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## **FEASIBILITY REPORT FOR 5000 QUAILS FARMING**

### **Preamble**

Quails farming may be considered as a potential activity for income generation and self employment by the rural and peri-urban youth. A feasibility report has been prepared to highlight the scientific and marketing aspects of the activity. The total capital involved in the activity comes to Rs.1,079,380, covering purchase of 2000 sq feet land, purchase of machinery, construction of a store, office, shed and bathroom. Rs.158,380 will be the total capital cost if the person possesses land and appropriate building for the activity. An operational cost of Rs.168,000 will cover the cost of chicks, labor, feed and miscellaneous expenditures. Nine flocks per year are expected to be produced, with 5000 birds per flock, valuing Rs. A monthly return of

The quail farming is an activity of livestock sector having the potential of graduate entrepreneurship and self employment for the youth of the country. The University of Agriculture Peshawar has been using it for teaching to the graduate (Doctor of Veterinary Medicine) studies, Postgraduate (M Sc Hons/PhD) research and a tool for poverty alleviation and self employment. The activity is being run under a revolving fund to produce quails for sale at the University Campus and other consumers. Based upon our experience and data generated we are proposing the activity for propagation of the quails farming model through SMEDA, KPCCI, Prime Minister's Youth Loaning and assistance of other donors.

Under the proposed model, 10 flocks of birds will be reared annually on the same premises of the farm. Quails will be sold to traders and the whole seller markets in the urban areas. Quails meat will be directly sold to the hotels inside the country. These birds are marked for meat purpose to the common masses. The quail chicks will be purchased from private hatcheries. The entire specific requirement will be met by temperature control, feeding and drinking system, which will be monitored by the concerned staff. After marketing of broiler at 30th day of age the quail house will be given 3 days for the preparation to receive the new flock. During this week, proper cleaning, washing, white washing, disinfection and fumigation will be performed prior to the arrival of the new flock. During flock rearing, strict measures for bio-security will be observed at the unit. In the last ten years, the little known Japanese quail [*Coturnix Japonica*] has been introduced to the Pakistan as an alternative avian species in the progressing of poultry industry to mitigate chronic protein deficiency among the Pakistani population.

### **Experience of UA Peshawar**

Several studies were conducted at the University of Agriculture, Peshawar to study the feed conversion ratio, supplementation of antioxidants, growth pattern, breeding efficiency and effects of aflatoxins on economic parameters and other aspects. Effect of aflatoxin B1 on liver histopathology and serum biochemistry of Japanese quails was studied. It was concluded that AFB1 is capable of inducing clinico biochemical reactions and alterations in different organs when fed to quails in different concentrations. Another study investigated the effect of organic acids on the performance of Japanese quails and found that net return was significantly higher by the supplementation.



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In the Japanese quails, the effects of natural mating and artificial insemination were compared on productive and reproductive parameters, and survivability of young chicks. Natural mating was allowed in quails in group A and B with male/female ratios of 1/3 and ¼ respectively, while artificial insemination was practiced in group C with male/female ratio of 1/6. Mating ratio and artificial insemination affected egg production significantly in all groups by showing higher egg and chick weight (10.98g, 7.83g) as well as higher hatchability for group A while significantly higher fertility in group C. However, egg shell weight and survivability of hatched chicks remained unaffected among the groups. It was concluded that artificial insemination showed good results in Japanese quails in term of least fertility related problem as compared to natural mating.

A study was conducted to compare the effect of different semen extenders on quail eggs fertility. A total of 120 mature female quail breeders were divided into 4 groups of 3 replicates each containing 10 birds. Mean fertility and hatchability were significantly higher for group A among the different extender groups. However, semen extenders did not affect ( $p \geq 0.05$ ) egg production, egg weight, chick weight and survivability. Significantly highest motility and live sperm count were observed for group A at different time intervals. Lowest cost per chick was recorded for group A followed by B, D and C. It was concluded that proctodeal gland foam extender was found to be very effective for fertility, hatchability, sperm motility and count and as well as economical in terms of cost per chick.

### **Expected impact**

1. A source of self employment for the youth with higher monetary returns
2. A source of alternate source of meat for the local population and export
3. A candidate for a new chain of restaurants with cheaper source of meat
4. A tool for food security of the nation

### **Personnel:**

1. Mr Rafiullah Khan, Lecturer, [drkhan83@gmail.com](mailto:drkhan83@gmail.com)
2. Prof Sarzamin Khan, PI, Rabbits Project; [dr.zaminaup@gmail.com](mailto:dr.zaminaup@gmail.com)
3. Prof M Subhan Qureshi, Dean; [drmsqureshi@aup.edu.pk](mailto:drmsqureshi@aup.edu.pk)

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## Experimental quails at UA Peshawar

	
<p>Maggots propagated for poultry feed development at UAP</p>	<p>Use of Chlorine dioxide in drinking water improved quails gut function</p>

### Cost estimate (Pak Rs.)

#### LAND & BUILDING

Space Requirement: The land requirement for this proposed project is 1000 sq ft which would cost Rs.500,000. Details for civil works are as follows:

**Machinery & Equipment Requirement:** Various types of farm equipment are needed for feeding, drinking and handling the birds. List of farm equipment, which will be needed, as under:

#### Production Assumptions

Number of Flocks per year	9
Number of Birds per Flock	5000
Number of Sheds	1
Time required per Flock (Days)	30
Lag time required per Flock (Days)	4
Total Annual Production Capacity	9
Average weight per bird (g)	110
Shed Space Required per Bird (Sq.ft.)	0.2
Sale price growth rate	10%
Production capacity utilization	100%



# Dairy Science Park



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## Capital cost

Investment	Rs.
Land	500,000
Building/Infrastructure	421,000
Machinery & equipment	196,380
Office equipment	37,000
<b>Total Investment</b>	<b>1,079,380*</b>

If the land is available, the cost will be reduced to 579,380; if the building is also available, the cost will be further reduced to 158,380

## Operational cost

Investment	Rs.
Cost of 5000 day old chicks	60,000
Cost of 40 bags of feed @2200	88,000
Labor	10,000
Miscellaneous	10,000
Total cost on one flock	168,000
Cost on 9 flocks	1,512,000

## Predicted profitability (Pak Rs.)

Income through sale of one flock of 5000 birds @ Rs.50	225,000
Price of 9 flocks	2,025,000
Cost	1,512,000
Net profit per annum	513,000
<b>Profit per month</b>	<b>42,750</b>