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Influence of planting time and mulching on yield and quality of direct sown muskmelon (*Cucumis melo* L.*)* under low tunnel

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Abstract

An investigation was undertaken to study the impact of date of sowing and mulching under low tunnel conditions on the growth, yield and quality of direct sown muskmelon during 2019-20 and 2020-21 at Vegetable Research Farm and Biochemical Laboratory of Punjab Agricultural University, Ludhiana. Treatments were comprised of four dates of sowing (15th November, 15th December, 15th January under low tunnels and 15th February in open conditions) and two mulch treatments (black polythene mulch and non-mulch). Muskmelon hybrid, MH-27 planted on 15th November gave higher number of fruits (4.0), highest total yield (216.6 q/ha), ascorbic acid (22 mg/100g) and dry matter (8.6 %). 15th January planting gave highest vine length (186.8 cm), maximum fruit diameter (17.6 cm), maximum fruit weight (830.3 g) and TSS (12 °Brix). Mulched plants exhibited better growth, yield and quality when compared with non-mulch plants. It is concluded that muskmelon sown under low tunnel on 15th November with black polythene mulch offers higher yield and maximum net returns and B: C ratio.

Keywords: Date of sowing, Direct sowing, Low tunnel, Mulching, Muskmelon.

Introduction

Muskmelon (*Cucumis melo* L.) commonly called kharbooja in Hindi belongs to the family *cucurbitaceae*. It is an important cucurbit with high nutritional value which is highly relished for its sweet taste, flavor and refreshing effect. It is cultivated in both sub-tropical and tropical regions of the world. Since muskmelons are preferred worldwide, it may prove to be a long-term guarantee for profitable agriculture (Rodriguez et al. 2006). Muskmelon has a superior consumer preference because of the fact that it is rich in dietary fibre, folic acid, ascorbic acid, carotene, and potassium along with human health bio-active compounds (Lester and Hodges 2008). *Cucumis melo* is proven to possess medicinal properties such as anti-inflammatory, analgesic, anti-oxidant, free radical scavenging, anti-ulcer, anti-cancer, diuretic, anti-diabetic, hepato-protective, anti-microbial and anthelmintic (Milind and Kulwant 2011).

India is a vast country with diverse agro-climatic conditions. In North Indian plains of the country, temperature falls to 2-4^{0}C during winters and reaches extremity up to 45^{0}C during summers. Muskmelon being a warm season crop is grown successfully in tropical and subtropical areas as spring, summer season crop. The necessary conditions for successful growth of muskmelon are high temperature, low rainfall and low humidity. It shows severe mortality at high humidity, promote leaf diseases and the quality of muskmelon deteriorates (Meena et al. 2018). Thus, it is necessary to harvest the fruits before the onset of rains. Among the protected structures, low tunnels stand out as they are cheaper and better structures for off season production of vegetables. They are flexible, transparent semi-circular structures that are installed over the individual beds of vegetables. They can be dismantled and can be utilized again in next year. Low tunnel production facilitates early crop production by protecting the crop during winter season by creating favorable micro climate for successful cultivation of early season crop. It provides protection from frost and heavy rains and enhances the growth and development of the crop (Ken-bar 2004) leading to fruit precocity, allowing growers to get the premium prices occurring early in the harvest season (Demchak 2009). The low tunnels have a direct effect on relative humidity and air temperature and, indirect effect on soil moisture and soil temperature. In fact, this technique mitigates the adverse effects of climate change on fruit growing (Carlen and Kruger 2009). They warm up the soil and

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protect the plants from cold injury and advance the crops than normal season by 30 to 40 days (Singh et al. 2012). Protecting crops under plastic (polyethylene), generates changes in the environmental conditions of temperature, light and relative humidity that might affect the physiological responses of the plant. This practice can be followed in many crops such as, squashes, pepper plant, eggplant etc.

Mulch is widely used in commercial production of vegetables for its benefits of minimizing soil erosion, water loss, nutrient loss and better weed control (Van Derwerken and Wilcox-Lee 1988). It further improves the environmental conditions in the tunnel, with manifold advantages; such as, controlling weeds, reducing nutrient leaching, increasing soil moisture conservation and decreasing soil evaporation (Lamont 2005; Kumar and Lal 2012) leading to higher and uniform yield (De Pascale et al. 2011). It is beneficial in promoting higher plant biomass, early harvest and yield of when compared to plants grown without mulch. Soil mulch in combination with low tunnels, raise air and soil temperatures and improve uniformity of soil moisture creating a favourable microclimate for the growth of crops (Soltani et al. 1995) and thereby increase early and total yield (Wells and Loy 1985). In order to explore the full yield potential of the muskmelon, there is need to optimize the date of sowing with mulch under low tunnels in order to obtain good quality crop with early maturity. Therefore, this research was carried out to determine the best date of planting and growing conditions to get higher and early yield to fetch higher market price.

Materials and Methods

The present investigation was conducted at the Vegetable Research Farm and Biochemistry Laboratory, Department of Vegetable Science, Punjab Agricultural University, Ludhiana during 2019-20 and 2020-21. Ludhiana is situated at latitude of 30° 54' N and longitude of 75° 48' E and at a mean height of 247 meters above sea level. This place is characterized by very hot and dry summer, from April to June followed by a hot and humid monsoon period and cold winters during December- January. The soil was sandy loam, well drained having pH 8.2, organic carbon 0.22%, available N 126.22 kg/ha, P_2O_5 22.6 kg/ha and available K_2O 147 kg/ha. The experiment was laid out in randomized block design with three replications. There were totally eight treatments which included four dates of planting namely, 15th November (under low tunnel), 15th December (under low tunnel), 15th January (under low tunnel) and 15th February (open condition); Mulch application which includes black polythene mulch and no mulch. Muskmelon hybrid MH-27 was sown in the field for two seasons 2019-20 and 2020-21 at different dates under different mulch conditions as per treatments. The seeds of muskmelon were sown on both sides of 3 m wide bed at a spacing of 60 cm between two hills. The crop was irrigated by flooding the furrows between the beds. To cover the paired rows of muskmelon with low tunnel, iron arches were manually fixed at a distance of 3 m. Height of low tunnel was 45 cm above the ground. Low tunnels were removed after 15th February. The normal cultural practices for irrigation, nutrition and pest control were followed as per standard agronomic practices. Five plants were selected randomly in each treatment for recording various growth and yield calculating and quality parameters. Measurement of vine length was done from base of the plant to the highest point of the main vine with the aid of a meter rod. Primary branches arising from main stem of each vine were recorded at the time of last harvest. The diameter of the fruit was measured using Vernier callipers and TSS was determined using digital refractometer. The vitamin C content of muskmelon fruit was estimated using 2,6-dicholorophenol indophenol dye method suggested by AOAC (1990). The data recorded for various aspects was statistically analysed as per the procedure given by Steel and Torrie (1981) adapted by Cheema and Singh (1991).

Results and Discussion

Growth and flower attributing parameters: A perusal of data presented in the Table 1 depicts the growth and flowering parameters recorded during 2019-20 and 2020-21. Length of the vine recorded at 60 and 90 days after planting revealed that among the different dates of sowing February 15th planting showed maximum vine length (50.5 cm and 83.4 cm) due to high temperature prevailing during the initial growth period. Vine length recorded at the time of maturity was maximum in 15th February planting (184.6 cm) during 2019-20. While, during 2020-21,15th January planted crops exhibited maximum vine length (189.1 cm) under low tunnel. Minghua et al. (2000) reported that plants under low tunnel showed better vegetative growth and increased yield by 10.5% when compared to plants under open conditions. Black polythene mulch remarkably increased the vine length (184.9 cm) compared to non-mulch plants (172.1 cm). This might be due to higher temperature and soil moisture content under plastic mulch which improves plant microclimate conditions which hastened the growth (Mahadeen 2014). Early flowering determines early crop production and is important for obtaining higher market prices. Planting on 15th February resulted

Table 1: Growth and flower attributing parameters as affected by date of planting and mulching under low tunnel during the year 2019-20 and 2020-21

Treatments	Vine length at 60 DAS (cm)			Vine length at 90 DAS (cm)			Vine length at maturity (cm)			Number of primary branches			Days to 50% flowering			Days to first harvest		
	2019-20	2020-21	Pooled	2019-20	2020-21	Pooled	2019-20	2020-21	Pooled	2019-20	2020-21	Pooled	2019-20	2020-21	Pooled	2019-20	2020-21	Pooled
Dates of sowing (D)																		
15 November	27.4	28.2	27.8	51.6	49.2	50.4	178.5	177.4	177.9	2.8	2.7	2.7	107.8	110.8	109.3	142.1	141.5	141.8
15 December	26.3	26.2	26.2	64.5	63.3	63.9	176.2	174.5	175.3	2.6	2.6	2.6	97.8	97.3	97.5	113.2	112.2	112.7
15 January	45.9	46.8	46.3	75.2	64.6	69.9	182.6	188.7	185.6	2.7	2.7	2.7	84.3	85.0	84.6	116.8	117.2	117.0
15 February	49.8	51.3	50.5	82.8	83.4	83.1	184.6	189.1	186.8	2.7	2.7	2.7	46.3	47.5	46.9	77.2	76.3	76.7
Mulch Conditions (M)																		
Mulch	41.5	40.7	41.1	85.3	83.5	84.4	186.8	183.1	184.9	2.8	2.6	2.7	79.9	81.4	80.6	107.4	106.8	107.1
Non-mulch	33.7	34.9	34.3	72.3	69.9	71.1	174.1	170.2	172.1	2.6	2.7	2.6	88.2	88.9	88.5	117.2	116.7	116.9
Interaction (D×M)																		
15 Nov + mulch	30.6	31.1	30.8	57.8	56.2	57.0	185.9	185.8	185.8	2.8	3.0	2.9	103.6	107.6	105.6	136.0	137.3	136.6
15 Nov + non-mulch	24.3	25.2	24.7	45.3	42.1	43.7	170.9	171.7	171.1	3.0	2.6	2.8	112.0	114.0	113.0	147.0	147.0	147.0
15 Dec + mulch	28.4	27.5	27.9	74.1	73.2	73.6	182.7	182.2	182.4	2.7	2.6	2.6	93.6	92.3	92.9	104.3	106.2	105.2
15 Dec + non-mulch	24.4	24.8	24.6	54.8	53.4	54.1	169.6	170.5	170.1	2.2	2.4	2.3	102.0	102.3	102.1	120.0	120.3	120.1
15 Jan + mulch	50.7	49.8	50.2	81.7	69.7	75.7	192.2	190.1	191.1	2.4	2.5	2.4	80.3	82.6	81.4	114.0	111.6	112.8
15 Jan + non-mulch	41.2	41.8	41.5	68.6	59.5	64.1	172.9	173.4	173.1	2.6	2.8	2.7	88.3	87.3	87.8	122.3	122.2	122.2
15 Feb + mulch	54.9	54.4	54.6	92.1	94.9	93.5	186.5	186.8	186.6	2.7	2.6	2.6	42.0	43.0	42.5	72.6	74.6	73.6
15 Feb + non-mulch	44.8	47.8	46.3	73.5	71.9	72.7	182.6	183.9	183.2	2.4	2.7	2.5	50.6	52.0	51.3	80.2	79.7	79.9
CD (p=0.05)																		
D	3.5	2.2	2.8	4.3	5.2	4.7	3.1	3.6	3.3	NS	NS	NS	5.1	4.3	4.7	3.9	3.9	3.9
M	2.4	1.5	1.9	3.1	3.7	3.4	2.2	2.6	2.4	NS	NS	NS	3.5	3.1	3.3	2.7	2.7	2.7
D×M	NS	NS	NS	NS	NS	NS	3.3	5.2	4.2	NS	NS	NS	NS	NS	NS	NS	NS	NS

in minimum days to flowering (46.9) and among the different dates of planting under low tunnels, 15th January took minimum days (84.6) followed by 15th December planting (97.5). Low Tunnel has the ability to warm the soil and protect the crop plants from frost and cold winds by entrapping the carbon dioxide. This leads to increase in photosynthetic activity and advance the crops than the normal season, thereby forcing the early harvest and fetching higher market value. Plants covered with black polythene mulch took 8 days lesser for 50% flower initiation than non-mulched plots. 15th February planting showed minimum number of days taken to first fruit harvest (76.7) followed by 15th December planting (112.7). Non-mulched plants took 10 days more for first fruit harvest than the plants covered with black polythene mulch.

Yield Parameters: Various yield parameters recorded in 2019-20 and 2020-21 are depicted in Table 2. Number of fruits per plant is an important attribute which has a significant influence on the yield of the plant. Maximum number of fruits were noted under 15th November planting (4.0) followed by 15th December (3.7). Mulched plants produced significantly higher number of fruits (3.9) than non-mulch plants (3.5). Ranjan et al. (2019) reported similar findings where maximum number of fruits per plant, and yield per hectare of muskmelon were obtained when the low tunnel planting was done on 15th December over other dates of sowing. Low tunnel planting exhibits more fruit diameter when compared to open field planting. 15th January (D_3) planting has maximum fruit diameter of 17.6 cm followed by 15th November, D_1 (17.4 cm). The fruit diameter noted under mulched plants was 17.9 cm which was comparatively higher than non-mulch plants (17 cm). The reason for this might be congenial soil moisture which causes high uptake of nutrients leading to the better growth of fruit. The results were in consonance with the findings of Parmar et al. (2013). Significant interaction was found between date of sowing and mulching. Sowing on 15th November (D_1) under black polythene mulch displayed highest fruit diameter (18.2 cm). Sowing on 15th January under mulched soil gave maximum fruit weight (830.3 g) followed by 15th November sowing (822.1 g). Mulch improved the

Table 2: Yield parameters as affected by date of planting and mulching under low tunnel during the year 2019-20 and 2020-21

Treatments	Number of fruits per vine			Fruit diameter (cm)			Average fruit weight (g)			Total yield (q/ha)			Marketable Yield (q/ha)		
	2019-20	2020-21	Pooled	2019-20	2020-21	Pooled	2019-20	2020-21	Pooled	2019-20	2020-21	Pooled	2019-20	2020-21	Pooled
Dates of sowing (D)															
15 November	3.9	4.1	4.0	17.5	17.4	17.4	825.4	818.7	822.1	215.1	218.1	216.6	203.5	207.7	205.6
15 December	3.5	4.0	3.7	17.2	17.1	17.1	813.3	816.6	814.9	199.9	191.6	195.7	190.8	192.1	191.4
15 January	3.8	3.5	3.6	17.5	17.6	17.5	827.8	832.9	830.3	181.3	187.6	184.4	179.4	180.5	179.9
15 February	3.5	3.5	3.5	17.3	17.5	17.4	822.9	819.6	821.2	170.4	169.4	169.9	158.0	156.3	157.1
Mulch Conditions (M)															
Mulch	3.9	4.0	3.9	17.8	18.0	17.9	850.3	859.1	854.7	198.2	199.1	198.6	186.1	185.8	185.9
Non-mulch	3.5	3.5	3.5	17.1	16.9	17.0	790.7	792.5	791.6	185.1	184.4	184.7	174.1	175.4	174.7
Interaction (D×M)															
15 Nov + mulch	4.0	3.6	3.8	18.2	18.3	18.2	852.6	868.3	860.4	223.6	222.3	222.9	213.5	215.6	214.5
15 Nov + non-mulch	3.3	3.3	3.3	16.9	16.5	16.7	798.3	791.6	794.9	215.1	207.9	211.5	193.7	195.5	194.6
15 Dec + mulch	3.6	3.6	3.6	17.4	17.5	17.4	848.3	855.0	851.6	206.0	206.9	206.4	195.9	200.1	198.0
15 Dec + non-mulch	3.3	3.3	3.3	17.0	16.7	16.8	753.3	761.7	757.5	196.9	193.0	194.9	185.4	189.4	187.4
15 Jan + mulch	4.6	4.3	4.4	17.6	17.6	17.6	851.2	856.6	853.9	187.6	188.1	187.8	176.4	180.6	178.5
15 Jan + non-mulch	3.6	3.3	3.4	17.4	17.7	17.5	753.1	751.6	752.3	180.4	174.5	177.4	166.3	174.9	170.6
15 Feb + mulch	4.0	4.0	4.0	18.1	18.2	18.1	845.0	865.3	855.1	174.2	175.3	174.7	165.6	174.1	169.8
15 Feb + non-mulch	3.6	3.6	3.6	17.1	17.1	17.1	758.3	788.3	773.3	170.1	164.9	167.5	152.7	160.8	156.7
CD (p=0.05)															
D	NS	NS	NS	NS	0.4	0.4	NS	NS	NS	2.2	2.4	2.3	2.6	3.2	2.9
M	0.5	NS	0.5	0.4	0.3	0.3	19.3	16.6	17.9	1.6	1.9	1.7	1.8	1.9	1.8
D×M	NS	NS	NS	NS	0.5	0.5	38.6	33.2	35.9	NS	NS	NS	3.7	4.1	3.9

average weight of fruit (854.7 g) when compared to non-mulch plots (791.6 g). A significant increase in total yield of the crop by 27.6 % was observed when planting was done on 15th November under the low tunnel as compared to farmers practice (15th February). 15th January gave 17.6 % and 15th December planting gave 13.8 % higher than 15th February planting. Low tunnels facilitate plants to intercept greater solar radiation which enlarges leaf area assimilation leading to increase in productivity (Ko³odziejczyk 2012). The results are in line with the discoveries of Bhatt et al. (2016). It was observed that low tunnel along with black polythene mulch increased the yield of summer squash by 4.2 times than open field planting. Similar trend in yield were also reported by Singh and Kumar (2009). Sari et al. (1994) reported similar findings in cucumber. Mulch increased the yield of crop plants by 7.2 % over non mulched plants. Total yield characters (early fruiting, fruit number and total crop yield) were found higher in mulched plants due to better soil moisture retention and temperature maintenance when compared to bare soil plants (Kumar and Lal 2012, Mahadeen 2014). Marketable yield was significantly higher in November 15th planting (205.6 q/ha) followed by December 15th planting (191.4 q/ha). Mulched plants gave significantly higher marketable yield (185.9 q/ha) in comparison to non-mulched plants (174.7 q/ha). Sowing on 15th November under low tunnel and black polythene mulch gave highest marketable yield of 214.5 q/ha.

Quality parameters: Quality attributes of the direct seeded muskmelon influenced by dates of sowing and mulching is described in the data presented in Table 3. TSS is one of the important quality parameters which have a direct influence on the flavor of muskmelon. Maximum TSS was recorded in 15th January planting (12.0 °Brix) in low tunnel followed by 15th February (11.6 °Brix) in open conditions. The low tunnels tend to increase the leaf canopy size which in turn improves fruit quality. Muskmelon plants with larger canopies show high rate of photosynthesis and translocate sugars by making them sweeter (Kultur et al. 2001). In cropping seasons 2019-20 and 2020-21, the average daily high temperature during harvesting was 35.7 °C and 36.2 °C. The meteorological data showed abundant solar radiation and dry weather at the time of harvesting. This led to high accumulation of sugars imparting better flavour (Kaur et al. 2017). High TSS was observed in the fruits grown under mulch conditions (11.2 °Brix) than non-mulched plants (10.8 °Brix). Ascorbic acid is the naturally occurring compound known for its antioxidant properties important for human health. Fruits obtained from 15th November sowing gave maximum ascorbic acid content of 22 mg/100mg followed by 15th December sowing (21.9 mg/100mg). There was a significant increase in ascorbic content in early sowing when compared to late sowing which was due to difference in light intensity. Positive relationship between

Table 3: Quality parameters as affected by date of planting and mulching under low tunnel during the year 2019-20 and 2020-21

Treatments	TSS (°Brix)			Ascorbic acid (mg/100 g)			Dry matter (%)		
	2019-20	2020-21	Pooled	2019-20	2020-21	Pooled	2019-20	2020-21	Pooled
Dates of sowing (D)									
15 November	10.5	10.2	10.3	22.1	21.9	22.0	8.6	8.6	8.6
15 December	10.7	10.9	10.8	21.8	22.0	21.9	8.1	8.2	8.1
15 January	12.1	11.9	12.0	21.4	21.4	21.4	8.2	8.1	8.1
15 February	11.7	11.5	11.6	22.1	21.5	21.8	8.0	7.9	7.9
Mulch Conditions (M)									
Mulch	11.2	11.3	11.2	22.3	22.1	22.2	8.5	8.6	8.5
Non-mulch	10.8	10.9	10.8	21.4	21.3	21.3	8.0	7.9	7.9
Interaction (D×M)									
15 Nov + mulch	10.6	10.7	10.6	22.4	22.3	22.3	8.8	8.8	8.8
15 Nov + non-mulch	9.5	9.7	9.6	21.2	20.8	21.0	8.4	8.3	8.3
15 Dec + mulch	10.9	11.2	11.1	22.5	22.1	22.3	8.6	8.6	8.6
15 Dec + non-mulch	10.4	10.8	10.6	21.7	21.9	21.8	7.5	7.8	7.6
15 Jan + mulch	11.4	11.5	11.4	22.1	21.7	21.9	8.2	8.3	8.2
15 Jan + non-mulch	11.1	11.1	11.1	21.1	21.2	21.1	8.1	8.0	8.1
15 Feb + mulch	11.8	12.1	11.9	22.3	22.4	22.3	8.4	8.5	8.4
15 Feb + non-mulch	11.4	11.4	11.4	21.8	21.3	21.5	7.7	7.2	7.4
CD (p=0.05)									
D	0.6	0.4	0.5	NS	NS	NS	NS	0.4	0.4
M	NS	0.3	0.3	0.5	0.4	0.4	0.5	0.3	0.4
D×M	NS	NS	NS	NS	NS	NS	NS	NS	NS

ascorbic acid content and light was reported by Acikgoz (2012). Mulched plots showed relatively higher amount of ascorbic acid (22.2 mg/100 g) than non-mulched plots (21.3 mg/100 g). November 15th transplanting under black polythene mulch showed highest dry matter accumulation (8.6 %). Gerber et al. (1982) reported earlier and superior quality of muskmelon (*Cucumis melo*) with the combination of row covers and plastic mulch.

Benefit-Cost ratio: Maximum net returns were obtained when sowing was done on 15th November under low tunnels and black polythene mulch. It was Rs.1,60,523 more than farmers practice (15th February sowing without mulch) with cost benefit ratio of 1:2.0. This was due to high market value in March-April (Rs.1500/q) which declined in the mid-season (Rs.800/q). Kumar et al. (2017) reported similar findings in bitter gourd. High market value in off-season with maximum net income and cost benefit ratio was obtained in December planting under low tunnel increasing the total income of the farmer.

In conclusion, the number of fruits per plant, average fruit weight and total yield were significantly higher in 15th November planting under low tunnels. Application of black polythene mulch was proved to be beneficial in all aspects such as growth, yield and quality when compared to non-mulch conditions. Low tunnels facilitated early planting and harvesting and the produce fetched higher price before the prices begin to decline in mid-season. Muskmelon sown on 15th November under low tunnel and black polyethylene mulch offers higher yield with maximum returns and benefit–cost ratio.

सारांश

खरबूजा की सीधी बुवाई और प्लास्टिक लो टनेल तकनीक में बुवाई के समय एवं पलवार में परीक्षण कार्य सब्जी परीक्षण प्रक्षेत्र एवं जैव रसायनिक प्रयोगशाला, पंजाब कृषि विश्वविद्यालय, लुधियाना (पंजाब) में सन् 2019–20 एवं 2020–21 में किया गया। कुल 4 बुवाई के समय निश्चित किये गये, जो 15 नवम्बर, 15 दिसम्बर, 15 जनवरी एवं 15 फरवरी और पलवार के 2 उपचारों (पलवार एवं गैर–पलवार) को शामिल किया गया। खरबूजा की संकर किस्म (एम.एच.–27) में सर्वाधिक फलों की संख्या (4 फल प्रति पौध), कुल उपज (216.6 कु. प्रति हेक्टेयर), एस्कॉर्बिक एसीड (22 मिली. प्रति 100 ग्राम), शुष्क पदार्थ (8.6 प्रतिशत) सर्वाधिक 15 नवम्बर की सीधी बुवाई और पलवार से प्राप्त की गयी जबकि 15 जनवरी की फसल में सर्वाधिक लता लम्बाई (186.2 सेमी.), फल व्यास (17.5 सेमी.), फल वजन (830.3 ग्राम) एवं कुल विलेय ठोस (12 डिग्री ब्रिक्स) पाया गया जो पलवार तकनीक के साथ लगाई गयी थी। पलवार में लगे पौधों ने गैर–पलवार पौधों की तुलना में बेहतर वृद्धि, उपज और गुणवत्ता का प्रदर्शन किया। परिणाम स्वरूप खरबूजा के टनेल में सीधी बुवाई अगर पलवार तकनीक के साथ लो–टनेल में 15 नवम्बर को लगाया जाये तो अधिक उपज एवं आय प्राप्त की जा सकती है।

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