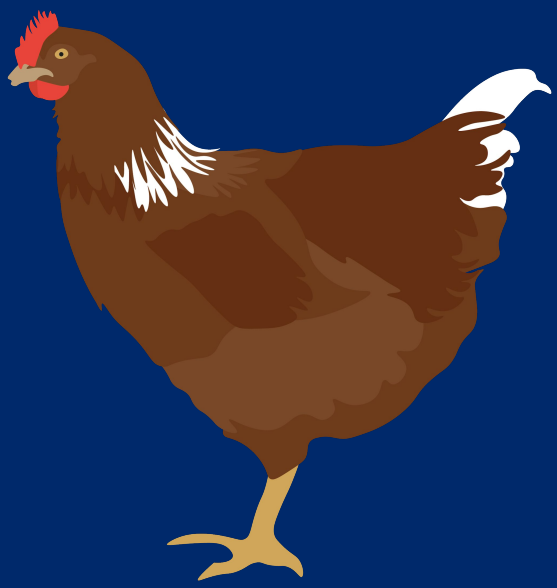


How to establish Backyard Poultry (BYP) unit with desi birds?

A guide to establish a piloted and easy to upscale Prototype with Pure Desi birds with 10 mother stocks (Free range rearing)

This playbook has been designed for PRADAN

Primary user: Farmers, Entrepreneurs
Secondary users: CSOs, Secondary Value Chain Entrepreneurs, Government Depts, Funding Agencies

What need/pain point is this playbook addressing?

This playbook was created using **PRADAN's** resources

This playbook aims to introduce farmers to a ready to replicate Prototype of BYP with Desi poultry at a household level. This BYP model has a traditional and cultural association with rural communities across India. This Playbook is an exposure to critical intervention support as piloted by PRADAN, which farmers can learn to understand that desi bird is also remunerative.

The implementation of this Playbook has to be accompanied with quality training and demonstration after the introduction of the topic through this Playbook.

Why Desi Birds?

- Does not require a high investment
- Less drudgery
- Easy to adapt as an entry point activity
- Native bird is more climate resilient
- More disease resistance compared to other breeds
- Can be adopted by ultra-poor households including destitutes and vulnerable sections of the population
- Cultural and Traditional Association
- Affordable source of nutrition for the Household
- Premium price and demand in the market

Benefits to the Stakeholders

FARMERS	- Provides supplementary income - Better nutritional security to the household - Easy for women farmers to adapt - Prospect for collective marketing and increased volume of production - Reduces ritual expenditure
PASHU SAKHI/PRANI MITRA Community Livestock Service Providers	- Service based livelihood option within the village/gram panchayat - Exposure to local market ecosystem
CSO/Government Department/ Implementing Agency	- Easy implementation model with low investment - An effective source of livelihood activity for the ultra poor households - Sectoral change is more visible
FPO/CLF/ Cooperative Society/ Entrepreneur	- Multiple opportunities of business engagement in a single value chain - Outreach opportunity to the farmer community as well as market - selling input and marketing output - Scope of service provision to the farmers

Infrastructure support cost (design, estimate and specification)

Particular	Quantity	Rate	Amount (Rs.)
Azola Bed (10x4) or Napier stem	1	300	300.00
Backyard Fencing net	1	500	500.00
GI wire net for BYP shed (1/3 bundle)	1	1250	1250.00
Bamboo, Nail & Wire	1	250	250.00
Brooding - Bulb, copper wire, holder etc	1	250	250.00
Creep feeder (Tapa)	2	210	420.00
Hatching unit	4	100	400.00
Lime (Kg)	2	30	60.00
Pre-starter feed (Kg)	10	40	400.00
Drinker (2) & Feeder(2)	4	400	1600.00
		Total	5,430.00

What steps does this solution take?

Step 1 Critical Interventions	Step 2 Additional Interventions
1. Age-wise keeping arrangement in shed 2. Backyard fencing 3. Brooding arrangement 4. Vaccination & de-worming 5. Stall feeding of chicks (1 month) 6. EVM- immunity booster, de-wormer, diarrhea check, cold treatment	1. Use feeder & drinker 2. No. of clutches may increase upto 6 per hen annually and decrease mother bird accordingly 3. Additional feed production like azola, super napier, vegetable to reduce feed cost 4. Collective marketing

Timeline

Activity	Time Period	Priority
Age-wise keeping arrangement in shed	7-8 labour days	Before placing bird
Backyard fencing	2-3 labour days	Before placing bird
Placing of mother bird	0-10 days	Quality Breed Selection
Brooding chicks for 10 - 15 days	7 weeks after placing mother	Clutch wise separate brooding
Vaccination and de-worming	Regular activity as per schedule	
Stall feeding of chicks	0-30 days after chicks production	Clutch wise stall feeding
EVM	Regular activity as per need	

Step 1:

Age-wise keeping arrangement in shed

- Desi bird rearing with mixed age group demand age-wise keeping arrangement
- Design shed structure according to age-wise keeping - (1)Laying & hatching setup; (2) Brooding & chicks stall feeding setup and (3) Separate setup for grower & big birds
- Mobilise raw materials for shed construction
- Materials to be arranged. Procure materials:
    - feeder, drinker
    - baskets for egg laying & hatching
    - liming after completion of shed construction
    - setting brooding equipments
- Period required for construction : **10 Days**
- Liming shed after completion and continue in every two months

Step 2:

Backyard Fencing

- **Low cost fishnet/ green net** and **Bamboo** is suggested for Backyard Fencing
- Backyard Fencing is necessary to protect bird from predators, diseases and any other external hazard
- Ensure backyard fencing to protect crops from desi birds

Step 3: Selection and Placement of Mother Birds

Selection of mother bird is important for better production. Select mother bird based on the following criteria

- Bird laying more than 12 eggs and hatching more than 60% of egg laid per clutch.
- The hen has adequate mothering nature like doesn't damage own eggs and chicks

Maintain maximum one cock per 6-7 mother birds and change the cock every year

Step 4:

Brooding and stall feeding of chicks

- Brooding is necessary for chicks till 2-3 weeks. Maintain 33 degree Centigrade in 1st week and reduce gradually.
- Use electric bulb or any other brooding arrangement of maintaining temperature.
- Stall feeding of chicks till 30 days is essential to control mortality & predation; maintain proper care & vaccination.
- Chicks unable to scavenge till 150- 200 gm body weight.
- Use clean feeder and drinker for stall feeding.

Step 5:

Vaccination and De-worming

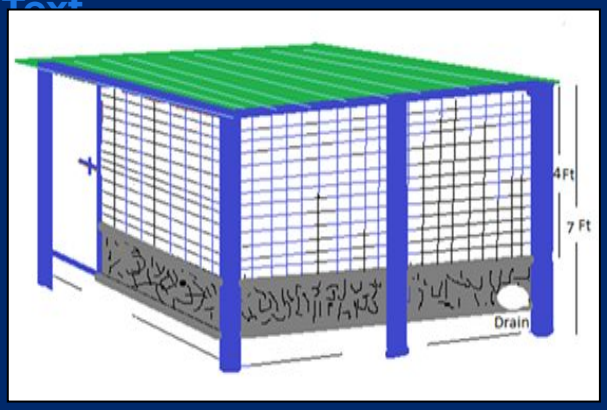
- Provide Lasota vaccination and deworm to chicks at 7 days age-old.
- Provide Fowl-pox and R2B vaccine after 60 days age-old and continue in every six months
- Provide R2B vaccine to all bird more than 200 gm in October- November is necessary to prevent bird from RD disease.
- Continue deworming of birds in every 3 months

Step 6:

EVM- immunity booster, dewormer, diarrhea check, cold treatment

- Provide immunity booster to **weak/diseased/new bird/chicks**
- Provide **turmeric powder/chiraita** water every 15 days for deworming
- Provide diarrhea check, and other products as per necessity
- Provide **Plox** to prevent fowl pox as per schedule

BYP Sheds:



The above arrangement/support would be necessary implementation with farmer's own suitable space and contribution.

Farmer could construct mud-shed based on low input investment. Still, concrete BYP shed could be constructed based on project support or farmer's own interest.

Constructing concrete shed is not mandatory intervention, but significantly decreases drudgery and maintenance. Age-wise keeping arrangement is necessary like 1. Laying & hatching, 2. Brooding & chicks stall feeding, 3. Other grower & big bird.

Unit cost of BYP shed- 15X10 sqft.

Sl	Component	Unit	Rate	Total Cost
1	Roof: asbestos of 10ft long & 3.5 ft width	5	620	3100
2	Door and hinges, windows (lump sum), Net and wire & Backyard fencing net	1	3000	3000
3	cement packet for cemented floor and wall plaster	5	390	1950
4	C.B. brick (foundation & wall)	0.5	7500	3750
5	Sand	0.5	1800	900
6	Stone chips- 20 dhama	20	30	600
7	Wall, Raised bed, foundation, flooring and other construction work- 1 Mason- 3 days	3	500	1500
8	Wall, Raised bed, foundation, flooring and other construction work- 3 labour- 9 days	9	250	2250
	Total			17050

What caveats/disclaimers do we need to keep in mind?

Problems	Solution
Why is deworming necessary?	Regular deworming of birds reduces parasite load, stress and maintain adequate weight gain of birds
What are the protocall to be followed for vaccination?	Cold chain should be maintained. The vaccine should be stored in cool box maintaining 2-8 degree. Utilize vaccine and administrate properly within 2 hours of opening them.
Why is it important to vaccinate birds before outbreak of the disease?	Vaccination is a preventive measures. It helps to build immune system. After disease strikes, the virus load is much higher and break the resistance power of the body.
How to identify desi birds?	Desi/ local birds have natural hatching and brooding capability. Whereas, the Kroiler/dual purpose colour birds don't have such ability.
How to reduce feed cost and provide natural feeds to the birds?	Desi birds consume leafy vegetables, cabbage, Azola, soft leaf of grasses like napier, worms like termite etc. It is a natural scavenger. Farmer can produce those in their backyard.

References (Links to pdfs or videos)

https://youtu.be/BxSQ6EPNd3I?si=3p3J7iUdTSOhymtZ

What resources financial are required to implement this playbook?

Initial infrastructure/ set-up cost:-INR 5,500/-

Working capital required:- **INR** 7,000/-

Do you have any other remarks /suggestions?

- Farmer should gain exposure to understand that Desi bird also very remunerative.
- Quality training demonstration is necessary to implement this model.
- Investment at HH level on adaptation can improve practices.

Cost Economics of one year

Considerations in steady state

Particulars	Quantity/Rate/Cost
# Cock	2
# Mother hen	10
# Eggs per clutch @ 13	130
Clutch interval (months)	4
Duration of calculation (months)	12
# Clutches in a year	3
# total eggs	390
# of eggs for hatching (80%)	312
# Eggs hatched (70%)	225
# Chicks survived till 1st month in stall fed conditions (80%)	180
Cost of Lasota & IBD vaccination, one each @ Rs 2	719
Cost of de-worming med @ Rs 1 per bird, 1 time	180
Cost of other vit. + antibiotics powder @ Rs 1 (LS)	180
Feed avg. 20 gm per day for 30 days (KG)	108
Feed cost Rs 35 per kg	3774
Sub-total:	4852
# Birds survived till 3rd months (90%)	162
Cost of Lasota & IBD vaccination, one each @ Rs 2	647
Cost of de-worming med @ Rs 1 per bird (twice)	323
Cost of Fowl pox & R2B vaccination @ Rs 2, once each	647
Amt of feed in kg, avg. 30 gm per day for 60 days, rest scavenging (KG)	291

Cost Economics of one year

Considerations in steady state

Particulars	Quantity/Rate/Cost
Feed cost Rs 35 per kg	10190
Sub-total:	**11807**
Cost for parent stocks	12
4 times de-worming to parent stocks, @Rs 1 per dose	48
4 times RD vaccines to parent stocks, @Rs 2	96
2 times fowl pox, @Rs 2	48
Feed consumption, 40 gm per day for 240 days (K G)	115.2
Feed cost Rs 35 per kg	4032
Sub-total:	4224
Total cost Rs	20883
# Birds survived till 5-6 months, saleable age (90%)	146
Avg body weight gained @ 1.25 kg per bird by consuming 2.4 kg feed, KG	1.25
Total live weight (kg)	182
Sales price per kg Rs	310
10% Commission for marketing services	31
Sales price per kg realized by farmer Rs	279
Total sales value realized by farmer Rs	50766
Net profit realized by farmer, apprx Rs 1000 per month:	29883

References (Links to pdfs or videos)

Contact PRADAN's Resource Persons for further information on the BYP Prototype model

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