | Length of pods (cm) |
|--------------|---------------------|
| YZ-15 | 9 |
| KS | 8.1 |
| YAU-4 | 8.9 |



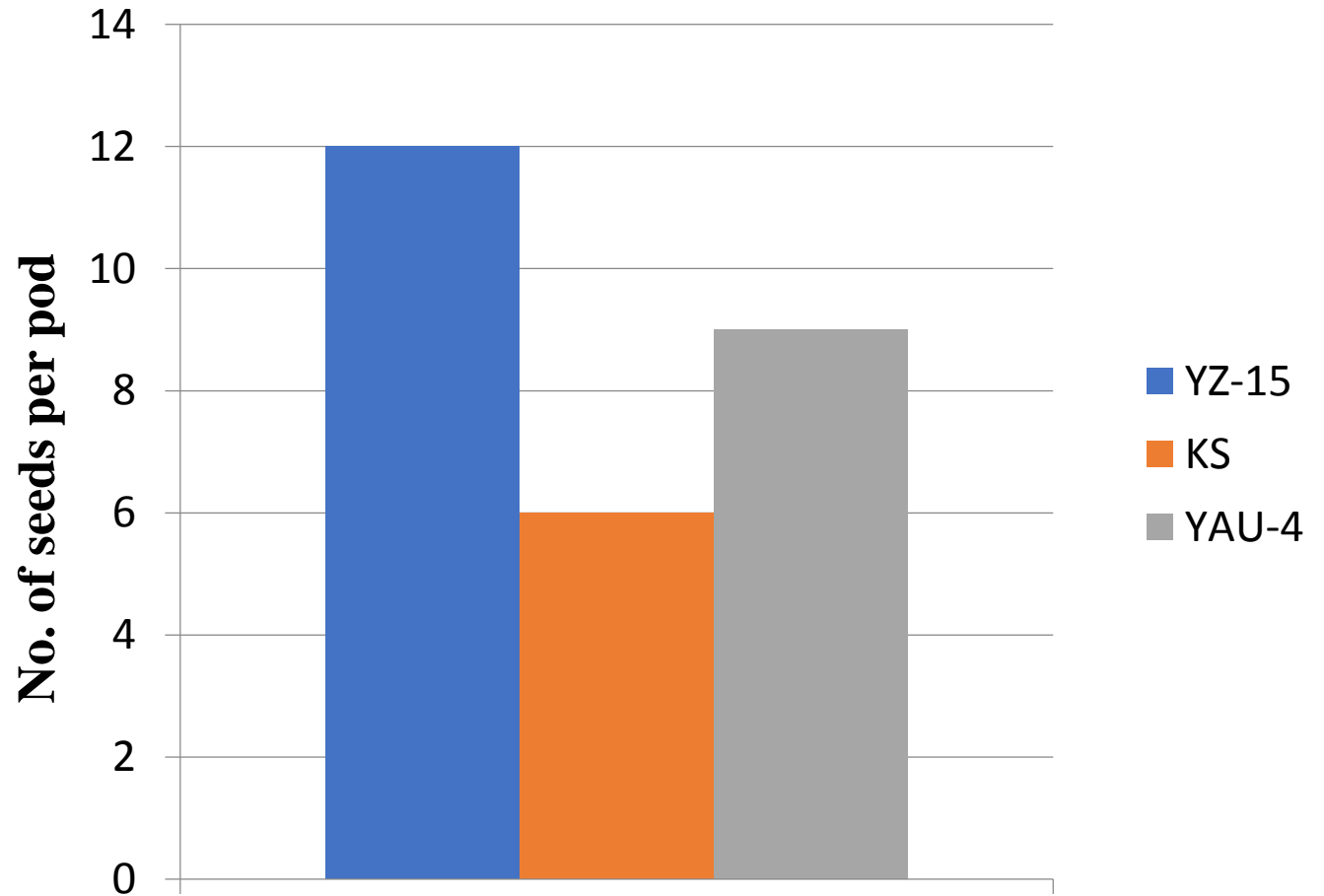
Total Number of Pods Per Plant

| Varieties | Number of pods per plant |
|--------------|--------------------------|
| YZ-15 | 28 |
| KS | 16 |
| YAU-4 | 23 |



Number of Seeds Per Pod

| Varieties | Number of seeds per pod |
|--------------|-------------------------|
| YZ-15 | 12 |
| KS | 6 |
| YAU-4 | 9 |



Conclusion & Recommendations

- ❑ T_1 (yezin -15) results are the most suitable variety.
- ❑ During our experiment, T_1 (Yezin-15) was being resistant to pests and water logging.
- ❑ T_1 (Yezin-15) is the most suitable variety for Patheingyi region and raining season (June-October)

Future Plan

- ❖ နောက်လာမည့်နှစ်တွင် စမ်းသပ်စိုက်ပျိုးမည့် ကျောင်းသား/သူများ အတွက် အတွေ့အကြုံများ၊ အခက်အခဲများ၊ လုပ်ဆောင်ရမည်အချက်အလက်များနှင့် အသိပညာဗဟုသုတများကို လက်တွေ့ လေ့လာသိမြင်ခွင့် ရရှိစေရန်
- ❖ စိုက်ပျိုးထုတ်လုပ်သော အသိပညာများ၊ ကြုံတွေ့ရသော အခက်အခဲများ၊ နည်းပညာများကို ကျောင်းပြီး၍ လုပ်ငန်းခွင်ဝင်ရောက်သောအခါ တောင်သူများကို လက်ဆင့်ကမ်းမျှဝေ၍ နိုင်ငံ့စီးပွားတိုးတက်အောင် တစ်ထောင့်တစ်နေရာမှ ပါဝင်ဆောင်ရွက်သွားရန်အတွက် လက်တွေ့နယ်ပယ်နှင့် ကိုက်ညီသော ပိုမိုကောင်းမွန်သည့် စမ်းသပ်မှုများကို နောင်လာမည့် စာသင်နှစ်မှ ကျောင်းသား/သူများနှင့် ဆက်လက်လုပ်ဆောင်သွားပါမည်။



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