



Data-driven intensive shrimp farm management



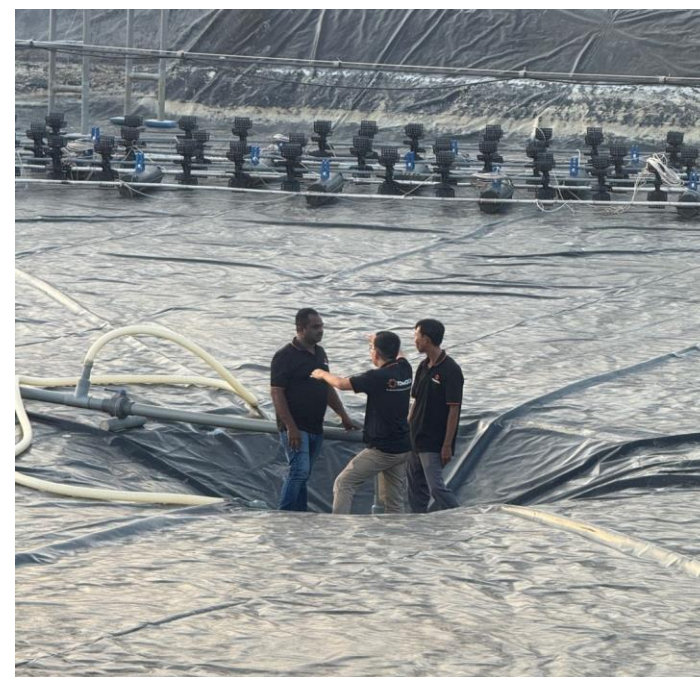
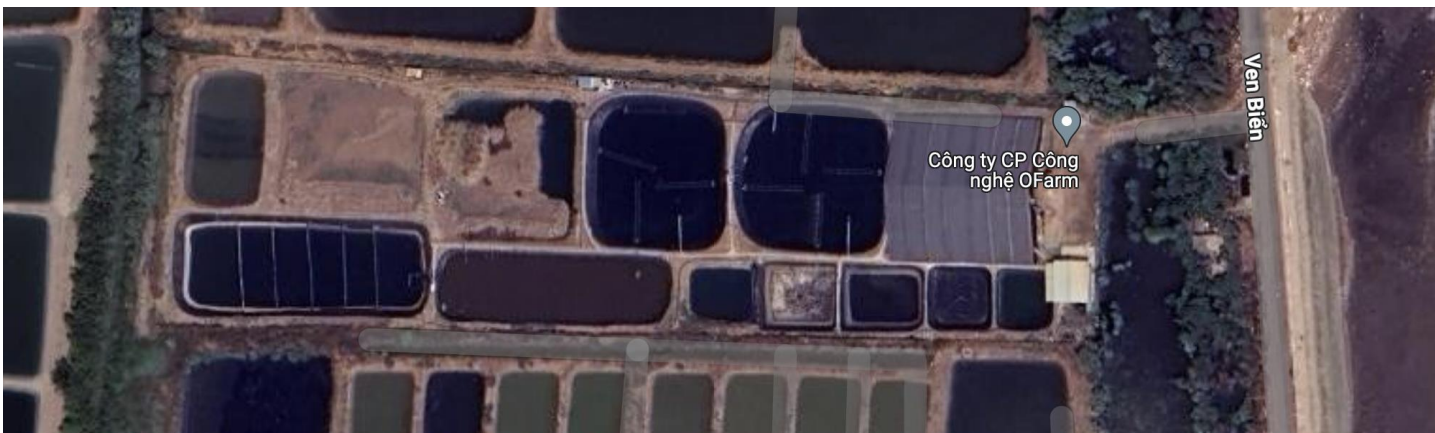


Intensive shrimp farms in Vietnam

MPLA | 300 ha | 840 round ponds **MPKG** | 600 ha | 800 square ponds

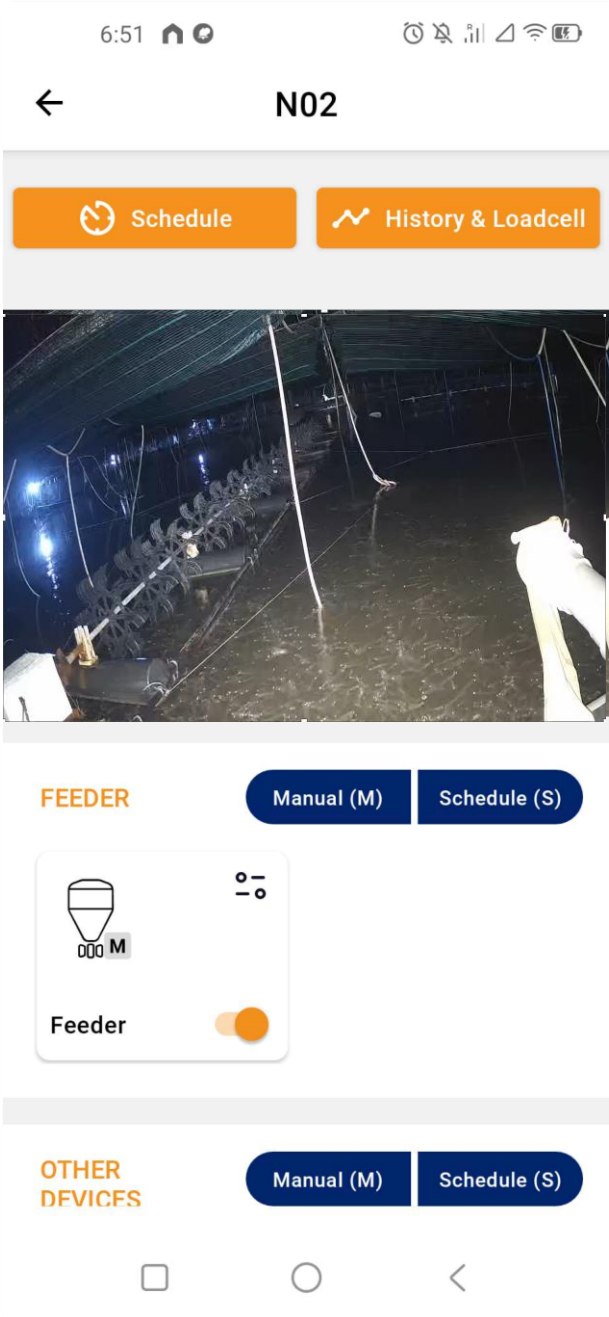


OFarm | 2,2 ha | 3 square ponds, indoor nursery ponds





Automation





MPLA | 300 ha |
840 ponds | 5000 devices

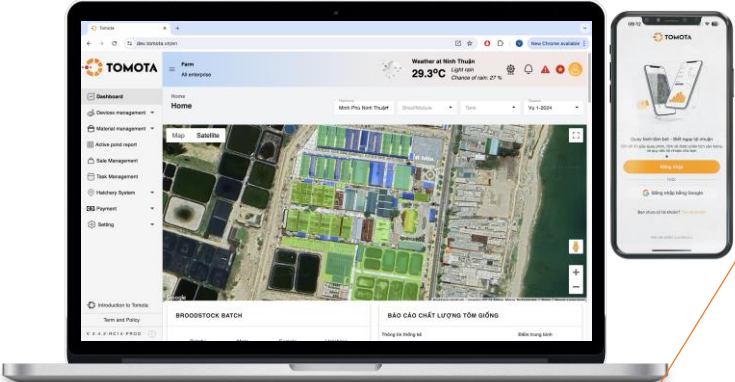
MPKG | 600 ha |
810 ponds | 5100 devices

- ❑ 4 staff replacing hundreds of workers on night shifts
- ❑ 30% increase in labor productivity
- ❑ 300 cases/month/farm of instrument failures detected
- ❑ 10% decrease in electricity consumption



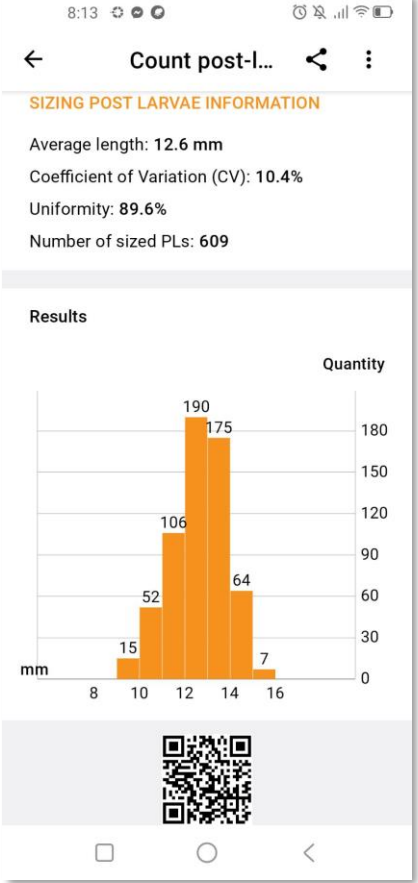
Post larvae quality management

Hatchery Management System



- 1 Broodstock quality
- 2 Spawning method
- 3 Hatching rate
- 4 Nauplii quality
- 5 Production history
- 6 Luminescent incidence
- 7 Pathogen screening results
- 8 Visual assessment
- 9 Tolerance to environmental shock
- 10 Size of post larvae
- 11 Therapy history
- 12 QC warning

1	Broodstock quality
	Pathogen free status
	Origin
	Broodstock type (domesticated/wild-caught)
	Supplier
	Female average body weight
	Male average body weight
	Age at arrival
8	Visual assessment
	Hepatopancreas score
	Appearance score
	Deformity rate (%)
	Biofouling rate (%)
	Swimming & reaction
	Muscle-gut ratio





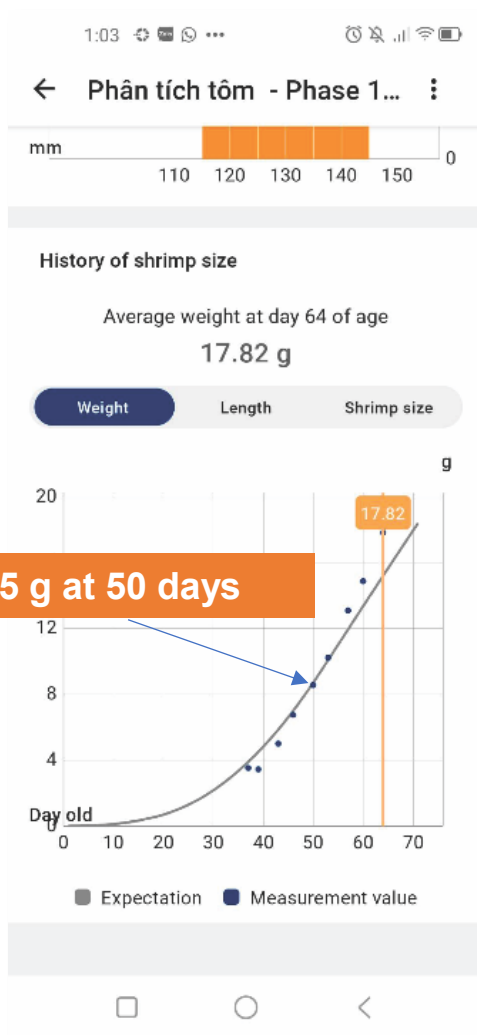
Stocking density's impact on growth



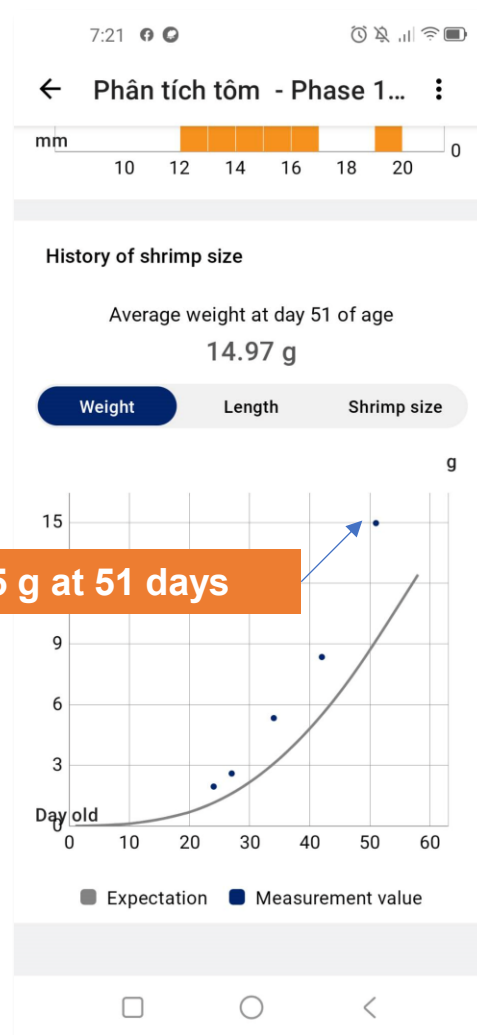
450 shrimp/m²



200 shrimp/m²



110 shrimp/m²



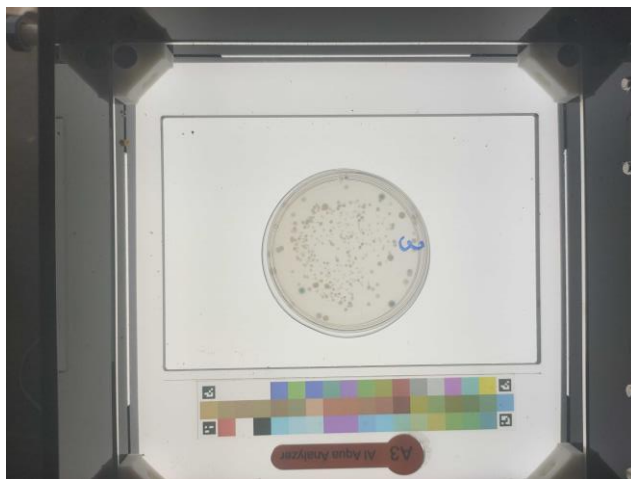
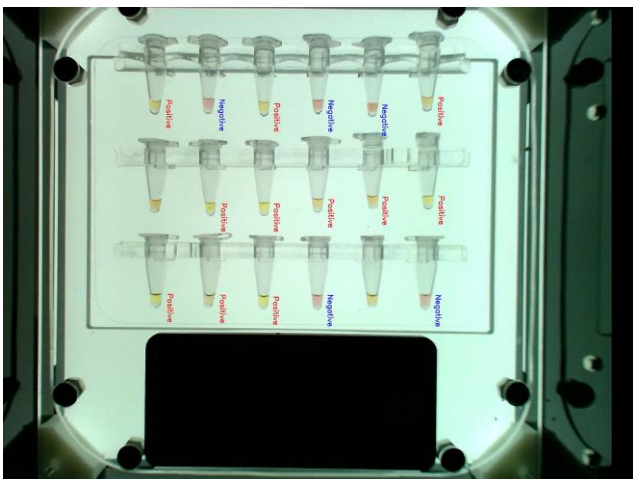
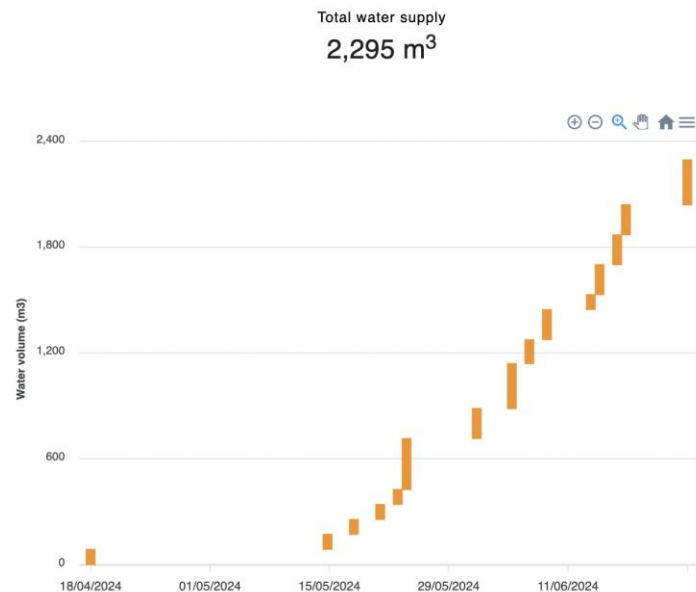
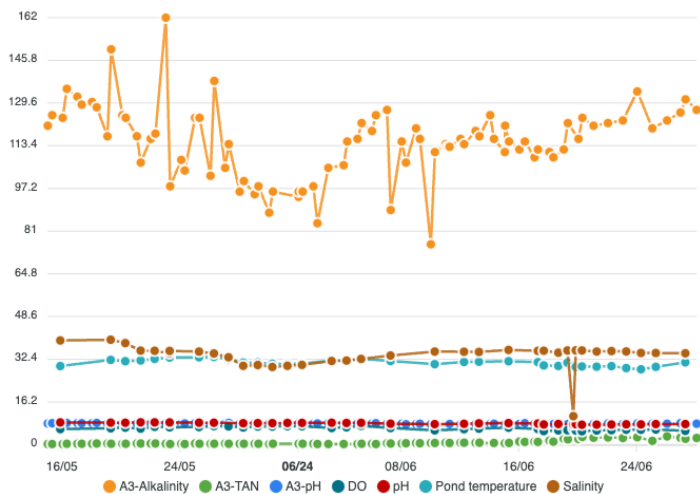


Density management by pond transfer / partial harvest





Water and disease management



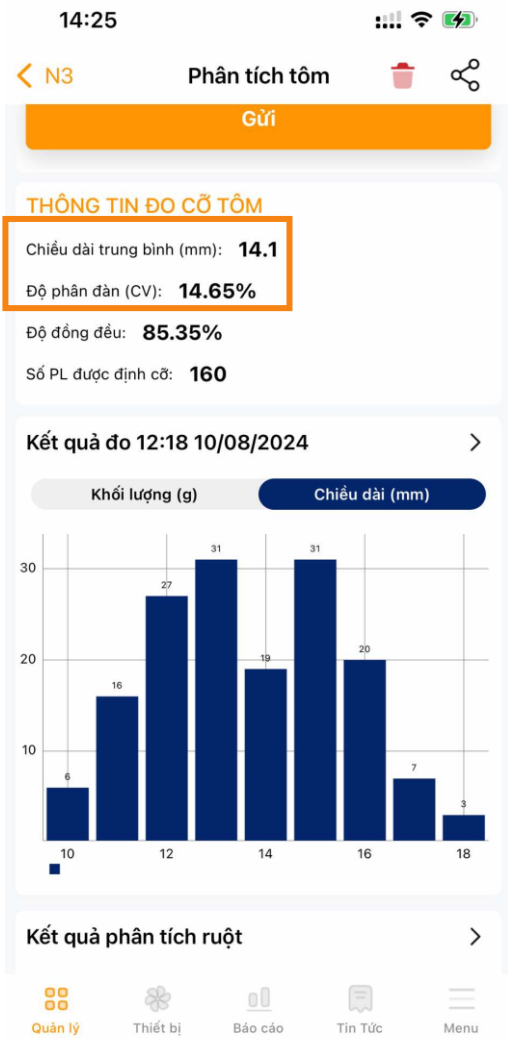
Plankton assessment, PCR, Isothermal nucleic acid amplification tests (iNAATs) and bacteriological tests

- Regular testing of water parameters and pathogens
- Onsite probiotic fermentation
- Daily water exchange < 5%

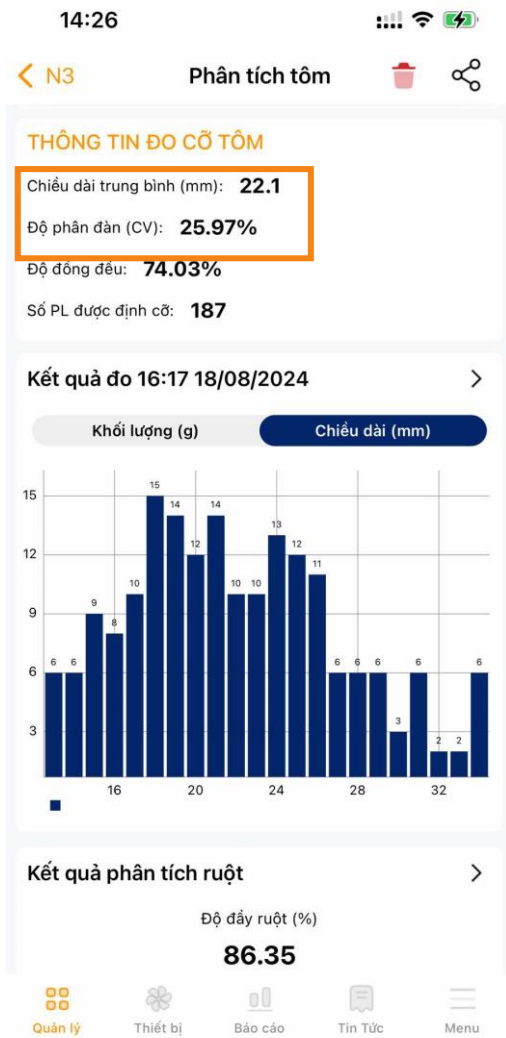


Disease management: EHP

DOC 6



DOC 16



DOC 33



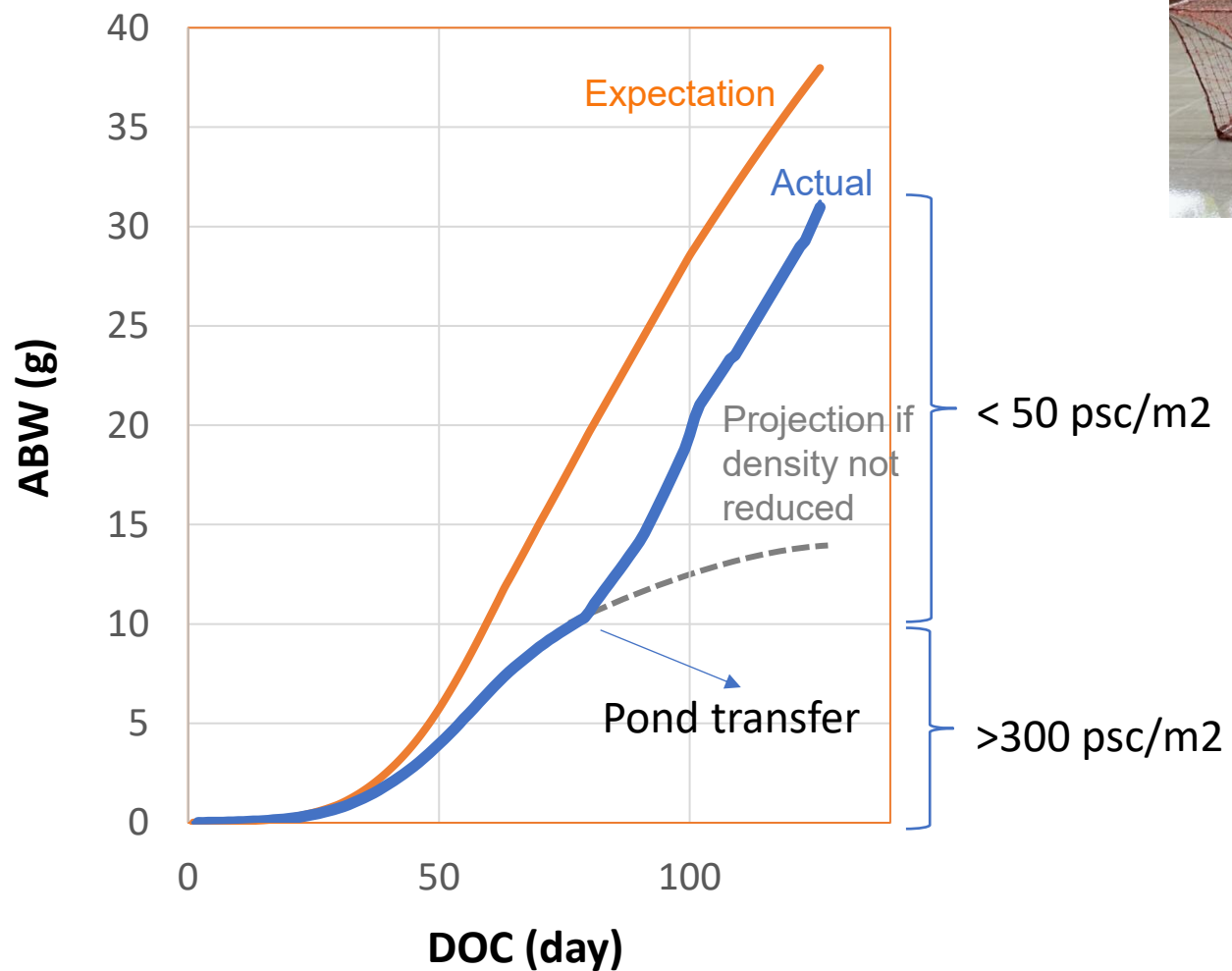
CV increased rapidly during nursery
Tested + EHP on DOC 33

CV tăng nhanh trong giai đoạn vào
DOC 33 test dương tính EHP





Coping with disease: EHP



OFarm



Coping with diseases: **TPD**

DOC 12
48.02%

DOC 14
43.98%, TPD +,

- Feeding + Herbal products

DOC 16
86.46%

DOC 30
92.41%

