

Table 1: Egg quality ($\bar{X} \pm SE$) of Inshas layers as affected by storied periods, temperature levels and covering system at 42 weeks of age.

Items	Egg weight (g)	Albumin %	Shell %	Yolk %	Haugh units	Yolk index
Effect of storage period (P):						
1 day	51.99±0.29	57.16±0.36 ^a	10.80±0.14 ^a	32.03±0.37 ^b	88.16±0.59 ^a	40.81±0.55
4 days	52.54±0.40	56.19±0.25 ^b	10.46±0.11 ^b	33.35±0.32 ^a	86.16±0.67 ^b	40.10±0.39
7 days	52.57±0.34	55.80±0.25 ^b	10.38±0.08 ^b	33.82±0.29 ^a	82.39±0.92 ^c	39.51±0.23
Significance	NS	**	*	**	**	NS
Effect of temperature levels (T):						
5 °C	52.78±0.49	56.91±0.37 ^a	10.61±0.14	32.48±0.44 ^b	87.71±0.61 ^a	40.93±0.49 ^a
16 °C	51.72±0.44	56.42±0.27 ^{ab}	10.65±0.12	32.93±0.30 ^b	85.53±0.93 ^b	40.22±0.40 ^{ab}
26 °C	52.61±0.28	55.83±0.27 ^b	10.38±0.06	33.80±0.30 ^a	83.47±0.94 ^c	39.27±0.28 ^b
Significance	NS	*	NS	**	**	*
Effect of cover system (C):						
Without	52.36±0.30	56.24±0.33	10.48±0.10	33.28±0.36	85.35±0.84	39.99±0.36
Plastic layer	52.37±0.40	56.53±0.21	10.61±0.11	32.85±0.27	85.79±0.77	40.29±0.37
Significance	NS	NS	NS	NS	NS	NS
PxT	NS	*	NS	**	**	*
PxC	NS	**	NS	**	**	NS
TxC	NS	NS	NS	NS	*	*

Means having different letters at the same column in each classification are differ significantly(P<0.05).

* = (P<0.05), ** = (P<0.01); NS= Not significant.

Table 2: Egg quality ($\bar{X} \pm SE$) of Inshas layers as affected by interaction between storied periods, temperature levels and covering system at 42 weeks of age.

Interaction effect			Egg weight (g)	Albumin %	Shell %	Yolk %	Haugh units	Yolk index
Storage period	Temperature levels	Cover system						
1 day	5 °C	Without	51.90±0.70	58.90±0.85 ^a	10.76±0.18	30.34±0.95 ^e	90.70±0.35 ^a	41.11±1.42
		Plastic layer	52.05±1.95	57.14±0.88 ^{abcd}	11.16±0.63	31.71±1.1 ^{cde}	88.48±1.09 ^{abc}	42.46±1.53
	16 °C	Without	51.75±0.85	57.37±1.24 ^{abc}	11.14±0.53	31.48±0.78 ^{de}	88.67±1.08 ^{abc}	42.47±1.65
		Plastic layer	50.85±0.35	56.49±0.33 ^{bcd}	10.71±0.25	32.80±0.51 ^{bcd}	88.20±1.35 ^{abcd}	40.44±0.83
	26 °C	Without	52.85±0.65	56.43±0.90 ^{bcd}	10.53±0.14	33.03±0.90 ^{abcd}	87.55±1.42 ^{abcd}	38.94±1.37
		Plastic layer	52.55±0.75	56.64±0.67 ^{bcd}	10.53±0.20	32.84±0.80 ^{bcd}	85.37±1.91 ^{bcd}	39.47±0.42
4 days	5 °C	Without	53.65±1.15	55.06±0.22 ^{de}	10.13±0.07	34.80±0.21 ^{ab}	83.88±1.07 ^{def}	39.84±0.22
		Plastic layer	52.80±1.20	57.69±0.77 ^{ab}	10.56±0.39	31.74±1.16 ^{cde}	89.34±0.50 ^{ab}	42.34±1.78
	16 °C	Without	50.50±0.40	56.16±0.02 ^{bcd}	10.51±0.23	33.34±0.23 ^{abcd}	86.87±1.02 ^{abcd}	39.77±0.27
		Plastic layer	52.55±2.05	56.51±0.38 ^{bcd}	10.83±0.38	32.65±0.74 ^{bcd}	87.56±0.95 ^{abcd}	39.62±1.04
	26 °C	Without	52.35±0.15	55.97±0.41 ^{bcd}	10.33±0.07	33.70±0.34 ^{abcd}	84.70±2.03 ^{cde}	39.47±0.42
		Plastic layer	53.40±1.60	55.76±0.55 ^{bcd}	10.41±0.26	33.84±0.67 ^{abcd}	84.61±2.12 ^{cde}	39.57±0.33
7 days	5 °C	Without	53.45±0.91	56.40±0.58 ^{bcd}	10.49±0.37	33.11±0.37 ^{abcd}	86.49±1.22 ^{abcd}	40.39±0.73
		Plastic layer	54.80±0.10	56.26±0.30 ^{bcd}	10.59±0.25	33.15±0.55 ^{abcd}	87.36±0.78 ^{abcd}	39.45±0.35
	16 °C	Without	53.05±0.65	55.31±0.64 ^{cde}	10.29±0.09	34.40±0.73 ^{ab}	80.91±1.54 ^{efg}	39.52±0.31
		Plastic layer	54.10±1.40	56.67±0.57 ^{bcd}	10.43±0.07	32.90±0.57 ^{abcd}	80.97±2.13 ^{efg}	39.49±0.28
	26 °C	Without	51.80±1.60	54.53±0.67 ^e	10.16±0.09	35.31±0.76 ^a	78.39±0.67 ^g	38.41±0.57
		Plastic layer	52.70±0.40	55.64±0.27 ^{bcd}	10.30±0.10	34.05±0.37 ^{abc}	80.20±0.64 ^{fg}	39.78±0.77
Significance			NS	*	NS	**	**	NS

Means having different letters at the same column in each classification are differ significantly(P<0.05).

* = (P<0.05), ** = (P<0.01); NS= Not significant.

Table 4: Chemical composition of eggs ($\bar{X} \pm SE$) of Inshas layers as affected by interaction between storied periods, temperature levels and covering system at 42 weeks of age.

Interaction effect			Moisture %	Ether extract %	Ash %	Crude protein %
Storage period	Temperature levels	Cover system				
1 day	5 °C	Without	15.27±0.35 ^a	27.53±0.50 ^a	3.65±0.32 ^a	33.97±0.98 ^a
		Plastic layer	14.50±1.13 ^{ab}	25.60±0.87 ^{abc}	3.31±0.32 ^{abc}	33.90±0.50 ^{ab}
	16 °C	Without	13.63±0.72 ^{abcd}	25.80±0.91 ^{abc}	3.33±0.47 ^{abc}	33.40±0.67 ^{abcd}
		Plastic layer	13.73±0.81 ^{abc}	25.93±0.90 ^{abc}	2.97±0.26 ^{abcd}	33.80±0.68 ^{ab}
	26 °C	Without	13.63±0.84 ^{abcd}	25.13±1.12 ^{abcd}	2.90±0.21 ^{abcd}	32.97±0.26 ^{abcde}
		Plastic layer	13.53±0.78 ^{abcd}	24.50±1.10 ^{bcd}	3.21±0.35 ^{abc}	32.90±0.47 ^{abcde}
4 days	5 °C	Without	13.50±0.52 ^{abcd}	25.27±0.60 ^{abcd}	3.13±0.15 ^{abcd}	32.90±0.23 ^{abcde}
		Plastic layer	14.83±0.26 ^a	26.17±0.71 ^{ab}	3.73±0.33 ^a	33.63±0.48 ^{ab}
	16 °C	Without	12.73±0.23 ^{bcd}	24.27±0.32 ^{bcde}	2.53±0.26 ^{cd}	33.13±0.84 ^{abcde}
		Plastic layer	12.97±0.29 ^{abc}	23.43±1.05 ^{cde}	3.77±0.20 ^a	33.20±0.76 ^{abcde}
	26 °C	Without	11.87±0.20 ^{de}	22.83±0.44 ^{de}	2.67±0.19 ^{bcd}	32.77±0.47 ^{abcde}
		Plastic layer	12.73±0.32 ^{bcd}	24.43±0.69 ^{bcde}	2.70±0.21 ^{bcd}	32.97±0.42 ^{abcde}
7 days	5 °C	Without	12.67±0.29 ^{bcd}	24.10±0.32 ^{bcde}	2.53±0.23 ^{cd}	32.37±0.15 ^{abcde}
		Plastic layer	13.60±0.26 ^{abcd}	24.37±0.73 ^{bcde}	3.47±0.20 ^{ab}	32.77±0.18 ^{abcde}
	16 °C	Without	10.57±0.39 ^e	22.80±0.62 ^{de}	2.30±0.06 ^d	32.00±0.15 ^{bcde}
		Plastic layer	12.00±0.55 ^{cde}	22.87±0.39 ^{de}	2.93±0.20 ^{abcd}	31.50±0.53 ^{de}
	26 °C	Without	10.70±0.35 ^e	21.93±0.78 ^e	2.47±0.23 ^{cd}	31.40±0.67 ^e
		Plastic layer	12.07±0.28 ^{cde}	23.53±0.72 ^{cde}	2.70±0.23 ^{bcd}	31.73±0.68 ^{cde}
Significance			**	**	**	*

Means having different letters at the same column in each classification are differ significantly(P<0.05).

* = (P<0.05), ** = (P<0.01); NS= Not significant.

Table 5: Lose percent of egg weight, mortality of embryos, fertility, hatchability and hatch weight ($\bar{X} \pm SE$) of Inshas layers as affected by storied periods, temperature levels and covering system at 42 weeks of age.

Items	Number of egg	Lose percent	Mortality embryo (11-18days) %	Mortality embryo (19-20 days) %	Fertility %	Hatchability of egg set %	Hatch weight
Effect of storage period (P):							
1 day	51.99±0.29	0.33±0.02 ^c	3.09±0.40 ^b	3.19±0.33 ^c	96.61±0.27 ^a	87.30±0.74 ^a	33.73±0.29
4 days	52.54±0.40	0.45±0.05 ^b	4.12±0.49 ^b	4.94±0.45 ^b	95.16±0.48 ^b	82.72±0.97 ^b	33.71±0.26
7 days	52.57±0.34	0.97±0.07 ^a	5.35±0.47 ^a	8.44±0.77 ^a	91.46±0.89 ^c	76.60±1.85 ^c	34.08±0.18
Significance	NS	**	*	**	**	**	NS
Effect of temperature levels (T):							
5 °c	52.78±0.49	0.36±0.05 ^b	3.50±0.42	4.12±0.49 ^b	95.99±0.43 ^a	86.89±0.58 ^a	33.77±0.29
16 °C	51.72±0.44	0.69±0.09 ^a	4.32±0.58	5.66±0.64 ^a	94.34±0.64 ^b	81.17±1.48 ^b	33.62±0.29
26 °C	52.61±0.28	0.70±0.08 ^a	4.73±0.45	6.79±0.93 ^a	92.90±1.02 ^c	78.55±1.91 ^b	34.13±0.33
Significance	NS	**	NS	**	**	**	NS
Effect of cover system (C):							
Without	52.36±0.30	0.64±0.08	4.87±0.47	6.04±0.72	93.96±0.75	80.08±1.56	33.90±0.23
Plastic layer	52.37±0.40	0.52±0.06	3.50±0.34	5.01±0.55	94.86±0.60	84.33±1.12	33.77±0.26
Significance	NS	**	*	*	NS	*	NS
PxT	NS	**	*	**	**	**	NS
PxC	NS	**	*	**	**	**	NS
TxC	NS	*	NS	*	*	**	NS

Means having different letters at the same column in each classification are differ significantly(P<0.05).

* = (P<0.05), ** = (P<0.01); NS= Not significant.

Table 6: Lose percent of egg weight, hath weight and fertility component ($\bar{X} \pm SE$) of Inshas layers as affected by interaction between storied periods, temperature levels and covering system at 42 weeks of age.

Interaction effect			Mortality	Mortality	Fertility	Hatchability	Hatch	
Storage period	Temperature levels	Cover system	lose percent	embryo (11-18days) %	embryo (19-20 days) %	%	of egg set %	weight
1day	5 °C	Without	0.19±0.01 ⁱ	2.47±0.62 ^c	1.85±1.07 ⁱ	97.53±0.62 ^a	89.81±0.53 ^a	41.11±1.42
		Plastic layer	0.27±0.03 ^{ghi}	3.09±1.23 ^c	2.47±0.62 ^{ef}	96.91±0.62 ^{ab}	89.54±0.60 ^a	42.46±1.53
	16 °C	Without	0.37±0.01 ^{efgh}	2.47±0.62 ^c	4.32±0.62 ^{cdefc}	95.68±0.62 ^{ab}	84.26±1.60 ^{ab}	42.47±1.65
		Plastic layer	0.37±0.05 ^{efgh}	2.47±0.62 ^c	3.09±0.62 ^{def}	96.91±0.62 ^{ab}	87.96±1.60 ^{ab}	40.44±0.83
	26 °C	Without	0.44±0.04 ^{defg}	5.56±1.07 ^{abc}	4.32±0.62 ^{cdef}	95.68±0.62 ^{ab}	83.33±1.07 ^{ab}	38.94±1.37
		Plastic layer	0.34±0.06 ^{fghi}	2.47±0.62 ^c	3.09±0.62 ^{def}	96.91±0.62 ^{ab}	88.89±1.07 ^{ab}	39.47±0.42
4 days	5 °C	Without	0.21±0.02 ^{hi}	4.94±1.63 ^{abc}	3.70±1.07 ^{cdef}	96.91±0.62 ^{ab}	86.11±0.53 ^{ab}	39.84±0.22
		Plastic layer	0.21±0.01 ^{hi}	2.47±0.62 ^c	5.56±1.07 ^{cde}	95.06±1.63 ^{ab}	87.04±1.07 ^{ab}	42.34±1.78
	16 °C	Without	0.66±0.02 ^c	4.94±1.63 ^{abc}	6.17±0.62 ^{cd}	93.83±0.62 ^{ab}	77.78±1.07 ^{bcd}	39.77±0.27
		Plastic layer	0.45±0.04 ^{def}	3.09±1.23 ^c	3.70±1.07 ^{cdef}	96.30±1.07 ^{ab}	85.19±1.07 ^{ab}	39.62±1.04
	26 °C	Without	0.65±0.02 ^c	4.94±1.23 ^{abc}	6.17±0.62 ^{cd}	93.83±0.62 ^{ab}	77.81±1.07 ^{bcd}	39.47±0.42
		Plastic layer	0.52±0.08 ^{cde}	4.32±0.62 ^{abc}	4.32±1.63 ^{cdef}	95.06±1.63 ^{ab}	82.41±0.53 ^{abc}	39.57±0.33
7days	5 °C	Without	0.68±0.03 ^c	4.32±0.62 ^{abc}	4.94±0.62 ^{cdef}	95.06±0.62 ^{ab}	84.26±0.53 ^{ab}	40.39±0.73
		Plastic layer	0.60±0.02 ^{cd}	3.70±1.07 ^{bc}	6.17±0.62 ^{cd}	94.44±1.07 ^{ab}	84.57±0.62 ^{ab}	39.45±0.35
	16 °C	Without	1.28±0.07 ^a	7.41±1.07 ^a	9.88±1.63 ^b	90.12±1.63 ^{cd}	71.30±3.74 ^{de}	39.52±0.31
		Plastic layer	0.99±0.13 ^b	5.56±1.07 ^{abc}	6.79±0.62 ^c	93.21±0.62 ^{bc}	80.56±0.53 ^{bcd}	39.49±0.28
	26 °C	Without	1.32±0.08 ^a	6.79±1.23 ^{ab}	12.96±1.07 ^a	87.04±2.83 ^d	66.05±0.62 ^e	38.41±0.57
		Plastic layer	0.94±0.08 ^b	4.32±0.62	9.88±1.63 ^b	88.89±1.07 ^d	72.84±3.75 ^{cde}	39.78±0.77
Significance			**	*	**	**	**	NS

Means having different letters at the same column in each classification are differ significantly(P<0.05).

* = (P<0.05),

** = (P<0.01);

NS= Not significant.

Table 7: Economic efficiency of eggs (EE) ($\bar{X} \pm SE$) of Inshas layers as affected by storied periods, temperature levels and covering system at 42 weeks of age.

Items	Number of egg	Price/ egg (LE)	Total revenue (LE)	Number of chick hatch	Price/ chick (LE)	Return	Net return	EE %
<i>Effect of storage period:</i>								
1 day	630	0.90	567	550	1.5	824.99	257.99	145.50
4 days	630	0.90	567	521	1.5	781.70	214.70	137.87
7 days	630	0.90	567	483	1.5	723.87	156.87	127.67
<i>Effect of temperature levels:</i>								
5 °C	630	0.90	567	547	1.5	821.11	254.11	144.82
16 °C	630	0.90	567	511	1.5	767.06	200.06	135.28
26 °C	630	0.90	567	495	1.5	742.30	175.30	130.92
<i>Effect of cover system:</i>								
Without	945	0.90	850.5	757	1.5	1135.13	284.63	133.47
Plastic layer	945	0.90	850.5	797	1.5	1195.38	344.88	140.55

1- Total revenue = Egg number X Price/egg (LE)

2- Return (LE) = Chick number X Price/chick (LE)

3-Net return /treatment (LE) = Return -Total revenue (LE)

4-EE = Net revenue/treatment (LE) / Total revenue (LE).

Table 8: Economic efficiency of eggs ($\bar{X} \pm SE$) of Inshas layers as affected by interaction between storied periods, temperature levels and covering system at 42 weeks of age.

Interaction effect			Number of egg	Price/egg (LE)	Total revenue (LE)	Number of chick hatch	Price/chick (LE)	return	Net return	EE %
Storage period	Temperature levels	Cover system								
1 day	5 °C	Without	105	0.90	94.5	94	1.5	141.45	46.95	149.68
		Plastic layer	105	0.90	94.5	94	1.5	141.03	46.53	149.23
	16 °C	Without	105	0.90	94.5	88	1.5	132.71	38.21	140.43
		Plastic layer	105	0.90	94.5	92	1.5	138.54	44.04	146.60
	26 °C	Without	105	0.90	94.5	87	1.5	131.24	36.74	138.88
		Plastic layer	105	0.90	94.5	93	1.5	140.00	45.50	148.15
4 days	5 °C	Without	105	0.90	94.5	90	1.5	135.62	41.12	143.52
		Plastic layer	105	0.90	94.5	91	1.5	137.09	42.59	145.07
	16 °C	Without	105	0.90	94.5	82	1.5	122.50	28.00	129.63
		Plastic layer	324	0.90	94.5	89	1.5	134.17	39.67	141.98
	26 °C	Without	324	0.90	94.5	82	1.5	122.55	28.05	129.68
		Plastic layer	324	0.90	94.5	87	1.5	129.80	35.30	137.35
7 days	5 °C	Without	324	0.90	94.5	88	1.5	132.71	38.21	140.43
		Plastic layer	324	0.90	94.5	89	1.5	133.20	38.70	140.95
	16 °C	Without	324	0.90	94.5	75	1.5	112.30	17.80	118.83
		Plastic layer	324	0.90	94.5	85	1.5	126.88	32.38	134.27
	26 °C	Without	324	0.90	94.5	69	1.5	104.03	9.53	110.08
		Plastic layer	324	0.90	94.5	76	1.5	114.72	20.22	121.40

1- Total revenue = Egg number X Price/egg (LE)

2- Return (LE) = Chick number X Price/chick (LE)

3-Net return /treatment (LE) = Return -Total revenue (LE)

4-EE = Net revenue/treatment (LE) / Total revenue (LE).