

BIBLIOGRAPHY

BALALONG, CAMILO JR. J. APRIL 2013. Variety Trial of Cabbage Under Bansa, Monamon Norte, Bauko, Mountain Province Condition. Benguet State University, La Trinidad, Benguet.

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ABSTRACT

Five cabbage varieties were evaluated in Bansa, Monamon Norte, Bauko, Mountain Province during dry season on November 2012 to February 2013.

All varieties had 100 percent survival and heading percentage except for Kila F₁. Lucky Ball significantly initiated heads earlier and Lucky Ball, Rare Ball, and Mountain King were significantly harvested earlier than Scorpio and Kila F₁.

Equatorial circumference of heads was significantly wider in Lucky Ball, Rare Ball, and Mountain King. Lucky Ball and Rare Ball had the widest polar head circumference while Lucky Ball had the heaviest head weight.

Marketable yield was significantly higher in Lucky Ball and Rare Ball at 70.67 t/ha and 66.00 t/ha, respectively from which the highest ROI at 58.62 % and 49.27 % were obtained.



RESULTS AND DISCUSSION

Percentage Survival and Heading Percentage

All the varieties planted had 100 percent survival as presented in Table 1. Further, all the varieties had 100 percent heading except for Kila f₁ which significantly had the lowest heading percentage (Table 1).

Number of Days to Head Initiation Head Initiation to Harvesting Stage

Table 2 shows that variety Lucky Ball significantly initiated heads earlier while variety Lucky Ball, Rare Ball, and Mountain King were significantly harvested earlier at 62 days from transplanting.

Table 1. Percentage survival and heading percentage

VARIETY	PERCENTAGE SURVIVAL (%)	HEADING PERCENTAGE (%)
Lucky Ball	100 ^a	100 ^a
Rare Ball	100 ^a	100 ^a
Scorpio	100 ^a	100 ^a
Mountain King	100 ^a	100 ^a
Kila F ₁	100 ^a	88.54 ^b

Within a column, means with a common letter are not significantly different at 5% by DMRT



Table 2. Number of days from transplanting to head initiation harvesting

VARIETY	DAYS OF HEAD INITIATION	DAYS TO HARVEST
Lucky Ball	29.67 ^d	61.67 ^c
Rare Ball	29.67 ^c	61.67 ^c
Scorpio	32.00 ^b	65.00 ^b
Mountain King	29.67 ^c	62.00 ^c
Kila F ₁	35.00 ^a	69.67 ^a

Within a column, means with a common letter are not significantly different at 5% by DMRT

Equatorial and Polar Head Circumferences
And Average head Weight

Table 3 shows that variety Lucky Ball, Rare Ball, and Mountain King had significantly widest equatorial circumferences while variety Lucky Ball and Rare Ball significantly had the longest polar circumference heads measured.

There were no significant differences in the weight of heads produced by variety Lucky Ball, Rare Ball, Mountain King, Scorpio and Kila F₁ (Table 3).

Total, Marketable and
Non-Marketable Yield

Table 4 shows that there were no significant differences in total yield. However, variety Lucky Ball significantly had the highest marketable yield. The heads of all the varieties tested except Kila F₁ were marketable.



Table 3. Equatorial and polar head circumferences and average head weight

VARIETY	CIRCUMFERENCE (cm)		AVERAGE HEAD WEIGHT (kg)
	EQUATORIAL	POLAR	
Lucky Ball	54.87 ^a	48.60 ^a	1.48 ^a
Rare Ball	54.33 ^a	48.17 ^{ab}	1.42 ^a
Scorpio	46.87 ^b	46.67 ^c	1.29 ^a
Mountain King	54.57 ^a	47.73 ^b	1.33 ^a
Kila F ₁	46.27 ^b	42.80 ^d	1.30 ^a

Within a column, means with a common letter are not significantly different at 5% by DMRT

Table 4. Total, marketable, and non-marketable yield

VARIETY	YIELD (kg/1 m x 5 m plot)		
	TOTAL	MARKETABLE	NON-MARKETABLE
Lucky Ball	35.33 ^a	35.33 ^a	0.00 ^b
Rare Ball	33.00 ^a	33.00 ^{ab}	0.00 ^b
Scorpio	30.67 ^a	30.67 ^b	0.00 ^b
Mountain King	32.00 ^a	32.00 ^b	0.00 ^b
Kila F ₁	31.33 ^a	27.33 ^c	4.00 ^a

Within a column, means with a common letter are not significantly different at 5% by DMRT



Computed Yield

Table 5 shows that the computed yield per hectare was significantly higher in Lucky Ball.

Table 5. Computed yield

VARIETY	COMPUTED YIELD (t/ha)
Lucky Ball	70.67 ^a
Rare Ball	66.00 ^{ab}
Scorpio	61.33 ^b
Mountain King	64.00 ^b
Kila F ₁	54.67 ^c

Within a column, means with a common letter are not significantly different at % by DMRT

Black Rot and Club Root Incidences and Diamond-Back Moth Infestation

Table 6 shows that there were no significant differences observed in the incidence of black rot and club root infestation as well as in the incident in diamond back moth infestation.



Table 6. Black rot and club root incidence, and diamond back moth infestation

VARIETY	BLACK ROT INCIDENCE	CLUB ROOT INCIDENCE	DIAMOND BACK MOTH
Lucky Ball	1.00 ^a	1.00 ^a	1.33 ^a
Rare Ball	1.00 ^a	1.00 ^a	1.67 ^a
Scorpio	1.00 ^a	1.00 ^a	1.00 ^a
Mountain King	1.00 ^a	1.00 ^a	1.67 ^a
Kila F ₁	1.00 ^a	1.00 ^a	1.67 ^a

Within a column, means with a common letter are not significantly different at 5% by DMRT

Head Firmness and Color

As presented in Table 7, Lucky Ball, Rare Ball, and Mountain King significantly had very firm heads. In head color, Lucky Ball, Rare Ball, and Mountain King had dark green color while Scorpio and Kila F₁ had light green color.

Cost and Return Analysis

Table 8 shows that the highest return of investment at 58.62 was obtained from Lucky Ball followed by the ROI taken from Rare Ball and Mountain King.

Picture Documentation

Figure 1 shows the overview of the field experiment while figure 2 presents the harvested heads of the cabbage varieties evaluated.



Table 7. Head firmness and color

VARIETY	HEAD FIRMNESS	HEAD COLOR
Lucky Ball	1.00 ^b	1.00 ^a
Rare Ball	1.00 ^b	1.00 ^a
Scorpio	2.00 ^a	2.00 ^a
Mountain King	1.00 ^b	1.00 ^a
Kila f ₁	2.00 ^a	2.00 ^a

Within a column, means with a common letter are not significantly different at 5% by DMRT



Table 8. Cost and return analysis

PARTICULAR	LUCKY BALL	RARE BALL	SCORPIO	MOUNTAIN KING	KILA F ₁
Marketable Heads	35.33	33.00	30.67	32.00	27.33
A. Sales	989.24	924.00	858.76	896.00	765.24
B. Expenses					
1. Seed	35	35	35	35	35
2. Fertilizer					
-14-14-14	13	13	13	13	13
-16-0-0	22	22	22	22	22
-chicken dung	60	60	60	60	60
3. Insecticide					
-Success	43	43	43	43	43
-Sumicidine	43	43	43	43	43
4. Fungicide					
-Dathane	87	87	87	87	87
5. Transportation	70.66	66.00	61.34	64.00	54.66
6. Labor	250	250	250	250	250
Total ex.	623.66	619.00	614.34	617.00	607.66
C. Net profit	365.58	305.00	244.42	279.00	157.58
D. ROI	58.62	49.27	39.79	45.22	25.93
E. RANK	1	2	4	3	5



PICTORIAL PRESENTATION



Figure 1. Overview of the experiment field



A. Lucky Ball



B. Rare Ball



C. Scorpio



D. Mountain King



E. Kila F₁

Figure 2. Sample harvested heads of the cabbage varieties evaluated

SUMMARY, CONCLUSIONS, AND RECOMMENDATION

Summary

The study was conducted from November 2012 to February 2013 at Bansa, Monamon Norte, Bauko, Mountain Province to evaluate the performance of five cabbage varieties.

Findings show that all varieties had 100 percent survival and heading percentage except for Kila F₁. Lucky Ball significantly initiated heads earlier, and Lucky Ball, Rare Ball, and Mountain King were significantly harvested earlier.

Equatorial circumference of heads was significantly wider in Lucky Ball, Rare Ball, and Mountain King. Lucky Ball and Rare Ball had the widest polar head circumference. Lucky Ball had the heaviest head weight.

Marketable yield was significantly higher in Lucky Ball and Rare Ball, while Kila F₁ was significantly produced higher non-marketable yield. Lucky Ball and Rare Ball significantly had higher computed marketable yield at 70.67 and 66.00 t/ha, respectively.

Lucky Ball, Rare Ball, and Mountain King significantly had very firm heads. Lucky Ball, Rare Ball, and Mountain King had dark green color while Scorpio and Kila F₁ had light green color.

The highest return of investment at 58.62 % was obtained in Lucky Ball followed by Rare Ball at 49.27 %. There were no significant differences in black rot, club root and diamond back moth incidence among the varieties evaluated from no to slight damage.



Conclusion

Based from the results of the study, Lucky Ball and Rare Ball had the best yield performance from which higher profit is derived.

Recommendation

Lucky Ball and Rare Ball are then recommended to be grown in Bansa, Monamon Norte, Bauko, Mountain Province.



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