Table 1. Effect of season and storage condition on physiological loss in weight and marketability of stored papaya.

|  |  |  |
| --- | --- | --- |
| Treatments | Physiological loss in weight (%)  | Marketability (%) |
| Days after storage | Treatment mean | 6th day after storage | Days after storage | Treatment mean | 6th day after storage |
| 2nd day | 4th day | 0th day | 2nd day | 4th day |
| S1Z0 | 0.89 | 0.93 | 0.91 | -  | 100 | 100 | 66.67 | 88.89 | - |
| S1Z1 | 2.06 | 1.76 | 1.91 | 0.88 | 100 | 100 | 88.89 | 96.30 | 55.56 |
| S2Z0 | 0.89 | 0.87 | 0.88 | 0.72 | 100 | 100 | 100 | 100 | 22.22 |
| S2Z1 | 1.60 | 1.70 | 1.65 | 2.16 | 100 | 100 | 55.55 | 85.19 | 0 |
| S3Z0 | 0.93 | 1.40 | 1.17 | 1.04 | 100 | 100 | 100 | 100 | 66.67 |
| S3Z1 | 2.11 | 2.84 | 2.48 | 1.04 | 100 | 100 | 77.78 | 92.59 | 22.22 |
| Days mean | 1.41 | 1.58 |   |   | 100 | 100 | 81.48 |  |  |
|  Mean | S1- 1.41 S2- 1.26 S3- 1.82Z0- 0.99 Z1- 2.01 |  CD- 0.51 | S1- 92.59 S2- 92.59 S3- 96.29Z0 -96.30 Z1- 91.40 |   |
| CD (0.05) | D-NS S-0.25 Z- 0.20 S × Z-NS D × S × Z- NS | D-5.31 S-NS Z-4.34 S × Z-7.51 D × S × Z- 13.014 | CD- 38.85 |

Table 2. Effect of season and storage condition on textural parameters of stored papaya.

|  |  |
| --- | --- |
| Treatments | Textural parameters |
| Flesh firmness (N) | Bio-yield point (N) |
| Days after storage (DAS) | Treatment mean | 6thDAS | Days after storage (DAS) | Treatment mean | 6th day after storage |
| 0th day | 2nd day | 4th day | 0th day | 2nd day | 4th day |
| S1Z0 | 650.21 | 594.59 | 16.77 | 420.52 | *
 | 1453.43 | 1385.19 | 58.25 | 965.63 | -  |
| S1Z1 | 757.76 | 563.02 | 83.40 | 468.06 | 50.63 | 1411.41 | 1508.36 | 600.84 | 1173.54 | 409.86 |
| S2Z0 | 297.03 | 350.55 | 129.83 | 259.14 | 77.73 | 1199.28 | 1128.54 | 959.70 | 1095.84 | 939.97 |
| S2Z1 | 128.83 | 66.27 | 109.65 | 101.58 | 75.99 | 1147.60 | 1186.71 | 824.71 | 1053.01 | 668.62 |
| S3Z0 | 690.87 | 733.83 | 227.34 | 550.68 | 15.00 | 1953.17 | 1883.16 | 1390.60 | 1742.31 | 421.51 |
| S3Z1 | 432.63 | 595.12 | 60.45 | 362.74 | 24.42 | 1660.47 | 1469.90 | 574.20 | 1234.86 | 474.35 |
| Days mean | 492.89 | 483.90 | 104.57 |   |   | 1470.89 | 1426.98 | 734.72 |  |  |
| Mean  | S1- 444.29 S2- 180.36 S3- 456.71Z0 -410.11 Z1- 310.79 |   | S1- 1069.58 S2- 1074.43 S3- 1488.58Z0- 1267.93 Z1- 1153.80 |  |
| CD (0.05) | D-62.23 S-62.23 Z- 50.81 S × Z- 88.01 D × S × Z- NS | CD- 19.10 | D-59.77 S-59.77 Z-48.81 S × Z-84.53 D × S × Z-146.42 | 156.20 |

Table 3. Effect of season and storage condition on TSS and acidity of stored papaya.

|  |  |  |
| --- | --- | --- |
|  | Total soluble solids (0B) | Titrable acidity (%) |
| Treatments | Days after storage (DAS) | Treatment mean | 6thDAS | Days after storage (DAS) | Treatment mean | 6th day after storage |
| 0th day | 2nd day | 4th day | 0th day | 2nd day | 4th day |
| S1Z0 | 9.47 | 12.27 | 14.60 | 12.11 | - | 0.09 | 0.12 | 0.18 | 0.13 | - |
| S1Z1 | 10.03 | 15.07 | 17.10 | 14.07 | 18.63 | 0.21 | 0.25 | 0.30 | 0.25 | 0.29 |
| S2Z0 | 10.27 | 13.87 | 17.87 | 14.00 | 20.33 | 0.13 | 0.19 | 0.25 | 0.19 | 0.29 |
| S2Z1 | 10.03 | 11.90 | 16.17 | 12.70 | 18.50 | 0.09 | 0.16 | 0.18 | 0.14 | 0.23 |
| S3Z0 | 10.77 | 12.57 | 15.90 | 13.08 | 18.50 | 0.11 | 0.14 | 0.21 | 0.15 | 0.23 |
| S3Z1 | 10.87 | 15.73 | 17.73 | 14.78 | 19.37 | 0.07 | 0.18 | 0.18 | 0.14 | 0.23 |
| Days mean | 10.24 | 13.57 | 16.56 |   |   | 0.12 | 0.17 | 0.22 |   |   |
| Mean  | S1- 13.09 S2- 13.35 S3-13.93Z0- 13.06 Z1- 13.85 |   | S1- 0.19 S2- 0.17 S3-0.15Z0-0.16 Z1- 0.18 |   |
| CD (0.05) | D-0.56 S-0.56 Z-0.46 S × Z-0.79 D × S × Z-1.37 |  CD-0.856 |  D-0.03 S-0.03 Z-NS S × Z-0.04 D × S × Z- NS | CD-NS |

Table 4. Effect of season and storage condition on nutritional quality parameters of stored papaya.

|  |  |  |
| --- | --- | --- |
|  | Total carotene (mg.100g-1) | Vitamin C (mg.100 g-1) |
| Treatments | Days after storage (DAS) | Treatment mean | 6thDAS | Days after storage (DAS) | Treatment mean | 6th DAS |
| 0th day | 2nd day | 4th day | 0th day | 2nd day | 4th day |
| S1Z0 | 0.20 | 1.11 | 1.34 | 0.89 | - | 50.48 | 52.86 | 55.24 | 52.86 | - |
| S1Z1 | 0.21 | 0.85 | 0.93 | 0.66 | 1.33 | 50.95 | 52.86 | 55.71 | 53.18 | 57.62 |
| S2Z0 | 0.26 | 0.45 | 0.90 | 0.53 | 1.22 | 58.09 | 58.57 | 58.57 | 58.41 | 60.00 |
| S2Z1 | 0.25 | 0.52 | 1.35 | 0.70 | 1.50 | 55.71 | 60.00 | 61.90 | 59.21 | 63.81 |
| S3Z0 | 0.28 | 0.38 | 0.94 | 0.54 | 1.10 | 54.76 | 57.14 | 58.57 | 56.82 | 60.95 |
| S3Z1 | 0.26 | 1.23 | 1.32 | 0.94 | 1.44 | 55.71 | 57.62 | 60.48 | 57.94 |   |
| Days mean | 0.24 | 0.76 | 1.13 |   |   | 54.28 | 56.51 | 58.41 |   |   |
| Mean  | S1- 0.77 S2- 0.62 S3-0.74Z0- 0.65 Z1- 0.77 |   | S1- 53.02 S2- 58.81 S3- 57.38Z0 -56.03 Z1- 56.77 |  |
| CD (0.05) | D-0.04 S-0.04 Z-0.04 S × Z-0.06 D × S × Z- 0.11 | CD-0.29 | D- 1.24 S-1.24 Z- NS S × Z- NS D × S × Z- NS | CD-2.64 |

Table 5. Effect of season and storage condition on organoleptic quality parameters of stored papaya.

|  |  |  |
| --- | --- | --- |
| Treatments | Appearance (mean score) | Colour (mean score) |
| 0th day | 2nd day | 4th day | 0th day | 2nd day | 4th day |
| S1Z0 | 5.3 | 6 | 3.9 | 4.8 | 5.4 | 6.3 |
| S1Z1 | 5.6 | 6.5 | 7.3 | 5.1 | 6 | 6.4 |
| S2Z0 | 5.6 | 6.1 | 7.3 | 6.1 | 7.3 | 7.1 |
| S2Z1 | 5 | 5.9 | 4.7 | 6.2 | 5.7 | 6.7 |
| S3Z0 | 6 | 6.7 | 7.2 | 6 | 7.3 | 6.5 |
| S3Z1 | 6.4 | 7.3 | 5.7 | 6.3 | 6.7 | 6.6 |
| k value | 16.04 | 15.94 | 38.54 | 15.69 | 22.53 | 5.30 |
| Treatments | Texture (mean score) | Taste (mean score) |
| 0th day | 2nd day | 4th day | 0th day | 2nd day | 4th day |
| S1Z0 | 5.4 | 5.3 | 5.1 | 4.5 | 5 | 4.5 |
| S1Z1 | 6 | 5.7 | 5.4 | 4.9 | 5.3 | 4.7 |
| S2Z0 | 5.9 | 4.8 | 5.4 | 5.2 | 5.3 | 5.1 |
| S2Z1 | 5.6 | 5.7 | 6 | 5.2 | 5.1 | 4.9 |
| S3Z0 | 6.6 | 6.4 | 6.2 | 5.6 | 5.9 | 5.1 |
| S3Z1 | 6.5 | 6.4 | 4.9 | 5.4 | 5.7 | 5.1 |
| k value | 9.4 | 10.34 | 10.22 | 9.8 | 7.19 | 3.9 |
| Treatments | Flavour (mean score) | Overall acceptability (mean score) |
| 0th day | 2nd day | 4th day | 0th day | 2nd day | 4th day |
| S1Z0 | 4.1 | 5.3 | 5 | 4.7 | 5.6 | 5 |
| S1Z1 | 4.2 | 5.4 | 4.9 | 4.9 | 5.7 | 5.2 |
| S2Z0 | 4.7 | 5.3 | 5.1 | 5.3 | 5.8 | 5.1 |
| S2Z1 | 4.9 | 4.9 | 4.9 | 5.1 | 5.4 | 5.5 |
| S3Z0 | 5.1 | 5.5 | 5.2 | 5.1 | 6.5 | 5.9 |
| S3Z1 | 5 | 5.6 | 5.2 | 5 | 5.6 | 5.3 |
| k value | 8.32 | 4.30 | 1.70 | 3.66 | 5.64 | 4.02 |
| χ2 | 11.07 |