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Effect of nitrogen levels, row ratio and row direction on growth, yield and economics of baby corn (*Zea mays* L.) intercropped in pigeon pea (*Cajanus cajan* L.)

Pradeep Prasad and Rajesh Singh

Abstract
A field experiment was conducted at Crop Research Farm, Department of Agronomy, SHUATS, Allahabad, (Uttar Pradesh) during *kharif* season of 2015 and 2016 to study "Effect of nitrogen levels, row ratio and row direction on growth, yield and economics of baby corn (*Zea mays* L.) Intercropped with pigeon pea (*Cajanus cajan* L.). The experiment was laid out in Randomised Block Design with 18 treatments and three controls *viz.* sole pigeon pea, pigeon pea in paired row and sole baby corn each replicated thrice. The pooled results of two year experiment at 60 DAS revealed that treatment T_7 (75% RDN to pigeon pea +100% RDN to baby corn in 1:1 row ratio +East-West row direction) gave maximum values for plant height (157.0cm), dry weight (71.38 g/plant), stem diameter (2.41cm), number of cobs /plant (2.67), length of cobs with husk (16.63cm), length of cobs without husk (8.65cm), weight of cob with husk (25.87 g) and weight of cobs without husk (8.87 g) followed by treatment T_5 (100% RDN to both crops in 1;1 row ratio +East-West row direction) which was found to be at par to treatment T_7 in all attributes mentioned above. However, baby corn yield and green fodder yield was recorded maximum in treatment T_{16} (Pigeon pea +baby corn in 2:2 row ratio +75% RDN to pigeon pea +100% RDN to baby corn +East-West row direction) as 1.27 t/ha and 22.18 t /ha respectively and followed by treatment T_{14} (pigeon pea +baby corn in 2:2 row ratio +100% RDN to both the crops +East-West row direction) which was found to be at par to treatment T_{16}. With respect to economics of baby corn production, maximum gross return, net return and BC ratio were computed in treatment T_{16} which registered values as ₹135960.00, ₹108150.00 and 3.88 respectively.

Keywords: Baby corn, row ratio, row direction, paired row, economics, net return, nitrogen levels

Introduction
For diversification, value addition of maize and development of food processing industries, recent practice is growing of maize (*Zea mays* L.) for vegetable purpose known as Baby corn (Lone *et al.* 2013) [6]. Baby corn is a young cob ear harvested at the stage of silk emergence, light yellow in colour with regular row arrangement, 10 to 12cm long and having a diameter of 1.0 to 1.5cm are preferred in the market (Golada *et al.* 2013) [1]. All the corn species can be used as baby corn if harvested young especially at silk emergence and no fertilization has taken place as the tassels are removed as soon as they emerge. Nowadays, some specified baby corn varieties have been developed *viz*. Golden baby, VL Baby corn-1, HM-4 etc. The tender cobs are consumed as a natural food. It is very tasty and easy to eat because of its tenderness, sweetness and having high nutritive value. In India, baby corn production for salads, vegetable, pickles and many other dishes is growing day by day in 'seven sisters' state of North-Eastern region, Maharashtra, Andra Pradesh, Haryana and Western Uttar Pradesh (Kheibari *et al.* 2012) [2]. The economic potential and marketing aspects of canning baby corn as a small scale food processing venture can be explored. Canning and pickle industries of baby corn offer immense export potential which may bring foreign exchange to farmers of our country. Cultivation of baby corn can also be helpful in generating employment for rural youths and school dropouts as 3-4 crops of baby corn can be raised in a year. After the harvest of baby, the economic potential is also enhanced as it supplies green, soft succulent, nutritious and palatable fodder with high digestibility for our cattle. Baby corn has been recognised as a heavy nitrogen feeder as it requires 150kg N ha^{-1} which is much more than any other cereal crop. The information on nitrogen row ratios and row direction on growth, yield and economics of baby corn is meagre. Hence, an experiment was carried out entitled "Effect of row ratio, row direction and nitrogen levels in intercropping of pigeon pea (*Cajanus cajan* L.) +baby corn (*Zea mays* L.)

Materials and Methods

An experiment was conducted during *Kharif* season of 2015 and 2016 at Crop Research Farm, Department of Agronomy, SHUATS, Allahabad (U.P.) which is located between 25º 24' N latitude, 81º 50' E Longitude and at an altitude of 98m above the mean sea level. The soil of the experimental field was sandy loam in texture medium in organic carbon (0.60%), low in available nitrogen (145.1kg ha^{-1}, medium in available phosphorus (29kg ha^{-1}) and high (160kg ha^{-1}) in available potassium. The pH of the soil was 6.5. The maximum temperature ranged between 40 ºC and 44 ºC while minimum temperature ranged between 3 to 4 ºC during 2015 and 2016 respectively. The experiment was laid out in Randomized Block Design (RBD) with 21treatments each replicated thrice. The treatments comprised of three nitrogen levels *viz*. F_1-100% RDN to both crops, F_2-100% RDN to pigeon pea +75% RDN to baby corn, F_3-75% RDN to pigeon pea +100% RDN to baby corn. The two row ratios *viz.* C_1-1:1 and C_2-2:2 and three row direction *viz.* D_1-North-South, D_2- East-West and D_3- control. Three sole crop stands *viz*. S_1-Sole pigeon pea, S_2- Pigeon pea (PR) and S_3-Sole baby corn were also taken comparison. Full dose of phosphorus and potassium was applied to pigeon pea crop while half dose of nitrogen and full dose of phosphorus and potassium was applied as basal to baby corn crop. Rest half dose of nitrogen to baby corn was given at knee height stage as band placement. The date of sowing in both the years was 30th June. All other cultural practices were similar in each treatment.

Results and Discussion

The findings of experiment entitled "Effect of Nitrogen, row ratio and row direction on growth, yield and nutrient use efficiency of baby corn (*Zea mays* L.) Intercropped in pigeon pea (*Cajanus cajan* L.)" was conducted during *kharif* season of 2015 and 2016 at Crop Research Farm, Department of Agronomy, SHUATS, and Allahabad. In this research paper, the pooled data for effect of nitrogen, row ratio and row direction on growth and yield of baby corn has been discussed and data pertaining to various criteria used for treatment evaluation are analysed statistically to test their significance.

Growth Parameters of baby corn

The pooled data on plant height of baby corn plants at 60 DAS after sowing have been presented in Table 1. A perusal of the pooled data reveals that plant height differed significantly among treatment combinations. Highest plant height (157.0cm) at 60 DAS was recorded in treatment T_7 (Pigeon pea +Baby corn (1:1) +75% RDN to Pigeon pea +100% RDN to Baby corn +E-W row direction) followed by treatment T_5 (Pigeon pea +baby corn (1:1) +100% RDN to both crops +E-W row direction) which recorded plant height as 155.53cm and was found to be at par to treatment T_7. The probable reason for recording maximum plant height may be due to more space between the plants and which led to maximum utilization of moisture, nutrients, space and solar radiation in E-W row direction. The other reason may also be due to beneficial effect of pigeon pea (legume crop) which fixes atmospheric nitrogen through its nodules led to more availability of nitrogen and also due to slow growth of pigeon pea up to 60 DAS. These findings are in conformity with those reported by Koul, G. G. **(**2011) [3].

An appraisal of Table 1 clearly reveals that maximum dry weight of baby corn plant was significantly influenced by row ratio, nitrogen levels and East-West orientation. Maximum dry weight (71.38g/plant) at 60 DAS was recorded in treatment T_7 followed by treatment T $_5$ which recorded dry weight of 70.97 g per plant at 60 DAS and was found to be statistically at par to dry weight recorded under treatment T_7.This may be due to greater exposure to light under E-W direction of sowing led to better photosynthetic activity and increased availability of nutrients to plant which provided more vigour to plants in becoming healthier which in turn resulted in higher dry weight of plant. The other reason may be due to wider spacing, lesser weed competition and increased availability of moisture and nutrients to plants resulted in higher growth attributes and physiological characters. These findings are in close conformity to those reported by Kumar (2009), Kheibari *et al.*, (2012) [2]

A perusal of Table 1 clearly reveals that stem diameter at 60 DAS differed significantly among the treatment combinations. The maximum stem diameter (2.41cm) was recorded in treatment T_7 followed by treatment T_5 which recorded stem diameter as 2.40cm at 60 DAS and was found to be at par to treatment T_7. The probable reason for recording maximum stem diameter may be due to wider spacing (1:1), better availability of nutrients, moisture and space and solar radiation right from sun rise to sun set because of East- West orientation. Crop row orientation at near right angle to sun direction may suppress weed growth by creating a partial shade on weeds (Pathan *et al.*, (2006) [8]. However, baby corn sown in 2:2 paired row exhibited lower values of stem diameter which may be attributed to closer spacing leading to higher competition for moisture, nutrients and light. Similar findings were also reported by Thavaprakaash and Velayudham (2009) [13].

A critical review of Table 2 reveals that number of cobs per plant was significantly influenced by row ratio, nitrogen levels and East-West orientation among the treatment combinations. The maximum number of cobs/plant (2.67) at harvesting was recorded in treatment T_7 followed by treatment T_5 which recorded 2.60 number of cobs/plant. The probable reason may be due to less competition for nutrients, moisture, space and better growth attributes during the vegetative phase of the baby corn plant. The other reason may be because of wider spacing, greater exposure to light leading to better photosynthetic activity and increased availability of nutrients to plants resulted in higher growth attributes and physiological characters. These findings are in conformity to those reported by Kumar (2009) [4] and Golada *et al.*, (2013) [1].

An appraisal of Table 2 reveals that length of cobs with husk and without husk was significantly influenced by row ratio, nitrogen levels and East-West orientation among the treatment combinations. The maximum length of baby corn cob with husk (16.63cm) and without husk (8.65cm) was recorded in treatment T_7 followed by treatment T_5 which recorded 16.37cm and 8.51cm length of cob with husk and without husk respectively. This may be due to higher indices of growth and yield attributes *viz.* leaves number/plant, leaf length, plant dry weight, CGR and higher number of cobs /plant which helped in maximum photosynthesis due to better availability of nitrogen and hence maximum length of cobs with and without husk. These results are in conformity with the findings of Golada *et al.*, (2013) [1].

A critical review of Table 3 reveals that weight of cob with and without husk also was significantly influenced by row ratio, nitrogen levels and East-West orientation among the treatment combinations. The maximum weight of cob with husk (25.87g) and without husk (8.87g) was recorded in treatment T_7 followed by treatment T_5 which recorded weight of cob with and without husk as 25.67g and 8.81g respectively and was also found to be at par to that recorded under treatment T_7. The probable reason may be due to higher indices of growth, dry matter accumulation and other yield attributes which helped the baby corn plant in maximum photosynthesis which in turn led to better translocation of photosynthates to reproductive parts coupled by maximum availability of nutrients, moisture, space and light in E-W orientation in 1:1 row ratio. These findings are in accordance with the findings of Lone *et al.,* (2013) [6] and Golada *et al.,* (2013) [1].

A perusal of Table 3 shows that yield of baby corn was significantly influenced by row ratio, nitrogen levels and East- West orientation among the treatment combinations. The maximum baby corn cob yield (1.46 t/ha) was recorded in treatment T_{16} (Pigeon pea +baby corn (2:2) +75% RDN to pigeon pea +100% RDN to baby corn +East-West row direction) followed by treatment T_{14} (Pigeon pea +baby corn (2:2) 100% RDN to both the crops +East-West row direction) which recorded cob yield as 1.38 t/ha and was found to be at par to treatment T_{16}. The probable reason for recording maximum cob yield is because of more number of baby corn plants /m^2 due to paired row method of crop establishment. The other reason may also be due to better light respectability in E-W row direction and slow growth of pigeon pea providing baby corn plants to attain higher growth and yield attributes. Observed marked increase in baby corn yield appear to be a resultant of remarkable improvement in different yield attributes which was brought about due to adoption of paired row spacing and plant population per unit area. Higher green cob yield with application of higher nitrogen could be ascribed to its profound influence on vegetative and reproduction growth of the crop (Prodhan *et al.,* (2007) [9]. These findings are in accordance with the findings of Raja (2001) [10] and Olujobi *et al.,* (2013) [7].

Similarly, Table-3 also reveals that green fodder yield was significantly influenced by row ratio, nitrogen levels, East-West orientation among treatment combination. The maximum green fodder yield (24.18 t/ha) was recorded in treatment T_{16} (Pigeon pea +baby corn (2:2) +75% RDN to pigeon pea +100% RDN to baby corn +East-West row direction) followed by treatment T_{14} (Pigeon pea +baby corn (2:2) 100% RDN to both the crops +East-West row direction) which recorded green fodder yield to a tune of 24.00 t/ha and was found to be at par to treatment T_{16}. Baby corn being a short duration crop due to harvesting (picking) of just emerged cobs give fresh green fodder which are very useful for milch cattle. The probable reason for recording higher green fodder yield is because of more number of baby corn plants/m^2 due to paired row method of crop establishment. The other reason may also be due to better light respectability in E-W row direction resulted in better metabolism in plants due to availability of nitrogen in appropriate quantity which in turn led to better growth and yield attributes. The other cause may be that slow growth of pigeon pea provided better chance to baby corn plants to attain higher growth and yield attributes. Similar findings have also been reported by Sahu *et al.,* (2003) [11] and Sharifi and Taghizadeh, (2009) [12].

Table 1: Effect of row ratio, row direction and nitrogen levels on plant height, dry weight and stem diameter of baby corn (*Zea mays* L.)

Treatment Details	Plant height (cm)	Dry weight (g)	Stem diameter (cm)
S_o-Sole baby corn	156.13	73.65	2.49
T_2-Pigeon pea +baby corn (1:1) +100% RDN to both crop +N-S row direction	153.80	70.67	2.26
T_3-Pigeon pea +baby corn (1:1) +100% RDN to pigeon pea +75% RDN to baby corn +N-S row direction	151.93	69.77	2.13
T_4-Pigeon pea +baby corn (1:1) +75% RDN to pigeon pea +100% RDN to baby corn +N-S row direction	155.37	70.93	2.26
T_5-Pigeon pea +baby corn (1:1) +100% RDN to both crop +E-W row direction	155.30	70.97	2.40
T_6-Pigeon pea +baby corn (1:1) +100% RDN to pigeon pea +75% RDN to baby corn +E-W row direction	155.53	70.68	2.27
T_7-Pigeon pea +baby corn (1:1) +75% RDN to pigeon pea +100% RDN to baby corn +E-W row direction	157.0	71.38	2.41
T_8-Pigeon pea +baby corn (1:1) +100% RDN to pigeon pea and baby corn +conventional direction	153.07	66.23	2.25
T_9-Pigeon pea +baby corn (1:1) +100% RDN to pigeon pea +75% RDN to baby corn +conventional direction	151.53	65.82	2.13
T_{10}-Pigeon pea +baby corn (1:1) +75% RDN to pigeon pea +100% RDN to baby corn +conventional direction	154.27	66.95	2.26
T_{11}-Pigeon pea +baby corn (2:2) +100% RDN to both crop +N-S row direction	151.53	64.03	2.12
T_{12}-Pigeon pea +baby corn (2:2) +100% RDN to pigeon pea +75% RDN to baby corn +N-S row direction	149.93	63.75	2.11
T_{13}-Pigeon pea +baby corn (2:2) +75% RDN to pigeon pea +100% RDN to baby corn +N-S row direction	153.63	64.44	2.15
T_{14}-Pigeon pea +baby corn (2:2) +100% RDN to both crop +E-W row direction	153.27	64.35	2.25
T_{15}-Pigeon pea +baby corn (2:2) +100% RDN to pigeon pea +75% RDN to baby corn +E-W row direction	151.23	63.98	2.23
T_{16}-Pigeon pea +baby corn (2:2) +75% RDN to pigeon pea +100% RDN to baby corn +E-W row direction	154.40	64.84	2.28
T_{17}-Pigeon pea +baby corn (2:2) +100% RDN to both crop +conventional direction	151.90	62.38	2.11
T_{18}-Pigeon pea +baby corn (2:2) +100% RDN to pigeon pea +75% RDN to baby corn +conventional direction	150.33	62.01	2.06
T_{19}-Pigeon pea +baby corn (2:2) +75% RDN to pigeon pea +100% RDN to baby corn +conventional direction	153.27	62.95	2.13
F-test	S	S	S
S. Ed. (±)	0.72	0.48	0.04
C. D. at 5%	1.47	0.97	0.09

Table 2: Effect of row ratio, row direction and nitrogen levels on No. of cobs/plant, length of cob with husk and length of cob without husk of baby corn (*Zea mays* L.)

Treatment Details	No. of cobs/plant (No.)	Length of cob with husk (cm)	Length of cob without husk (cm)
T_1-Sole baby corn	2.87	16.90	8.55
T_2-Pigeon pea +baby corn (1:1) +100% RDN to both crop +N-S row direction	2.40	16.00	8.35
T_3-Pigeon pea +baby corn (1:1) +100% RDN to pigeon pea +75% RDN to baby corn +N-S row direction	2.07	15.50	8.15
T_4-Pigeon pea +baby corn (1:1) +75% RDN to pigeon pea +100% RDN to baby corn +N-S row direction	2.47	16.17	8.49
T_5-Pigeon pea +baby corn (1:1) +100% RDN to both crop +E-W row direction	2.60	16.37	8.51
T_6-Pigeon pea +baby corn (1:1) +100% RDN to pigeon pea +75% RDN to baby corn +E-W row direction	2.27	15.93	8.31
T_7-Pigeon pea +baby corn (1:1) +75% RDN to pigeon pea +100% RDN to baby corn +E-W row direction	2.67	16.63	8.65
T_8-Pigeon pea +baby corn (1:1) +100% RDN to pigeon pea and baby corn +conventional direction	2.13	15.93	8.34
T_9-Pigeon pea +baby corn (1:1) +100% RDN to pigeon pea +75% RDN to baby corn +conventional direction	1.87	15.57	8.05
T_{10}-Pigeon pea +baby corn (1:1) +75% RDN to pigeon pea +100% RDN to baby corn +conventional direction	2.13	15.97	8.20
T_{11}-Pigeon pea +baby corn (2:2) +100% RDN to both crop +N-S row direction	2.0	15.47	8.13
T_{12}-Pigeon pea +baby corn (2:2) +100% RDN to pigeon pea +75% RDN to baby corn +N-S row direction	1.73	15.07	7.95
T_{13}-Pigeon pea +baby corn (2:2) +75% RDN to pigeon pea +100% RDN to baby corn +N-S row direction	2.07	15.63	8.23
T_{14}-Pigeon pea +baby corn (2:2) +100% RDN to both crop +E-W row direction	2.20	15.97	8.30
T_{15}-Pigeon pea +baby corn (2:2) +100% RDN to pigeon pea +75% RDN to baby corn +E-W row direction	2.0	15.67	8.03
T_{16}-Pigeon pea +baby corn (2:2) +75% RDN to pigeon pea +100% RDN to baby corn +E-W row direction	2.20	16.10	8.45
T_{17}-Pigeon pea +baby corn (2:2) +100% RDN to both crop +conventional direction	1.80	15.40	8.31
T_{18}-Pigeon pea +baby corn (2:2) +100% RDN to pigeon pea +75% RDN to baby corn +conventional direction	1.53	16.07	7.97
T_{19}-Pigeon pea +baby corn (2:2) +75% RDN to pigeon pea +100% RDN to baby corn +conventional direction	1.93	15.53	8.35
F-test	S	S	S
S. Ed. (±)	0.07	0.32	0.1
C. D. at 5%	0.95	0.04	0.21

Table 3: Effect of row ratio, row direction and nitrogen levels on weight of cob with husk (g), weight of cob without husk, yield of cobs and green fodder yield of baby corn (*Zea mays* L.)

Treatment Details	Weight of cob with husk (g)	Weight of cob without husk (g)	Yield of baby cobs (t ha^{-1})	Green fodder yield (t ha^{-1})
T_1-Sole baby corn	26.21	9.16	1.48	30.10
T_2-Pigeon pea +baby corn (1:1) +100% RDN to both crop +N-S row direction	25.58	8.72	1.16	22.60
T_3-Pigeon pea +baby corn (1:1) +100% RDN to pigeon pea +75% RDN to baby corn +N-S row direction	25.37	8.37	1.07	22.52
T_4-Pigeon pea +baby corn (1:1) +75% RDN to pigeon pea +100% RDN to baby corn +N-S row direction	25.65	8.76	1.17	22.67
T_5-Pigeon pea +baby corn (1:1) +100% RDN to both crop +E-W row direction	25.67	8.81	1.18	23.83
T_6-Pigeon pea +baby corn (1:1) +100% RDN to pigeon pea +75% RDN to baby corn +E-W row direction	25.45	8.59	1.16	23.34
T_7-Pigeon pea +baby corn (1:1) +75% RDN to pigeon pea +100% RDN to baby corn +E-W row direction	25.87	8.87	1.21	24.05
T_8-Pigeon pea +baby corn (1:1) +100% RDN to pigeon pea and baby corn +conventional direction	25.32	8.13	1.07	21.95
T_9-Pigeon pea +baby corn (1:1) +100% RDN to pigeon pea +75% RDN to baby corn +conventional direction	24.99	8.03	1.04	21.80
T_{10}-Pigeon pea +baby corn (1:1) +75% RDN to pigeon pea +100% RDN to baby corn +conventional direction	25.47	8.30	1.09	22.00
T_{11}-Pigeon pea +baby corn (2:2) +100% RDN to both crop +N-S row direction	24.75	8.23	1.20	23.33
T_{12}-Pigeon pea +baby corn (2:2) +100% RDN to pigeon pea +75% RDN to baby corn +N-S row direction	24.40	8.02	1.19	23.16
T_{13}-Pigeon pea +baby corn (2:2) +75% RDN to pigeon pea +100% RDN to baby corn +N-S row direction	24.87	8.33	1.22	23.51

T_{14}-Pigeon pea +baby corn (2:2) +100% RDN to both crop +E-W row direction	25.06	8.61	1.38	24.00
T_{15}-Pigeon pea +baby corn (2:2) +100% RDN to pigeon pea +75% RDN to baby corn +E-W row direction	24.83	8.30	1.23	23.67
T_{16}-Pigeon pea +baby corn (2:2) +75% RDN to pigeon pea +100% RDN to baby corn +E-W row direction	25.32	8.63	1.46	24.18
T_{17}-Pigeon pea +baby corn (2:2) +100% RDN to both crop +conventional direction	25.00	8.07	1.13	22.83
T_{18}-Pigeon pea +baby corn (2:2) +100% RDN to pigeon pea +75% RDN to baby corn +conventional direction	24.53	7.95	1.11	22.67
T_{19}-Pigeon pea +baby corn (2:2) +75% RDN to pigeon pea +100% RDN to baby corn +conventional direction	25.15	8.24	1.18	23.02
F-test	S	S	S	S
S. Ed. (±)	0.12	0.06	0.02	0.26
C. D. at 5%	0.25	0.13	0.05	0.53

Economics of baby corn production

A perusal of Table 4 reveals that maximum gross return, net return and B:C ratio was computed in treatment T_{16} (Pigeon pea +baby corn (2:2) +75% RDN to pigeon pea +100% RDN to baby corn +East-West row direction) which registered values as ₹135960.00, ₹ 108150.00 and 3.88 respectively.

Table 4: Economics of baby corn production

Treatments combination	Cost of cultivation (₹)	Yield (t/ha)		Sale (₹)		Gross return (₹ /ha)	Net return (₹ /ha)	B:C Ratio
		Baby corn cob	Green fodder	Baby corn cob	Green fodder			
T_1	27650	1.48	30.10	88800	60200	149000	121350	4.38
T_2	27610	1.16	22.60	69600	45200	114800	87190	3.15
T_3	27350	1.07	22.52	64200	45040	109240	81890	2.99
T_4	27610	1.17	22.67	70200	45340	115540	87930	3.18
T_5	27610	1.18	23.83	70800	47660	118460	90850	3.29
T_6	27350	1.16	23.34	69600	46680	116280	88930	3.25
T_7	27610	1.21	24.05	72600	48100	120700	93090	3.37
T_8	27610	1.07	21.95	64200	43900	108100	80490	2.91
T_9	27350	1.04	21.80	62400	43600	106000	78650	2.87
T_{10}	27610	1.09	22.00	65400	44000	109400	81790	2.96
T_{11}	27850	1.20	23.30	72000	46600	118600	90750	3.25
T_{12}	27700	1.19	23.10	71400	46200	117600	89900	3.24
T_{13}	27810	1.22	23.51	73200	47020	120220	92410	3.32
T_{14}	27850	1.38	24.00	82800	48000	130800	102950	3.69
T_{15}	27700	1.23	23.67	73800	47340	121140	93440	3.37
T_{16}	27810	1.46	24.18	87600	48360	135960	108150	3.88
T_{17}	27850	1.13	22.83	67800	45660	113460	85610	3.07
T_{18}	27700	1.11	22.67	66600	45340	111940	84240	3.04
T_{19}	27850	1.18	23.02	70800	46040	116840	88990	3.19

Baby corn sold at ₹ 60000/t
Green fodder sold at ₹ 2000/t

Conclusion

Baby corn cultivation under optimum nutrient input condition can give a positive impetus to the baby corn cultivation which in turn shall be very fruitful in encouraging the livelihood security of poor farming community. Further, the short life cycle also enhances the chances of improving the land use pattern of farmers. It can be concluded that paired row spacing +100% RDN to baby corn in East-West direction is the most suitable intercropping system for maximum productivity leading to maximum net return and BC ratio for farmers of this region.

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