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Influence of integrated nutrient management on growth attributes and yield contributes of sweet corn (maize) in sweet corn (*Zea mays* L.) - potato (*Solanum tuberosum*) cropping sequence

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Abstract
An experiment entitled “Effect of integrated nutrient management in sweet corn-potato cropping sequence" was conducted during *kharif* and *rabi* season of 2014 to 2015 at Instructional Research Farm, Central Campus, Post Graduate Institute, Mahatma Phule Krishi Vidyapeeth, Rahuri. The experiment was laid out in a Randomized Block Design with three replications. The treatment consisted T_1 – 100% GRDF, T_2 - 75% RDN + 25% N through FYM, T_3 - 75% RDN + 25% N through VC, T_4 – 100% RDN + 25% N through FYM T_5 -100% RDN + 25% N through VC, T_6 – 125% RDN + 25% N through FYM and T_7 – 125% RDN + 25% N through VC for *kharif* sweet corn as a main plot treatment, whereas for *rabi* potato two sub plot treatment levels of GRDF viz., F_1 - 75 per cent GRDF and F_2 - 100 per cent GRDF replicated two times in split plot design resulting in seven treatment combinations replicated thrice during *kharif* season and fourteen treatment combinations during *rabi* season in RBD-split plot design replicated thrice. The experiment was conducted on same site without changing the randomization of the treatments for successive years.Among the INM treatments, The various fertilizer levels to preceding sweet corn crop significantly influenced T_7 - 125% RDN + 25% N through VC was found superior in growth attributes of sweet corn *viz.*, plant height, number of leaves plant^{-1}, leaf area and dry matter plant^{-1} at all crop growth stages of sweet corn during both the years of *kharif* season. The treatment T_7- 125% RDN + 25% N through VC recorded significantly higher values of all yield contributing characters of sweet corn *viz.*, length of cob with husk, girth of cob with husk, length of cob without husk, girth of cob without husk, weight of cob plant^{-1}, weight of cob without husk cob^{-1}, weight of husk,weight of grains cob^{-1}, number of grain lines cob^{-1}, number of grain lines^{-1}, number of grains cob^{-1}, weight of shelled cob during both the years of investigation. The maximum and significantly higher green cob yield, green fodder yield, biological yield and harvest index of sweet corn was observed in treatment T_7 – 125% RDN + 25% N through VC.

Keywords: cropping sequence, growth character, inm, sweet corn, yield attributes

Introduction
Maize has high genetic yield potential thanany other cereal crops. It has become one of the important food, fodder and industrial crops of the world and that’s why it is sometimes referred to as the miracle crop or the ‘Queen of Cereals.’ Being a C_4 plant, it is very efficient in converting solar energy in to dry matter. It is the world’s third leading cereal crop after wheat and rice. It accounts 8 per cent area and 25 per cent production of the world’s cereal. It occupies an important position in the world economy and trade as a food, feed and industrial grain crop. Sweet corn is an exhaustive crop and it is harvested at milky stage and requires fertile soils for optimum production. As the corn is considered as an exhaustive crop, requires more nutrient, organic nutrient management practices play an important role in sustaining productivity of sweet corn. Fertilizer is by and large the most important resource affecting the production and productivity of any cropping sequence. In the potato based cropping system intensive use of fertilizer, is practiced to enhance productivity and profitability. The imbalanced and indiscriminate use of chemical fertilizer in intensive cropping system has resulted in deterioration of soil health and decline in factor productivity (Kumar *et al.*, 2008) [7]. Continuous cropping of these crops without adequate restorative practices may pose threats to sustainability of system of high yielding varieties draw heavy amount of plant nutrients from soil and nutrient uptake often exceeds replenishment through fertilizers causing soil fertility deterioration in

many parts of India. Keeping this in view the present study wasundertaken with an objective to evaluate the performance of sweet maize under the combined use of organic and inorganic fertilizers.

Material and Methods

Field experiment was conductedduring the year of 2014-15 and 2015-16 at the Instructional Research Farm, Central Campus, Post Graduate Institute, M.P.K.V., Rahuri (M.S.) The sweet corn variety Sugar-75 was used as test crop. The soil of experimental site was clayey in texture with low in available nitrogen (241.35 kg ha^{-1}), medium in available phosphorous (22.85 kg ha^{-1}) and very high in potassium (365.75 kg ha^{-1}). The treatment consisted T_1 – 100% GRDF, T_2 - 75% RDN + 25% N through FYM, T_3 - 75% RDN + 25% N through VC, T_4 – 100% RDN + 25% N through FYM T_5 -100% RDN + 25% N through VC, T_6 – 125% RDN + 25% N through FYM and T_7 – 125% RDN + 25% N through VC for *kharif* sweet corn as a main plot treatment, whereas for *rabi* potato two sub plot treatment levels of GRDF viz., F_1 - 75 per cent GRDF and F_2 - 100 per cent GRDF replicated two times in split plot design resulting in seven treatment combinations replicated thrice during *kharif* season and fourteen treatment combinations during *rabi* season in RBD-split plot design replicated thrice. The experiment was laid out in Randomized Block Design, during *kharif* season the main plot treatments comprised of the gross recommended dose of fertilizers and three levels of FYM and vermin compost to sweet corn.

Results and Discussion

All the growth and yield attributing characters plant height, number of leaves $plant^{-1}$, leaf area $plant^{-1}$ and dry matter accumulation $plant^{-1}$ of sweet corn were studied periodically at 28, 42, 56, 70 DAS and at harvest whereas, days to 50% tasseling and silking were studied at observed in field condition stage respectively.

Plant height

Plant height is an important growth index to study the accumulation of dry matter by the plant and is very important to monitor the overall canopy architecture and also govern the orientation of the leaves that further govern the photosynthetic efficiency of a plant to utilize the natural resources. The data from Table 2 it could be seen that the mean plant height of sweet corn increased with the advancement of crop age during both the years of experimentation and reached to its maximum at harvest. The rate of increase was slow initially up to 28 DAS, very fast between 28 to 42 DAS, fast between 42 to 56 DAS and slow between 70 to at harvest. The differences in tallest plant height due to different levels of fertilizers to sweet corn were significant at all stages of crop growth during both the years of experimentation. Significantly maximum tallest plant height was recorded with application of treatmentT_7- 125% RDN + 25% N through VC than rest of the treatments and at par with treatment T_6 -125% RDN + 25% N through FYM. The lowest plant height was observed in treatment T_2 - 75% RDN +25% N through FYM, respectively. Significant effect on the increase on the plant height in sweet corn with the application of NPK may be attributed to the fact that nitrogen being an essential constituent of plant tissue favours rapid cell division and its enlargement, which together with the adequate quantity of phosphorus and potassium helps in the rapid cell division and better development of the cell size. This might be due to better vegetative growth of the crop under specific treatment. Application of organic manures and bio fertilizers might have improved soil physico-chemical and biological properties of the soil which helped in enhancing plant growth in terms of plant height. Further, the above treatment combination had a greater effect in enhancing the release of nutrients from the soil complex with the help of increased activities of beneficial microorganisms resulted in better utilization of nutrients by sweet corn crop for its normal metabolic activities. Moreover, vermicom post has narrow C:N ratio less than 20:1 than FYM about 30:1, which enhance release of nutrients availability than FYM to root. These, findings are in close agreement with findings of Verma *et al.*, (2006) [16] on INM in maize, Khadtare *et al.*, (2006) [5] on vermicompost in sweet corn, Zende, (2006) [17] on INM in sweet corn, Sahoo and Mahapatra, (2007) in sweet corn. Further, the beneficial effect of VC may be attributed to the fact that it supplied available plant nutrients and also had solubilizing effect on fixed forms of nutrients especially phosphorus in soil. These results are in the line of Kumar *et al.*, (2008) [7] and Keerthi *et al.*, (2013) [4]. This might be due to the fact that when urea is integrated with organic manure mineralization is faster and the process is faster in vermicompost than FYM which could be attributed to sufficient supply of nutrients for better plant growth.

Leaf area index

Leaf area index is of paramount importance in allthe crop plants, because optimum leaf area isrequired for maximum light interception which results for higher photosynthesis. Periodic leafarea index also increased significantly with application of treatment T_7 - 125% RDN + 25% N through VC over other treatment tested during two years of study. Besides application of VC and bio-fertilizer, apart from improving soil physico-chemical and biological properties of soil releases adequate quantities of nitrogen and phosphorus to boost up the growth of the crop there by number of functional leaves and increasing leaf area index. This might be due to sufficient moisture allows good crop growth attributes and APAR as well as photosynthesis rate reflected in production of higher functional leaves and leaf area $plant^{-1}$. These results are in the line of Narolia *et al.*, (2009) and Oktem *et al.*, (2010) [18]. Nitrogen is an essentialconstituent of proteins, enzymes and chlorophylland has been observed to influence the leafgrowth and its expansion, resulting in increased leaf area index. Availability of adequatephosphorus in plant results in proper leafexpansion, increase in leaf surface area and number of leaves and results in better efficiencyof chlorophyll during photosynthesis and this overall improvement gets trans located into better growth of the plant. Availability of adequatequantity of potassium is essential for the better crop growth and improves the source sink relationship that helps in harvesting higher cropyield. Potassium is a cofactor of numerousen zymes and basically helps in the translocation mechanism and it improves the mobility and utilization of other elements. Besides application of FYM and bio fertilizer, apart from improving soil physico-chemical and biological properties of soilreleases adequate quantities of nitrogen and phosphosrus to boost up the growth of the cropthereby increasing leaf area index. Moreover, leaf area index values were highest at 70 DAS, the period coinciding silking stage and there after declined up-to harvest. The decline in leaf area index after silking could be attributed to leafsenescence due to shading of lower leaves.

Dry matter accumulation

Dry matter accumulation is another importantcharacter to express the growth and metabolicefficiency of the plant, which ultimately influence the yield. Perusal of the data revealed that irrespective of treatments dry matter production went on increasing with the advancement in the age of crop up-to harvest and the magnitude ofincrease was more than double from 14 to 28 DAS and 28 to 42 DAS. At 14, 28, 42, 56 and 70DAS the dry matter production recorded undertreatment T_7 - 125% RDN + 25% N through VCwas significantly higher than other treatments but was at par with treatment T_6 - 125% RDN + 25% N through FYM at all stages of crop growth (Table 4)during two years of experimentation. The study also revealed that significantly lowest periodic dry matter was observed under T_2 - 75% RDN +25% N through FYM. Overall improvement in crop growth under the influence of vermicom post appears to be better due to nutritional availability in the crop root zone and plant system as vermicompost is known to improve the physical and biological properties of soil including supply of almost all the essential plant nutrients for growth and development of the plant. Prasanna kumar *et al.*, (2007) [10] found superiority of vermicompost over FYM with respect to crop growth and development on INM in maize. Vermicom post supplied major nutrients as well as micro-nutrients ensuring balanced plant nutrition. Besides, it improves physical, chemical and biological properties of the soil. This might be due to better synthesis of chlorophyll in leaves since VC contained appreciable quantities of magnesium apart from other nutrients, which might be helped in synthesis of chlorophyll. Khadtare *et al.*, (2006) [5] reported higher availability of nutrients to sweet corn plant from VC as compared to FYM due to VC has narrow C:N ratio. These results are similar to Verma *et al.*, (2006) [16] in maize, Arunkumar *et al.*, (2007) on NPK in sweet corn. Vermicompost would certainly have the soluble plant nutrients apart from some organic acids and mucus of earthworms and microbes which influence the growth attributes. These results are in agreement with findings of Bunkar *et al.*, (2013) [1], Kanu Murmu *et al.* (2013) [3], Kolari *et al.* (2014) [6] and Syami *et al.*, (2015). The enhanced growth with nitrogen was reported by Tetrawal *et al.*, (2011) [13].

Phenology traits

The present investigation indicated that application of T_7-125% RDN + 25% N through VC significantly increased the number of days taken to tasseling and silking than other treatments but remained at par with T_6 -125% RDN + 25% N through FYM during 2014 and 2015, however, significantly lowest number of days for the crop to reach these stages wasrecorded in T_2- 75% RDN + 25% N through FYM. These results are in accordance with the results obtained by Kolari *et al.* (2014) [6]. With the release and availability of sufficient nitrogen supply from the combined nutrition of inorganic and organic nature the advancement of the crop enhanced because of mere fact that nitrogen is a part of chlorophyll and is involved in cell division and elongation. The nitrogen is also known to delay the reproductive period of the crop which is evident from the present findings i.e. increased number of days to tasseling and silking. Delayed in mean number of days to 50% tasseling and 50% silking after sowing was observed by the treatment T_7-125% RDN + 25% N through VC while, the earliest mean number of days to 50% tasseling and 50% silking after sowing was observed by the treatment T_2- 75% RDN + 25% N through FYM. The possible reason seen was due to organic manures along with inorganic fertilizers and seed inoculated with biofertilizers which might have improved the physico-chemical and biological properties of the soil resulting in better availability of nutrients. While, the treatment T_2 exhibits, earliest 50% days to flowering these might be due to plant come in reproductive phase earlier as less nutrients availability at initial stage. There was conspicuous effect of different treatments on yield attributes of sweet corn. Superior vegetative growth due to integrated effect of inorganic fertilizers along with organic manures and seed inoculated with biofertilizers as realized in present investigation would obviously improved the yield attributes and there by green cob yield and fodder yield. Because of the growth characters were closely associated with yield attributes and also with green cob yield. The yield plant^{-1} depends mainly on the photosynthetic activity during silking and cob developing phases and canalization of the accumulated photosynthates during the vegetative phase to the sink.

Yield attributes

Data presented on yield attributes revealed thatdifferent treatments brought out significant variation in green cobs yield and green fodder yield. Perusal of the results of green cobs and fodder yield revealed that the treatment T_7 - 125% RDN + 25% N through VC recorded significantly the maximum green cob yield and green fodder yield higher over the rest of treatments, but it was at par with T_6 -125% RDN + 25% N through FYM in the pooled analysis. The pronounced effect of integrated nutrient management on green cobs yield reflects the increased in growth and yield attributes of sweet corn, resulted in higher green cobs yield and fodder yield. This might be due to all the growth and yield attributes as well as favorable physiological and microclimatic characteristics were found maximum in above reported fertilizer levels which was reflected in higher green cob yield and green fodder yield of sweet corn was very highly fertilizer responsive crop. This is due to adequate supply of photosynthates for development of sink and balanced nutrition with integrated N management improved individual plant performance. Further vermicompost application increased green cobs yield numerically over FYM application. These might be due to vermicompost which improved the soil fertility where all the appropriate nutrients are in readily available forms to the plants and have narrow C:N ratio (below 20:1) than FYM. These results are in accordance with the findings by Shambhavi and Sharma, (2008). They observed that vermicompost and FYM were applied at the same rate along with inorganic fertilizers; the yield was higher under vermicompost treatment than FYM in potato. Khadtare *et al.*, (2006) [5] also reported similar results on vermicompost in sweet corn. The higher yield observed with the application of vermicompost in comparison to FYM may be explained on the basis of higher nutrient content, faster decomposition and released nutrients in vermicompost besides enhancing the microbial population and higher root biomass (Kannan *et al.*, 2005). These findings are alike with those reported by Meena *et al.*,(2007), Sujatha *et al.*, (2008), Keerati *et al.*, (2013) [4] on INM in sweet corn, Zeinab *et al.*(2014) and Syahmi *et al.*, (2O15) [12] in sweet corn.

Similarly the treatment T_7 - 125% RDN + 25% N through VC has registered significantly the higher biological yield and harvest index than the over the rest of treatments but it was at par with T_6 -125% RDN + 25% N through FYM. The pronounced effect of integrated nutrient management on green cobs yield reflects the increased in growth and yield attributes of sweet corn, resulted in higher green cobs yield and fodder yield which ultimately noted the higher harvest index. Khadtare *et al.*, (2006) [5] also reported similar results on vermicompost in sweet corn, Zeinab *et al.* (2014) and Syahmi *et al.*,(2O15) [12] in sweet corn. Organic manures along with inorganic fertilizer and seed inoculated with azotobacter and phosphate-solubilizing bacteria had pronounced effect on green cob yield and green fodder yield. These might be due to fixation of atmospheric N and secretion of growth promoting substances of *Azotobacter* and increased bacterial efficiency by phosphobacteria combined together might have increased the growth and yield parameters as reported by Somani *et al.*, (2005) [11]. Similar effect was also observed by Thavanprakash *et al.*(2005) [14] in baby corn due to synergistic effect of INM, Thavaprakash and Velayudham, (2007) [15] in sweet corn and Nath *et al.*(2009).

Table 1: Details of the treatment and symbol used

Sr. No.	Treatment details	Symbol
A	**Main plot treatments (*Kharif*season sweet corn)**	
1	100% GRDF	T_1
2	75% RDN + 25% N through FYM	T_2
3	75% RDN + 25% N through vermicompost	T_3
4	100% RDN + 25% N through FYM	T_4
5	100% RDN + 25% N through vermicompost	T_5
6	125% RDN + 25% N through FYM	T_6
7	125% RDN + 25% N through vermicompost	T_7
GRDF (120:60:40 N, P_2O_5, K_2O kg ha^{-1} + 10 tonne)		
B	**Sub Plot Treatments (*Rabi* season potato)**	
1	75% GRDF (90 :45 : 30 kg N, P_2O_5, K_2O ha^{-1}+ 22.5 t ha^{-1})	F_1
2	100% GRDF (120:60:40 kg N, P_2O_5, K_2O ha^{-1}+ 30 t ha^{-1})	F_2

(A common seed treatment with *Azotobacter*+ PSB also given to all treatments at the time of sowing)

Table 2: Plant height of the sweet corn as influenced periodically by different treatments

Treatment		Plant height (cm)									
		2014					2015				
		28 DAS	42 DAS	56 DAS	70 DAS	At harvest	28 DAS	42 DAS	56 DAS	70 DAS	At harvest
Fertilizer Levels											
T_1 :	100% GRDF	31.55	95.72	163.58	169.22	176.48	32.18	96.06	165.53	171.92	180.64
T_2 :	75% RDN + 25% N through FYM	28.64	86.62	152.39	160.33	165.57	29.93	87.56	153.13	163.25	167.59
T_3 :	75% RDN + 25% N through VC	29.86	89.24	153.79	161.25	167.00	29.97	89.42	155.79	164.97	168.52
T_4 :	100% RDN + 25% N through FYM	30.99	91.77	154.85	164.22	169.63	31.24	91.87	156.95	165.45	171.37
T_5 :	100% RDN + 25% N through VC	31.22	92.26	156.95	166.45	171.53	31.55	92.59	157.75	166.31	172.42
T_6 :	125% RDN + 25% N through FYM	32.97	97.55	166.25	175.80	177.35	33.27	99.81	167.58	177.83	185.62
T_7 :	125% RDN + 25% N through VC	33.94	99.81	168.62	177.68	181.32	34.54	101.38	169.63	178.60	187.61
	S. Em. ±	0.34	1.01	1.33	0.64	1.33	0.35	0.84	0.69	0.64	1.34
	C. D. at 5%	1.01	3.03	3.97	1.92	3.99	1.05	2.50	2.06	1.92	4.03
	General mean	31.31	93.28	159.49	167.85	172.70	31.81	94.10	160.91	169.76	176.25

Table 3: Leaf area of sweet corn as influenced periodically by different treatments

Treatment		Leaf area(dm^2) $plant^{-1}$									
		2014					2015				
		28 DAS	42 DAS	56 DAS	70 DAS	At harvest	28 DAS	42 DAS	56 DAS	70 DAS	At harvest
Fertilizer Levels											
T_1 :	100% GRDF	6.45	16.72	30.94	36.08	33.22	6.71	18.15	32.50	40.52	36.52
T_2 :	75% RDN + 25% N through FYM	6.12	15.88	27.82	32.45	29.84	6.45	16.32	27.93	36.12	33.35
T_3 :	75% RDN + 25% N through VC	6.18	16.18	28.93	33.73	31.15	6.53	17.19	29.86	36.95	34.27
T_4 :	100% RDN + 25% N through FYM	6.27	16.38	30.62	34.76	32.06	6.63	17.29	31.75	40.02	36.29
T_5 :	100% RDN + 25% N through VC	6.28	16.53	30.72	35.91	33.04	6.69	17.79	32.29	40.23	36.32
T_6 :	125% RDN + 25% N through FYM	6.55	16.98	31.92	36.62	33.88	6.77	18.38	32.96	41.56	37.98
T_7 :	125% RDN + 25% N through VC	6.63	17.12	32.48	37.23	34.68	6.89	18.65	33.49	42.39	38.41
	S. Em. ±	0.04	0.06	0.45	0.38	0.31	0.04	0.12	0.31	0.61	0.50
	C. D. at 5%	0.11	0.19	1.35	1.12	0.93	0.13	0.36	0.95	1.81	1.48
	General mean	6.35	16.54	30.49	35.25	32.55	6.67	17.68	31.54	39.68	36.16

Table 4: Total dry matter accumulation of sweet corn as influenced periodically by different treatments

Treatment		Total dry matter (g) $plant^{-1}$									
		2014					2015				
		28 DAS	42 DAS	56 DAS	70 DAS	At harvest	28 DAS	42 DAS	56 DAS	70 DAS	At harvest
Fertilizer Levels											
T_1 :	100% GRDF	24.91	97.89	178.09	282.40	312.09	26.99	101.66	184.03	294.65	321.21
T_2 :	75% RDN + 25% N through FYM	24.05	93.95	175.71	270.31	287.43	24.31	95.65	178.97	281.63	290.55
T_3 :	75% RDN + 25% N through VC	24.28	95.75	176.78	274.39	296.93	25.53	98.52	179.85	283.48	305.29
T_4 :	100% RDN + 25% N through FYM	24.41	96.24	177.35	277.35	299.13	25.75	98.75	183.04	289.96	314.11

T_5 :	100% RDN + 25% N through VC	24.61	97.15	177.78	279.16	302.67	25.93	99.91	183.64	292.26	317.91
T_6 :	125% RDN + 25% N through FYM	25.76	99.79	181.54	294.35	315.91	27.65	101.66	184.98	301.69	331.63
T_7 :	125% RDN + 25% N through VC	25.98	101.71	183.91	295.30	318.99	28.31	103.75	186.14	305.57	341.77
	S. Em. ±	0.15	0.69	0.80	0.82	1.07	0.26	0.87	0.71	1.35	3.40
	C. D. at 5%	0.45	2.09	2.37	2.46	3.18	0.77	2.62	2.08	3.93	10.20
	General mean	24.86	97.50	178.74	281.89	304.74	26.35	99.99	182.95	292.75	317.50

Table 5: Number of days to 50% tasseling and 50% silking influenced by different treatments

Treatment		Number of days to 50% Tasseling		Number of days to 50% silking	
		2014	2015	2014	2015
Fertilizer Levels					
T_1 :	100% GRDF	50	47	54	52
T_2 :	75% RDN + 25% N through FYM	46	45	50	50
T_3 :	75% RDN + 25% N through VC	47	46	51	50
T_4 :	100% RDN + 25% N through FYM	47	46	52	51
T_5 :	100% RDN + 25% N through VC	49	46	53	51
T_6 :	125% RDN + 25% N through FYM	51	47	56	53
T_7 :	125% RDN + 25% N through VC	52	48	56	55
	S. Em. ±	0.22	0.27	0.33	0.46
	C. D. at 5%	0.65	0.81	0.98	1.38
	General mean	49	47	53	52

Table 6: Green cob and fodder yield of sweet corn during both years on pooled mean as influenced periodically by different treatments

Treatment		Green cob yield (q ha^{-1})		Pooled mean (q ha^{-1})	Green fodder yield (q ha^{-1})		Pooled mean (q ha^{-1})
		2014	2015		2014	2015	
Fertilizer Levels							
T_1 :	100% GRDF	265.25	271.99	268.62	527.85	540.80	534.33
T_2 :	75% RDN + 25% N through FYM	249.75	256.25	253.00	509.49	520.66	515.08
T_3 :	75% RDN + 25% N through VC	255.35	262.09	258.72	518.36	531.26	524.81
T_4 :	100% RDN + 25% N through FYM	258.45	264.84	261.65	522.07	534.76	528.42
T_5 :	100% RDN + 25% N through VC	260.74	267.04	263.89	524.09	536.58	530.34
T_6 :	125% RDN + 25% N through FYM	271.94	277.49	274.72	538.44	546.82	542.63
T_7 :	125% RDN + 25% N through VC	275.55	281.55	278.55	542.83	554.19	548.51
	S. Em. ±	2.69	2.75	2.73	3.26	3.51	2.30
	C. D. at 5%	7.98	8.25	8.20	9.80	10.55	6.90
	General mean	262.43	268.75	265.59	526.16	537.87	532.01

Table 7: Biological yield and harvest index of sweet corn as influenced by different treatments

Treatment		Biological yield (q ha^{-1})		Harvest index (%)	
		2014	2015	2014	2015
Fertilizer Levels					
T_1 :	100% GRDF	793.10	812.79	33.44	33.46
T_2 :	75% RDN + 25% N through FYM	759.24	776.91	32.89	32.98
T_3 :	75% RDN + 25% N through VC	773.71	793.35	33.00	33.04
T_4 :	100% RDN + 25% N through FYM	780.52	799.60	33.11	33.12
T_5 :	100% RDN + 25% N through VC	784.83	803.62	33.22	33.23
T_6 :	125% RDN + 25% N through FYM	810.38	824.31	33.56	33.66
T_7 :	125% RDN + 25% N through VC	818.38	835.74	33.67	33.69
	S. Em. ±	5.52	5.65	0.05	0.06
	C. D. at 5%	16.56	16.93	0.16	0.19
	General mean	788.59	806.29	33.27	33.33

Conclusion

From the two year investigations the data revealed that application of T_7 being at par with T_6 proved significantly superior in terms of cob yield, fodder yield and growthparameters. In view of this, it may be concluded that for obtaining maximum cob and fodder yieldin sweet corn, it needs to be fertilized with T_7.

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