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Impact of different bagging types on preventing sunburn injury and quality improvement of Keitt mango fruits

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ABSTRACT

The Present investigation was carried out in a private farm located at at Kafr El-Sohbi village, Qalubia governorate, Egypt, to study the effect of bagging type on reducing Keitt mango fruit disorders and improving fruit quality during 2014 and 2015 seasons. The bagging treatments were, without bag (control), news paper bag, white paper bag, agrail white bag, agrail red bag, agrail blue bag and agrail green bag. The treatments started at early June and sustained till harvest time. The obtained results showed that, bagging fruits with agrail red bag increased number of fruits per tree, fruit weight, yield per tree and vitamin C content. While, the number &weight of sunburn fruits /tree was reduced as compared to the other treatments. Moreover, bagging fruits with agrail green bag increased fruit length, fruit thickness, TSS %. On the other hand, bagging fruits with news paper bag increased fruit firmness and total acidity percentage. Moreover, bagging with agrail white bag had a significant effect on increasing values of lightness (L). While, bagging with agrail blue bag had a significant effect on higher values of hue angle (h) compared to the other treatments. Generally, it can be recommended from this study that, bagging Keitt mango fruits with agrail red bag and agrail blue bag was the best in reducing fruit disorders with improving fruit quality.

Key words: Keitt mango, bagging, sunburn, yield, hue angle, lightness and fruit quality.

Introduction

Mango (*Mangifera indica* L.) is a very delicious tropical fruit belongs to family Anacardiaceae, it is also considered as the queen of the fruits as it is very popular world-wide. Mango fruit is an abundant source of vitamins, minerals and is famous for its excellent flavour, attractive fragrance and nutritional value. It is as an emerging tropical export crop and is produced in about 90 countries in the world with a production of over 820,877 MT, Abbasi *et al.,* (2011). In Egypt, mango is considered the most popular fruit. The area of mango orchards reached 241101 feddan, producing about 712537 tons of fruits annually (Ministry of Agriculture and Land Reclamation Statistics, Egypt, 2013). Keitt mango cultivar grown successfully under the Egyptian conditions and its yield production comes in the late season ripening (The fruit generally has typically ripened from August until September in Florida, often into October as well, making it one of the more valued late-season varieties), especially in the newly reclaimed areas. However, due to the high temperature and sunlight in Egypt, the fruits exposed to certain mechanical and physiological disorders which reduce the fruit quality and marketability. In this respect, the process of fruit bagging is a necessary to protect from direct sun light, mechanical damage. Regardless, the high cost of the bagging process but the fruit quality improvement compensates this cost in particular when the fruits are exported.

The sunburn injury is sunburn browning. This sunburn does not cause tissue death but does cause loss of pigmentation resulting in a yellow, bronze, or brown spot on the sun exposed side of the fruit. Cells remain alive, cell membranes retain their integrity, cells do not leak, but pigments such as chlorophyll, carotenes, and xanthophylls are denatured or destroyed. This type of sunburn browning occurs at a temperature about 5°F lower than sunburn necrosis (115 to 120° F in apples). Light is required for sunburn browning. Fruits may be marketable but will be a lower grade

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Control of sunburn in fruits starts with developing good leaf cover in the canopy to shade the fruit. Fruits most susceptible to sunburn will be those that are most exposed, especially those that are not shaded in the afternoon. Anything that reduces canopy cover will increase sunburn, such as foliar diseases, wilting due to inadequate irrigation, and excessive or late pruning. Physiological leaf roll, common in some crops. Gordon Johnson (2012).

Bagging is a physical protection technique commonly applied to many fruits. It can, not only, protect the fruit from diseases and pests, but also, change the microenvironment of fruit development, which exerts multiple effects on the growth and quality of fruits (Guzman, 2004, Thorp *et al.,* 2007, Son & Lee, 2008 and Li *et al.,* 2008). Bagging protects fruit from diseases, pests and produce high quality unblemished fruits (Kitagawa *et al.,* 1992). Fruit pre-harvest bagging could effectively improve fruit coloration, markedly lower pesticide residual and avoid eating by birds and insects (Hu *et al.,* 2001 and Jia *et al.,* 2005). Yang *et al.,* (2009) proved that bagging could modify the microenvironment during fruit development, decreasing the rate of fruit drop and has been widely used to improve fruit appearance, decrease pesticide residues and increase commercial fruit value. Moreover, bagged fruits are preferred by the consumers. Generally, bagging treatments improves fruit appearance, protects fruit against damage from insect, pests, birds, diseases, mechanical scratches, and also alters the microenvironment for fruit development, with multiple effects on its inner quality.

Thus, this study aimed to investigate the effect of different bagging types on yield, fruit quality and skin color of fruitful Keitt mango tress.

Materials and Methods

This study was carried out during two successive seasons (2014 and 2015) on five years old Keitt mango trees grafted on Succary seedlings as rootstocks and planted at 2×3 meters in sandy soil under drip irrigation system in Kafr El-Sohbi village, Qalubia governorate, Egypt. The soil of the experimental field was sandy in texture with pH 7.3. Soil mechanical and chemical analyses are shown in Table (1).

Table (1): Soil mechanical and chemical analyses of the used soil.

Physical analysis		Chemical analysis			
		Cations meq/l		Anions meq/l	
Coarse sand	18.3%	Ca^{++}	8.9	$CO3^{--}$	Zero
Fine sand	36.8%	Mg^{++}	3.15	$HCO3^{-}$	4.5
Silt	27.5%	Na^{+}	4.20	Cl^{-}	6.35
Clay	18.4 %	K^{+}	1.18	$SO4^{--}$	8.10
Texture class sandy					
Soil pH	7.3	Available N	23.9 mg/kg		
E.C, dS/m	1.87	Available P	12.6 mg/kg		
Organic matter	2.6%	Available K	183 mg/kg		

Experiment layout:

The complete randomized block design with four replications was employed for arranging the seven investigated fertilization treatments, whereas each replicate was represented by a single tree. Consequently, twenty-eight healthy fruitful Keitt mango trees were carefully selected, as being healthy and disease free. Chosen trees were divided according to their growth vigour into four categories (blocks) each included seven similar trees for receiving the investigated seven bagging types.

All trees were subjected to the same horticultural practices (irrigation, fertilization, weeds &pest control) adopted in the region according to the recommendation of the Ministry of Agriculture. It was devoted to investigate the influence of different bagging types which started form early June to early of November.

The following seven treatments were included in this experiment:

T1 - Without bag (control).
T2 - News paper bag.
T3 - White paper bag.
T4 – Agrail white bag.
T5 – Agrail red bag.
T6 – Agrail blue bag.
T7 - Agrail green bag.

The following characters were measured:

Yield:

In each season, at harvest time (first of November), the numbers of fruits per tree and fruit yield per tree were counted for each treatment. All fruits were picked and weighted for each tree in different treatments, tree yield in kilograms was estimated by multiplying the number of fruits per tree and the average fruit weight.

Fruit quality:

Fruit physical properties:

In this regard average fruit weight (g.); dimensions (length, diameter and thickness in cm.); fruit shape index (length: diameter) and Fruit firmness was determined using Shatilon's instrument for measuring firmness of (Ib./Inch) were the fruit physical characteristics investigated in this regard.

Fruit chemical properties:

Fruit juice total soluble solids percentage (TSS%) was determined using Carl Zeins hand refractometer. Total acidity as gms of unhydrous citric acid per 100ml fruit juice, total soluble solids/ acid ratio was also estimated. Ascorbic, acid/ Vitamin C content was determined using 2, 6 dichlorophenol indophenol indicator for titration after A.O.A.C., (1995).

Sunburned fruit measurements:

- Number of sunburned fruits /tree.
- Weight of sunburned fruits /tree.
- Sunburned fruit weight % as comparing with weight of yield = sunburned fruits weight per tree (Kg) / weight of yield per tree (Kg) x 100.

Skin color measurements:

In this regard, L* indicates lightness, C* represents chroma, and h is the hue angle (L* = lightness, C* = chroma and h = hue) are the color skin measurements of Keitt mango fruits. (L, C and h) color was determined using a Minolta CR-300 colorimeter.

Statistical analysis:

All data obtained during both seasons were subjected to analysis of variance according to Snedecor and Cochran (1989). In addition, significant differences among means were differentiated according to the Duncan, multiple test range (Duncan, 1955) where small letters were used for distinguishing means of different treatments for each investigated characteristic.

Results and Discussion

Impact of different bagging types on No. of fruits/tree, fruit weight (g) and yield/tree (kg) of Keitt mango fruits.

No. of fruit/tree:

With regard to the response of number of fruits/tree to the differential investigated bagging types treatments, Table (2) shows obviously a considerable variations in this respect. Herein, the greatest number of fruits/tree were significantly coupled with T5 (Agrail red bag) and T7 (Agrail green bag). On the contrary the least number of fruits /tree was usually in concomitant to T1 (without bag) or control treatment which ranked statistically last during both 2014 & 2015 experimental seasons. In addition, the four other treatments were in-between the aforesaid two extremes.

Table 2: Impact of different bagging types on No. of fruits/tree, fruit weight (g), and yield/tree (Kg) of Keitt mango fruits during two experimental seasons 2014&2015.

Treatments	Some yield measurements during two experimental seasons 2014&2015					
	No. of fruits / tree		Fruit weight (g)		Yield/tree (Kg)	
	2014	2015	2014	2014	2014	2015
T_1 - Without bag (control).	11.67d	14.33b	481.7c	491.7c	5.60d	7.06c
T_2 - News paper bag.	13.67c	14.00b	508.3bc	528.3b	6.98c	7.43c
T_3 - White paper bag.	14.67ab	16.33a	505.7c	536.7b	7.44c	8.80b
T_4 – Agrail white bag.	13.67c	17.33a	565.0a	576.7a	7.72bc	9.99a
T5 – Agrail red bag.	15.33a	17.33a	555.0ab	581.7a	8.54ab	9.88a
T6 – Agrail blue bag.	14.33bc	15.00b	595.0a	603.3a	8.52ab	9.03b
T7 - Agrail green bag.	15.33a	17.00a	590.0a	598.7a	9.04a	10.18a

Means followed by the same letter/s within each column didn't significantly differ at 5% level.

Fruit weight (g):

Referring to the influence of differential investigated treatments on fruit weight (g) Table (2) displays obviously that the response was clearly pronounced, whereas all investigated treatments resulted in increasing fruit weight as compared to control (without bag). Such trend was true during both experimental seasons. However, the sixth treatment (Agrail blue bag) was statistically the superior, followed by T7 (Agrail green bag) which statistically came in the same rank. On the contrary, T1 (without bag) was significantly the inferior during both experimental seasons.

Yield / tree (kg):

It is quite evident as shown form tabulated data in Table (2) that yield /tree increased significantly with all the different bagging types over control (without bag) during both experimental seasons of study. Generally, it could be noticed the superiority of T7 (Agrail green bag) during both seasons of study particularly in 2nd season. However, the other bagging treatments increased yield /tree over control with a variable degree of response.

Impact of different bagging types on number &weight of sunburned fruits per tree and Sunburned fruits weight %/weight of yield per tree of Keitt mango fruits.

Number and weight of sunburned fruits per tree:

Concerning the number and weight of sunburned fruits per tree of Keitt mango cv. as influenced by the differential bagging treatments, data obtained during both 2014 & 2015 experimental seasons are presented in Table (3). It is quite evident that number and weight of sunburned fruits per tree were decreased by all bagging types treatments as compared to control

(without bag) during the two seasons of study. However, the highest rate of decreased over control was significantly detected by T5 (Agrail red bag) during 1st and 2nd seasons. On the other side, five other bagging treatments decreased number and weight of sunburned fruits per tree with a variable degrees particularly T6 (Agrail blue bag) which statistical came second. Such trend was true during both seasons of study.

Table 3: Impact of different bagging types on No. of sunburned fruits/tree, Sunburned fruits weight(kg) and Sunburned fruit weight %/weight of yield of Keitt mango fruits during two experimental seasons 2014&2015.

Treatments	Sunburned fruits measurements during two experimental seasons 2014&2015					
	No. of sunburned fruits/tree		Sunburned fruits weight (kg)		Sunburned fruit weight %/weight of yield	
	2014	2015	2014	2015	2014	2015
T_1 - Without bag (control).	4.67a	4.67a	2.24a	2.29a	40.04 a	32.00 a
T_2 - News paper bag.	2.33b	2.67b	1.20b	1.42b	16.98 b	18.95 b
T_3 - White paper bag.	1.33c	1.67c	0.68c	0.90c	8.95 c	10.01 c
T_4 – Agrail white bag.	0.67cd	0.67d	0.38cd	0.38d	4.76 cd	3.61 d
T5 – Agrail red bag.	0.33d	0.00d	0.19d	0.00d	2.22 d	0.00 d
T6 – Agrail blue bag.	0.33d	0.33d	0.19d	0.20d	4.08 d	1.96 d
T7 - Agrail green bag.	0.67cd	0.67d	0.39cd	0.40d	4.18 cd	3.72 d

Means followed by the same letter/s within each column didn't significantly differ at 5% level.

Sunburned fruits weight %/weight of yield per tree:

As for the influence of the differential bagging types on the sunburned fruits weight percentage as compared to total weight of fruits per tree followed the great extent the same trend previously detected with number and weight of sunburned fruits per tree. Hence, the greatest percentage of sunburned fruits weight was significantly in closed relationship to T1 (without bag) control during both 2014 & 2015 experimental seasons. Moreover, T2 (news paper bag) ranked statistically 2nd followed by T3 (white paper bag) which came statistically third in this concern. On the contrary, the least percentage was statistically coupled with T5 (Agrail red bag) during both 2014 & 2015 experimental seasons.

Impact of different bagging types on fruit dimensions and Fruit shape index of Keitt mango fruits.

Fruit dimensions:

Fruit length, fruit diameter and fruit thickness of Keitt mango fruits were the investigated three fruit dimensions regarding their response to the differential bagging types. Table (4) shows obviously that the variances were relatively few to be taking into consideration from the statistical point of view. Herein, it could be declared that fruits of bagging Keitt mango cv. with any type of bags tended relatively to be slightly oblonged in their length, diameter and thickness compared to control (without bag) the difference was more pronounced with T7 (Agrail green bag) and T5 (Agrail red bag) during both 2014 & 2015 experimental seasons.

Fruit shape index:

Table (4) shows obviously that the variances were relatively too few to be taking into consideration from the statistical point of view. Herein, it could be cleared that fruits of T4 (Agrail white bag) which induced fruits of 1.41 & 1.41 shape indices values compared with those of 1.33& 1.33 for control during both 2014 & 2015 experimental seasons, respectively. Variations in fruit shape indices could be logically explained on the unparalleled response of two fruit dimensions to a given

bagging type. Since, in the most cases the increase in fruit length was relatively higher than those resulted in fruit diameter as the response to each treatment was individually taking into consideration.

Table 4: Impact of different bagging types on fruit length (cm), fruit diameter (cm), fruit shape index and Fruit thickness (cm) of Keitt mango fruits during two experimental seasons 2014&2015.

Treatments	Some fruit quality measurements during two experimental seasons 2014&2015							
	Fruit length (cm)		Fruit diameter (cm)		Fruit shape index		Fruit thickness (cm)	
	2014	2015	2014	2015	2014	2015	2014	2015
T_1 - Without bag (control).	11.97b	12.24bc	9.00cd	9.20cd	1.33b	1.33b	7.73d	7.58d
T_2 - News paper bag.	11.90b	12.03c	8.87d	8.97d	1.34ab	1.34b	7.90cd	7.96c
T_3 - White paper bag.	12.10ab	12.32bc	8.88d	9.02cd	1.36ab	1.37ab	7.87cd	7.94c
T_4 – Agrail white bag.	12.80a	12.92a	9.07cd	9.17cd	1.41a	1.41a	8.36ab	8.42ab
T5 – Agrail red bag.	12.25ab	12.62ab	9.25bc	9.27c	1.32bc	1.36ab	8.14bc	8.18bc
T6 – Agrail blue bag.	11.90b	12.00c	9.54b	9.63b	1.25cd	1.25c	8.44ab	8.44ab
T7 - Agrail green bag.	11.82b	12.03c	9.88a	9.97a	1.20d	1.21c	8.66a	8.62a

Means followed by the same letter/s within each column didn't significantly differ at 5% level.

Impact of different bagging types on fruit firmness (Ib/Inch), T.S.S %, total acidity %, TSS/Acid ratio and (V.C.) content of Keitt mango fruits.

Fruit firmness (Ib/Inch):

Table (5) displays obviously that all bagging types decreased fruit firmness of Keitt mango cv. during 2014 & 2015 experimental seasons. However, the highest fruit firmness was markedly coupled with T1 (without bag) control which gave the highest fruit firmness i.e., 4.15 & 4.07 was resulted during 1st & 2nd seasons, respectively. Moreover, T2 (news paper bag) ranked statistically second. The reverse was true T4 (Agrail white bag) which induced significantly the lowest fruit firmness during both experimental seasons.

Fruit juice total soluble solids percentage (T.S.S %):

It is quite clear as shown from tabulated data in Table (5) that the highest T.S.S % was markedly coupled with T5 (Agrail red bag) which gave 20.35 & 20.20 % during 1st & 2nd seasons, respectively. Moreover, T3 (white paper bag) ranked statistically fruit with T5 (Agrail red bag) as the influence on fruit juice T.S.S % was concerned. The reverse was true with fruit juice T.S.S % of T1 (without bag) control which induced significantly the poorest fruits in their T.S.S % content during both 2014 & 2015 experimental seasons.

Fruit juice total acidity percentage:

Table (5) displays clearly that all investigated bagging types decreased fruit juice total acidity % than control (without bag). However, the highest rate of increase after the control was significantly detected by T2 (news paper bag). On the other side, five other bagging types decreased fruit juice total acidity percentage during 2014 & 2015 experimental seasons.

Fruit juice total soluble solids: Total acidity ratio:

It is quite clear as shown from tabulated data in Table (5) that the total soluble solids: total acidity ratio (TSS/Acid ratio) was slightly influenced by the differential bagging types. Such response was relatively higher and reached level of significance with only T5 (Agrail red bag) and T6 (Agrial blue bag). On the other hand, no considerable differences were observed with comparing four other

bagging types to (without bag) control. Such trend of response (relative lower differences in fruit juice TSS/Acid ratio to various bagging types) could be logically explained depending upon the paralleled rates of changes exhibited in both fruit juice TSS and total acidity parameters to a given investigated treatment with few exceptions (5th & 6th treatments).

Table 5: Impact of different bagging types on fruit firmness (Lb/Inch), T.S.S (%), acidity (%), T.S.S/Acid ratio and V.C (mg/100ml F.W) of Keitt mango fruits during two experimental seasons 2014&2015.

Treatments	Some fruit quality measurements during two experimental seasons 2014&2015									
	Fruit firmness (Lb/Inch)		T.S.S (%)		Acidity (%)		T.S.S/Acid ratio		V.C (mg/100ml F.W)	
	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
T_1 - Without bag (control).	4.15a	4.07a	13.77e	14.27e	0.743a	0.760a	18.52e	18.77f	41.42c	42.51f
T_2 - News paper bag.	3.63b	3.53b	16.08d	16.04d	0.703b	0.697b	22.87d	23.04e	45.15b	44.05e
T_3 - White paper bag.	1.87e	2.04e	20.15a	19.79a	0.680c	0.683b	29.65c	29.03d	46.85a	46.13d
T_4 – Agrail white bag.	1.74e	1.94e	17.60e	17.70c	0.607d	0.597c	29.04c	29.73cd	47.42a	47.29c
T5 – Agrail red bag.	2.38d	2.48d	20.35e	20.10a	0.653f	0.553c	37.53a	36.36a	48.07a	49.14a
T6 – Agrail blue bag.	1.97e	2.00e	19.32b	19.63a	0.567e	0.577c	34.12b	34.08ab	47.48a	47.80b
T7 - Agrail green bag.	2.82c	2.96c	18.73b	18.87b	0.573e	0.590c	32.70b	32.01bc	47.96a	48.05b

Means followed by the same letter/s within each column didn't significantly differ at 5% level.

Fruit juice ascorbic acid (V.C.) content:

Data obtained during both experimental seasons as shown from Table (5) displayed that all investigated bagging types increased fruit juice vitamin C (ascorbic acid) content over control (without bagging). The increase was significant during both experimental seasons. However, T5 (Agrail red bag) was statistically the superior and showed the greatest juice V. C content i.e., 48.07 and 49.14 mg V.C/100mL fruit juice during 2014 and 2015 experimental seasons, respectively. Moreover, both T7 (Agrail green bag) and T6 (Agrail blue bag) ranked statistically 2nd and 3rd after the aforesaid superior treatment during both experimental seasons. In addition, other investigated treatments were in between the aforesaid extremes i.e., 5th treatment (superior) and control or without bag (inferior) during both experimental seasons.

The present result goes partially in the line with that pointed out by several investigators regarding the beneficial effect of bagging types i.e., Harhash and Al-Obeed (2010) on date palm, Hu *et al.,* (2010) on persimmon, Hao *et al.,* (2011) on apple, Hu *et al.,* (2013) 'Fuyu' Persimmon, Abbasi *et al.,* (2014) on guava. On the other hand, the noticeable positive effect of different bagging types may be attributed to the effect of bagging on modify the microenvironment during fruit development, decreasing the rate of fruit drop and has been widely used to improve fruit appearance, decrease pesticide residues and increase commercial fruit value. Moreover, bagged fruits are preferred by the consumers.

Impact of different bagging types on Fruit skin color measurements ((L, C and H) of Keitt mango fruits.

Fruit skin color measurements:

In this regard, L* indicates lightness, C* represents chroma, and h is the hue angle (L* = lightness, C* = chroma and h = hue) are the color skin measurements of Keitt mango fruits in response to the differential bagging types. Data obtained during both 2014 & 2015 experimental seasons are presented in Table (6).

L = Lightness: -*

Concerning the response of fruit skin color (L* = Lightness) to the various investigated bagging types, Table (6) displays obviously that differences in most cases were relatively not so pronounced to be taken into consideration from the statistical standpoint. Meanwhile, bagging with news paper bag (T2) had a significant effect on higher values of lightness (L) compared to the other treatments in both seasons. On the other hand, T6 (Agrail blue bag) gave the lowest values of lightness (L) during 1st & 2nd experimental seasons.

Table 6: Impact of different bagging types on color measurements (L, C and H) of Keitt mango fruits during two experimental seasons 2014&2015.

Treatments	Color measurements during two experimental seasons 2014&2015					
	L		C		H	
	2014	2015	2014	2015	2014	2015
T_1 - Without bag (control).	45.14a	45.96bc	22.93ab	25.93abc	114.00bc	115.90cd
T_2 - News paper bag.	49.60a	49.61a	23.61ab	24.03cde	110.90c	112.20d
T_3 - White paper bag.	48.64a	47.92ab	26.27a	28.18a	120.70ab	122.50b
T_4 – Agrail white bag.	49.07a	49.69a	24.89ab	24.30bcd	120.30ab	118.70bc
T5 – Agrail red bag.	45.41a	46.55bc	20.65b	21.30e	111.80c	115.20cd
T6 – Agrail blue bag.	45.04a	44.66c	21.50ab	22.01de	126.40a	128.90a
T7 - Agrail green bag.	45.55a	48.22ab	26.00a	27.08ab	117.70bc	122.60b

Means followed by the same letter/s within each column didn't significantly differ at 5% level.

C = chroma: -*

It is quite evident as shown from tabulated data in Table (6) that the response of C* = chroma followed nearly the same trend previously discussed with L* = Lightness. Meanwhile, the superiority for T3 (white paper bag) was clearly during both experimental seasons. However, in the 1st season the response to other investigated bagging types was less pronounced and didn't reach level of significance with comparison to control.

H = hue angle: -

Regarding the response of h = hue angle to the differential bagging types, data in Table (6) displayed that Keitt mango fruits subjected to 6th treatment (Agrail blue bag) had statistically the highest values of h = hue angle during two experimental seasons. However, T3 (white paper bag) ranked statistically second during both experimental seasons. Meanwhile, the other investigated bagging types had no appreciable effect than control, whereas differences were too little to be taken into consideration from the static standpoint during both experimental seasons.

Obtained result pertaining the increase in different Fruit skin color measurements exhibited by investigated bagging types was in general agreement with the findings of Hofman *et al.,* (1997) they reported that the percentage of the skin with red color and its intensity decreased with increasing duration of fruit bagging in mango fruits. Also, Wu (2004) reported that, the pomegranate fruits in bag had the best color compared to the un-bagged fruits. Moreover, Muchui *et al.,* (2010) found that bagging fruit during development can improve color at harvest.

T1 - Without bag (control).

T2 - News paper bag.

T3 - White paper bag.

T5 - Agrail red bag.

T4 - Agrail white bag.

T5 - Agrail green bag.

T6 - Agrail blue bag.

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