Nutrient Management and Rate of Biostimulant on Hybrid Glutinous Corn

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Abstract

This study aimed to determine the yield performance of Hybrid glutinous corn in response to nutrient management and rate of biostimulant. It was conducted at Canalum, Nangka, Bayawan City, Negros Oriental from January 2019 to July 2019.

The study was laid out using split plot design with three (3) replications. Treatments differences were determined using the Least Significant Different (LSD) test.

Results showed that growth and yield parameters differed significantly with independent effects between factors employed.

Hybrid glutinous corn applied with different nutrient management differs significantly on parameters used. Treatments applied with 50% organic + 50% in-organic fertilizers got a significant effect on ear height.

Meanwhile, treatment with 100% in-organic fertilizer came in next and obtained almost the same or uniformed results with the aforementioned treatment.

Finally, treatment applied with 100% organic fertilizer acquired the lowest mean average and always acquired a non-significantly lesser compared from the above mentioned treatments.

Hybrid glutinous corn applied with three (3) different levels of megafol differed significantly. At 120ml/16 liters of water of megafol 80ml/16 liters of water of megafol sprayed per hectare there were significant effect on the weight per ear compared to 40ml/16 liters of water of megafol per hectare.

All parameters showed that no interaction effect was observed between nutrient management and levels of megafol to the yield performance of hybrid glutinous corn.

Keywords: *nutrient management, biostimulant, hybrid glutinous corn, Philippines*

I. INTRODUCTION

Glutinous corn is one of the major crops grown in the Philippines with over a million Filipino farmers, depending on it as their main source of income and employment. With the increasing population of Filipinos and the rise in the market demand for cornicks, local production of waxy corn grains has always been barely able to support the demand of the processing industry.

Glutinous corn it is a source of nutrition as well as phytochemical compounds. Phytochemicals play an important role in preventing chronic diseases. It contains various major phytochemicals such as carotenoids, phenolic compounds, and phytosterols. It is believed to have potential anti-HIV activity due to the presence of Galanthusnivalis agglutinin (GNA) lectin or GNA-maize. A tablespoon of maize oil satisfies the requirements for essential fatty acids for a healthy child or adult. Decoction of maize silk, roots, leaves, and cob are used for bladder problems, nausea, vomiting, and stomach complaints. Zein an alcohol-soluble prolamine found in maize endosperm has unique novel applications in pharmaceutical and nutraceutical areas. Resistant starch (RS) from maize reduces the risk of cecal cancer, atherosclerosis, and obesity-related complications (Kumar, 2016).

On the other hand in terms of production glutinous corn could not fully express its yielding potential not unless a right seeds, proper cultural practices, availability of nutrients as well as environmental growing conditions are provided to its growth and development. Glutinous corn grows in all types of soil but the best growth is obtained under a well-drained and aerated soil that contains adequate nutrient with a pH value ranging from 5.3 to 7.5 (PCARRD 2010).

Recent development has shown that application of bio stimulant or anti-stress enhances the expression of the genetic yield potential of any crop variety and also enhanced the ability of nutrients that utilized the plant. Biostimulant also help break dormancy, increase fruit size, enhance root system development, increase the activities of photosynthetic and other plant vigor and uniformity, regulate flowering, and stimulate fruit set and ripening(http://www.researhgate.net).

In connection with this, the study was initiated to investigate the technology of glutinous corn applied with different fertilizer and rate of bio-stimulant or anti-stress.

II. METHODOLOGY

Research Design

A split plot design was used in this study with nutrients as main plot (100% organic fertilizer, 100% in-organic fertilizer, 50% organic + 50% in-organic fertilizer) and the sub-plot are the rate of megafol (40 ml/16liters of water, 80 ml/16 liters of water, 120 ml/16 liters of water). Each treatment was replicated into three times.

The total land area of 600 m^2 was divided into main plot representing the three nutrients, with the area of 200m^2. Each sub plot had an area of 100m^2 to accommodate the subplot which wasthe rate of megafol. The Duncan Multiple Range Test was used to determine the difference between the treatment means and also utilized the significant difference based on 5% and 1% of level of significant. The following treatments were as follows;

Materials and Tools

This study used glutinous corn as test crop. Furthermore, the materials used were bamboo stick, markers, glutinous corn seed, fertilizers, and megafol.

The tools and equipment used in this study were as follows: steel tape, meter stick, vernier caliper, sprayer tank, weighing scale, tractor, and harrow.

Experimental Design and Treatments

Main Plot	Nutrients
MP1	100% organic fertilizer
MP2	100% in-organic fertilizer
MP3	50% organic + 50% in-organic fertilizer

Sub Plot	Rate of Megafol
SP1	40 ml/16 liters of water
SP2	80 ml/16 liters of water

Table 1: Treatments and Treatment Combinations

Nutrient Management	Levels of Megafol	Treatment Combination Code	Treatment Number
MP1 100% Organic Fertilizer (Rapha Humus)	40ml/16 lit. of water	MP1 SP1	T1
	80ml/16 lit. of water	MP1 SP2	T2
	120 ml/16 lit. of water	MP1 SP3	T3
MP2 100% In-organic (14-14-14, 21-0-0, 0-0-60 &California Grow)	40ml/16 lit. of water	MP2 SP2	T4
	80ml/16 lit. of water	MP2 SP2	T5
	120 ml/16 lit. of water	MP2 SP3	T6
MP3 50% Organic & 50% In-organic (Rapha humus, 14-14-14, 21-0-0, 0-0-60 & California Grow)	40ml/16 lit. of water	MP3 SP1	T7
	80ml/16 lit. of water	MP3 SP2	T8
	120 ml/16 lit. of water	MP3 SP3	T9

Fertilization treatment

The fertilizer application was based on treatments for the study was applied in three different fertilizer management as main plot was as follows;100% organic fertilizer, 100% in-organic fertilizer, 50% organic + 50% in-organic fertilizer.

The application was done in two schedules; one half (1/2) at planting; 1/2 at 25 days after planting. Fertilizer treatments were as follows.

Table 2. Fertilizer Tabulation

Application	(100% ORGANIC) Schedule	Rate Liter/ha
First	Planting	2 liters/ha
Second	25 DAP	2 liters/ha

Application	(100% IN-ORGANIC) Schedule	Rate NPK
First	Planting	60-30-45 +2lit./ha
Second	25 DAP	60-30-45 + 2lit./ha

Application	(50% OR+ 50%IN) schedule	Rate NPK+liter/ha
First	Planting	60-30-45 + 2L/ha(caligrow) + 2L/ha(raphe humus)
Second	25 DAP	60-30-45 + 2L/ha(caligrow) + 2L/ha(raphe humus)

Application	(MEGAFOL) Schedule	Rate Ml/16 L
First	15 DAP	40,80,120
Second	25 DAP	40,80,120
Third	40 DAP	40,80,120

Table 3. Fertilizer Tabulation: 100% Organic (MP1) Treatment

Application	**Schedule of Application**	**Kind / Rate**
		Rapha Humus (ml.)
First	Basal	2.8
Second	25 DAP	2.8
TOTAL		5.6

Table 4. Fertilizer Tabulation: 100 in-organic (MP2) Treatment

Application	Schedule of Application	Kind / Rate			
		Ammonium sulfate 21-0-0 (gram/hill)	**14-14-14 (gram/hill)**	**Potash 0-0-60 (gram/hill)**	**California Grow (ml)**
First	Basal	1.005	1.51	.175	2.8
Second	25 DAP	1.005	1.51	.175	2.8
TOTAL		2.01	3.02	.35	5.6

Table 5. Fertilizer Tabulation: 50% Organic + 50% In-organic (MP3)Treatment

Application	Schedule of Application	Kind / Rate				
		Organic	In-organic			
		Rapha Humus (ml.)	21-0-0 (gram/hill)	14-14-14 (gram/hill)	0-0-60 (gram/hill)	California Grow (ml)
First	Basal	2.8	1.005	1.51	.175	2.8
Second	15 DAP	2.8	1.005	1.51	.175	2.8
TOTAL		5.6	2.01	3.02	**.35**	5.6

Table 6. Levels of Megafol Tabulation of SP1,SP2,SP3 Treatments (Sub Plots/SP)

Application	**Schedule of Application**	**Rate**		
		.5lit/ha (ml)	**1lit/ha (ml)**	**1.5lit/ha (ml)**
First	15 DAP	.47	.93	1.4
Second	25DAP	.47	.93	1.4
Third	40 DAP	.47	.93	1.4
TOTAL		**1.4**	**2.8**	**4.2**

Land Preparation

The area was plowed and harrowed twice using a tractor drawn harrowed at two weeks interval. Canals were fixed and plots were laid out using steel tape and string as a linear guide.

Experimental Layout

The experimental area was divided into three main blocks and each block was further and divided into three plots corresponding to the treatments. Each plot was measured 10 meters x 10 meters with 0.70 meter distance between plots and 1 meter between blocks.

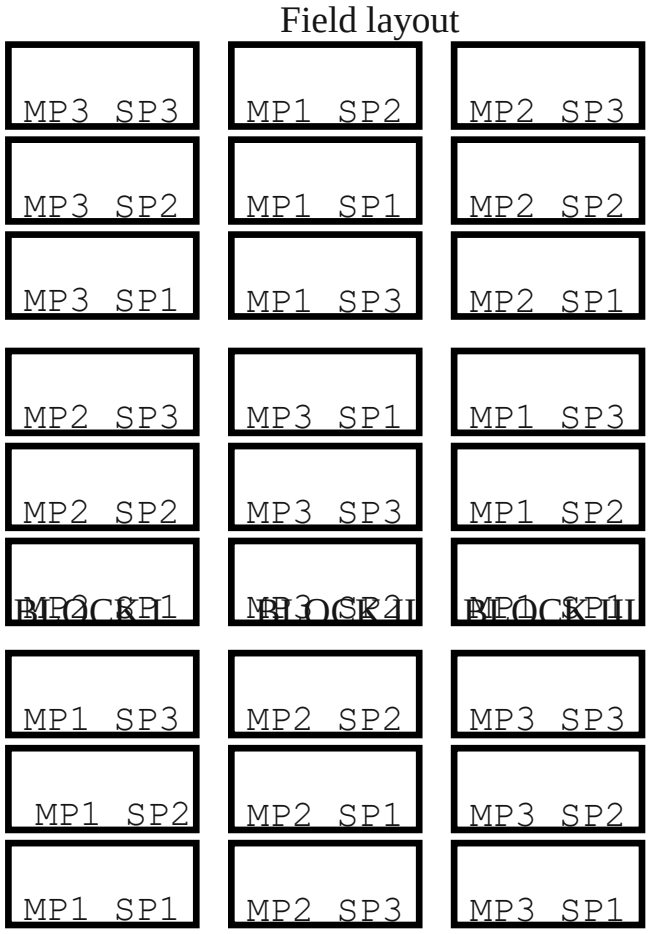

Figure 1. Field arrangement and randomization of hybrid glutinous corn and level of megafol.

Legend: MP – Nutrient Management; SP – Megafol

Planting

Seed of glutinous corn was planted at distance of 70cm between rows and 20 cm between hills at one seed per hill.

Megafol Application

Megafol was sprayed to the corn, this was based on programmed schedules; 15DAP, 25DAP, and 40DAP. In treatment one 40ml/16 liters of water of megafolper application, treatment two (80ml/16 liters of water of megafolper application and treatment three used 120ml/16 liters of waterper application. Each ration of megafol was diluted to 16 liters of water.

Care and management

Weeding and cultivation was done manually at two weeks after planting and one month thereafter with the use of blunt bolo. On the other hand, when sign of borer infestation was observed, application of insecticide was immediately administered. Sanitation of the whole area should be maintained.

Harvesting

Harvesting of glutinous corn was done manually. Extra care was done when taking samples and recording the data.

Harvesting started when it reached at maximum stage or corn ear development at 75 days after planting.

Statistical Tools and Analyses

Agronomic Parameter

1. **Plant height (cm).** This was obtained by measuring the height from the base to tip of the plant at two inner rows only 10 samples plant at random was measured per treatment and the average was determine.
2. **Ear height (cm).** The average ear height was measured from the base to the node of bearing the ear using 10 sample plants at random from two inner rows per treatment.
3. **Days to silking.** The number of days to silking was determined when the plant population formed silk.
4. **Days to flowering.** The number of days to flower formation was determined when plants in the population was flowered.

Yield and Yield Component

1. **Percent marketable ears.** This was taken by counting the number of marketable ears harvested from two inner rows per treatment multiplied by 100 over the number of plants per plot.
2. **Percent non-marketable.** This was taken by counting the non-marketable ears from 2 inner rows per treatment multiplied by 100 divided by number ears per plot.
3. **Total ear weight per plot (kg).** This was taken by weighing the total marketable ears per plot.
4. **Percent insect damage.** This was taken by counting the number of insect damage from 2 inner rows per replication per treatment divided by the total plants within the plot.
5. **Length of dehusked ear (cm).** The length of ear of 10 random by selected sample per replication per treatment was measured from the base to tip of the ears and the average was determined.
6. **Weight per ear (g).** This was obtained from the weight of the 10 randomly selected ears of any given plot and the average weight per ear was determined.
7. **Ear diameter (cm).** This was obtained by measuring the ear diameter of the 10 randomly selected ear of a given plot and the average diameter was determined.
8. **Yield (tons/ha).** This was taken by weighing all harvested ears with in any given plot and converted into yield by computation.

III. RESULTS AND DISCUSSION

Agronomic Parameter

Plant height (cm)

The plant height of hybrid glutinous corn as influenced by nutrient management and levels of megafol is presented on Table 7.

Table 7. Plant height and ear height of hybrid glutinous corn as influenced by nutrient management and levels of megafol

Treatments	Growth Parameters	
	Plant Height	**Ear Height**
Main Plot (Nutrient Management):		
100% Organic	180.00	69.01[c]
100% In-organic	196.44	80.64[b]
50% Organic + 50% In-organic	209.46	87.53[a]
F – test	ns	*
Sub Plot (Levels of megafol):		
40ml/16 lit. of water	191.79	78.41
80ml/16 lit. of water	196.79	78.84
120ml/16 lit. of water	197.31	79.93
F – test	ns	Ns

Means within the same column followed by common letter are not significantly different using Least Significant Different(LSD) test

Statistical analysis showed that plant height was not significantly affected by nutrient management and has no significant relation on the levels of megafol.

Results revealed that nutrient management with 50% organic – 50% In-organic fertilizers got the highest mean of 209.46 cm followed by 100% In-organic with 196.44 cm and lastly 100% organic fertilizer with 180.00 cm respectively. These results revealed that plant height of both 50% organic – 50% in-organic and 100% in-organic did not differ significantly.

These implicated that treatments applied by organic fertilizer can compete with treatments applied by in-organic fertilizer through the application of biostimulant; Valagro(2018), applied regularly provides a balanced plat growth development and promoting and improved yield.

Application of three (3) different levels of megafol has no significant effect on plant height on the tested crop. Result showed that Hybrid Glutinous corn sprayed with 120ml/16 liters of water of megafol got the highest mean height of 197.31 cm, followed by the treatment applied with 80ml/16 liters of water of megafol (196.79cm) and lastly a treatment applied with 40ml/16 liter of water of megafol(191.79cm); however, these did not differ significantly with each other.

No significant difference was observed on the interaction of treatments on nutrient management and levels of megafol as presented on Appendix Table 1a.

Ear height

Ear height of Hybrid glutinous corn as influenced by nutrient management and levels of megafol is reflected on table 7.

The result shows significance on nutrient management and less or no significance on the levels of megafol.

Data revealed that treatments applied with 50% organic – 50% in-organic fertilizers exhibited significance and got the highest ear height (87.53) and followed by 100% in-organic (80.64) and lastly the main plot applied with 100% organic fertilizers (69.01). The ear height of the three treatments independently has a significant difference.

On the other hand, treatments applied with different levels of megafol did not differ significantly. It displayed uniform results and did not exhibit a major difference.

There was no significant interaction effect on nutrient management and levels of megafol based on analysis of variance showed (Appendix Table 2a).

Days to silking

The days to silking of hybrid glutinous corn as influenced by nutrient management and levels of megafol is presented on Table 8.

Table 8. Days to silking and day to flowering of hybrid glutinous corn as influenced by nutrient management and levels of megafol

Treatments	Growth Parameters	
	Days to Silking	**Days to Flowering**
Main Plot (Nutrient Management):		
100% Organic	50.76	48.18
100% In-organic	49.93	47.90
50% Organic + 50% In-organic	49.49	47.41
F – test	ns	ns
Sub Plot (Levels of megafol):		
40ml/16 lit. of water	50.00	47.78
80ml/16 lit. of water	50.22	48.13
120ml/16 lit. of water	49.96	47.68
F – test	ns	ns

Means within the same column followed by common letter are not significantly different using Least Significant Different (LSD) test.

The numbers of days to silking of Hybrid glutinous corn influenced by nutrient management and levels of megafol the results shows a non-significant different.

All treatments revealed that nutrient management and levels of megafol did not affect significantly on the days to silking of the crop being tested.

Appendix Table 3a collectively revealed that three (3) different nutrient management and three (3) levels of megafol did not present significant difference on the days to silking. This results indicated that the variety would not have a variation in silk formation of Hybrid glutinous corn, the early silk based on the data presented would influenced genetically on hybrid vigor that would developed early formation of silk.

Moreover, there was no interaction effect observed between nutrient management and levels of megafol based on the appendix table 3a presented.

Days to flowering

The number of days to tasseling of hybrid glutinous corn as influenced by nutrient management and levels of megafol is presented on Table 8.

All treatments revealed that nutrient management and levels of megafol did not affect significantly on the days to flowering of the crop being tested.

Appendix Table 4acollectively revealed that three (3) different nutrient management and three (3) levels of megafol did not present significant difference on the day to Flowering.

Moreover, there was no interaction effect observed between nutrient management and levels of megafol based on the appendix table 6a presented.

Yield and Yield Components

Percent marketable ears

Percent marketable ears of hybrid glutinous corn as influenced by nutrient management and levels of megafol is presented on Table 9.

Table 9. Percent marketable ear and Percent non-marketable ear of hybrid glutinous corn as influenced by nutrient management and levels of megafol

Treatments	Yield Parameters	
	Percent marketable ears	**Percent non-marketable**
Main Plot (Nutrient Management):		
100% Organic	95.06	4.98
100% In-organic	93.27	7.84
50% Organic + 50% In-organic	94.77	5.23
F – test	ns	ns
Sub Plot (Levels of megafol):		
40ml/16 lit. of water	95.17	5.97
80ml/16 lit. of water	94.79	5.21
120ml/16 lit. of water	93.13	6.87
F – test	ns	ns

Means within the same column followed by common letter are not significantly different using Least Significant Different (LSD) test.

The percent marketable ear as influenced with nutrients management and levels of megafol was not significantly affected of all treatments employed. Resultsrevealed that nutrient management with 100% organic fertilizers got the highest mean of 95.06 followed by 50% organic - 50% In-organic with 94.77 and lastly 100% In-organic fertilizer with 93.27 respectively. The results revealed that at different sources of nutrients more or less similar percent marketable ear was attain.

Application of three (3) different levels of megafol has no significant effect on percent marketable ears on the tested crop. Result showed that hybrid glutinous corn sprayed with 40ml/16 liters of water of megafol got the highest mean height of 95.17, followed by the treatment applied with 80ml/16 liters of water of megafol (94.79) and lastly a treatment applied with 120ml/16 liter of water of megafol (93.13); however, these did not differ significantly with each other.

No significant difference was observed on the interaction of treatments on nutrient management and levels of megafol as presented on Appendix Table 5a.

Percent Non-marketable

Plants that did not bear ears were considered unproductive plants.

All treatments revealed that nutrient management and levels of megafol did not affect significantly on the percent non-marketable of the crop being tested.

Appendix Table 6a, collectively revealed that three (3) different nutrient management and three (3) levels of megafol did not present significant difference on the percent non-marketable.

More so, there was no interaction effect observed between nutrient management and levels of megafol based on the appendix table 6a presented.

Total ear weight per plot

Total ear weight per plot of hybrid glutinous corn as influenced by nutrient management and levels of megafol is presented on Table 10.

Table 10. Total ear weight per plot and ear diameter of hybrid glutinous corn as influenced by nutrient management and levels of megafol

Treatments	Yield Parameters	
	Total ear weight per plot	Ear diameter
Main Plot (Nutrient Management):		
100% Organic	16.56	4.78
100% In-organic	24.33	5.01
50% Organic + 50% In-organic	26.97	5.18
F – test	ns	ns
Sub Plot (Levels of megafol):		
40ml/16 lit. of water	21.60	4.94
80ml/16 lit. of water	22.26	5.03
120ml/16 lit. of water	24.00	5.00
F – test	ns	ns

Means within the same column followed by common letter are not significantly different using Least Significant Different (LSD) test.

The statistical data on total ear weight per plot at table 10depicted that there were no significant difference on both nutrient management and levels of megafol.

Specifically all the data in nutrient management described a uniform results and no significant variation were observed with the mean average of 16.56, 24.33, 26.97 respectively.

No significant interaction on the analysis of variance was observed in table 7a.

Ear Diameter

Statistical data on ear diameter at table 10 depicted that there were no significant difference on both nutrient management and levels of megafol.

Specifically, all the data in nutrient management (100% organic, 100% in-organic,& 50% organic -50% in-organic) described a uniform results and on variation were observed with the mean average of 48.18, 47.90 & 47.41 respectively.

Levels of megafol displayed no level of significance; all means have uniformed results. Further, treatments sprayed with 80ml/16lit. of water of megafol got the highest mean with 5.03.

No significant interaction was observed between nutrient management and levels of megafol as presented on appendix table 8a (ANOVA).

Percent insect damage

Percent insect damage of hybrid glutinous corn as influenced by nutrient management and levels of megafol is presented on Table 11.

Table 11. Percent insect damage and length of dehusked ear of hybrid glutinous corn as influenced by nutrient management and levels of megafol

Treatments	Yield Parameters	
	Percent insect damage	**Length of dehusked ear**
Main Plot (Nutrient Management):		
100% Organic	2.44	16.16
100% In-organic	4.11	17.00
50% Organic + 50% In-organic	2.75	17.86
F – test	ns	ns
Sub Plot (Levels of megafol):		
40ml/16 lit. of water	3.07	16.73
80ml/16 lit. of water	2.73	17.13
120ml/16 lit. of water	3.51	17.16
F – test	ns	ns

Means within the same column followed by common letter are not significantly different using Least Significant Different (LSD) test.

The statistical data on percent insect damage at table 11depicted that there were no significant difference on both nutrient management and levels of megafol.

Specifically all the data in nutrient management (100% organic, 100% In-organic, 50% organic-50% In-organic) described a uniform results and no significant variation were observed with the mean average of 2.44, 4.11, & 2.75 respectively.

No significant interaction was observed between nutrient management and levels of megafol as presented on appendix table 9a (ANOVA).

Length of Dehusked ear

Length of dehusked ear of hybrid glutinous corn as influenced by nutrient management and levels of megafol is reflected on table 11.

The result shows a non-significant on nutrient management and less or no significance on the levels of crop vaccine.

Data revealed that treatments applied with 50% organic – 50 in-organic fertilizers exhibited not significant and got the highest length of dehusked ear (17.86) and followed by 100% organic (17.00) and lastly the main plot applied with 100% organic fertilizers (16.16). The length of dehusked ear of the three treatments independently has a non-significant difference.

On the other hand, treatments applied with different levels of megafol did not differ significantly. It displayed uniform results of length of dehusked ear and did not exhibit a major difference.

There was no significant interaction effect on nutrient management and levels of megafol based on analysis of variance showed (Appendix Table 10a).

Weight per ear

Weight per ears of hybrid glutinous corn as influenced by nutrient management and levels of megafol is presented on Table 12.

Table 12. Weight per ears and Yield per hectare of hybrid glutinous corn as influenced by nutrient management and levels of megafol

Treatments	Yield Parameters	
	Weight per ear	**Yield per hectare (tons)**
Main Plot (Nutrient Management):		
100% Organic	175.94	5.91
100% In-organic	193.57	8.69
50% Organic + 50% In-organic	224.62	9.63
F – test	ns	ns
Sub Plot (Levels of megafol):		
40ml/16 lit. of water	187.95[b]	7.71
80ml/16 lit. of water	203.28[a]	7.95
120ml/16 lit. of water	202.90[b]	8.57
F – test	**	ns

Means within the same column followed by common letter are not significantly different using Least Significant Different (LSD) test.

The statistical data on weight per ear at table 12depicted that there were no significant difference on nutrient management and high levels of significance on the levels of megafol.

Specifically, all the data in nutrient management (100% organic,100% in-organic and 50% organic – 50% in-organic described a uniform results and no significant variation were observed with the mean average of 175.94, 193.57 & 224.62 respectively.

Moreover, figures in the levels of megafol exhibited a highlysignificant difference between treatments. Sub plot sprayed with 80ml/16liters of water of megafol showed a highest weight per ear with the average mean of 203.28 and followed by treatments sprayed with 120ml/16liters of water of megafol (202.90).Valagro brochure (2018)megafol applied at these levels proven effectiveapplied regularly provides a balanced plant growth development and promoting an improved yield. 40ml/16 lit. of water and 120ml/16 lit. Ofwater, treatments have almost the same results, there were no significant difference on both treatments.

No significant result was observed in the interaction of data between nutrient management and levels of megafol stated in appendix table 11a.

Yield per Hectare

Specifically, the table 12 on yield per hectare explained that there were no significant difference between 100% in-organic and 50% organic – 50% in-organic treatments with a total mean of 8.69 and 9.63 respectively. More so, the 100% organic treatment relatively lower as compared from the aforementioned treatments (100% in-organic and 50% organic – 50% in-organic) but did not reach to the level of significance. It implies that improve a plant's vigor, increase crop yields, and relieve plant stress (http://link.springer.com).

Levels of megafol (40ml/16 lit. of water,80ml/16 lit. of water & 120ml/16 lit. of water) displayed no level of significance; all means have uniformed results. Further, treatments sprayed with 120ml/ 16 lit. of water of megafolper hectare got the highest mean yield with 8.57 tons per hectare.

No significant interaction was observed between nutrient management and levels of megafol as presented on appendix table 12a (ANOVA).

IV. SUMMARY OF FINDINGS

The study aimed to determine the yield performance of Hybrid glutinous corn in response to nutrient management and levels of megafol. It was conducted at Canalum, Nangka, Bayawan City, Negros Oriental from January 2019 to JULY 2019.

Hybrid glutinous corn applied with different nutrient management differs significantly on both parameters employed. Treatments applied with 50% organic + 50% In-organic fertilizers gotthe significant effect on ear height.

Meanwhile, treatment with 100% organic fertilizer came in subsequently and obtained almost the same or uniform results with the aforementioned treatment.

Finally, treatment applied with 100% organic fertilizer acquired the lowest mean average and always acquired not significantly lesser compared from the above mentioned treatments.

Hybrid glutinous corn applied with different levels of megafol differed significantly. At 80ml/16 liters of water there was a highly significant effect on the weight per earcompared to 40ml/16 liters liter and 120ml/16 liters of water of megafol per hectare.

All parameters showed that no interaction effect was observed between nutrient management and levels of megafol to the yield performance of hybrid glutinous corn.

V. CONCLUSIONS

On the basis of the results gathered, the following conclusions were drawn.

1. Hybrid glutinous corn applied with(100% organic,100% in-organic and 50% organic – 50% in-organic 100% in-organic fertilizer have no significant difference among parameters. Treatment with 50% organic – 50% in-organic fertilizer got the highest and 100% in-organicsecond and lastly that consistently got the lower mean average between parameters was the 100% organic fertilizer.

2. Hybrid glutinous corn sprayed with 80ml/16 lit. of water of megafol per hectarediffered significantly increase weight per ear. Treatment applied with 120ml/16 lit. of water of megafol acquire more or less an average performance and finally the treatment sprayed with 40ml/16liters of water got the lowest mean of weight per ear.

3. All the parameters employed between nutrient management and levels of megafol have no significant interaction results.

VI. RECOMMENDATIONS

Based on the findings of the study, the researcher draws the following recommendations.

1. Further study should be done using hybrid glutinous corn varieties and another nutrient management that will probe its significant yield performance.

2. Hybrid glutinous corn sprayed with 80ml/16 liters of water of megafol per hectare got the highest in terms of weight per ear.

3. Further study should be done using other types of nutrient management and biostimulant that will explore its effectiveness on the yield parameters.

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