



### Aquaculture in Egypt

- \* Managed by National Aquaculture Sector – Ministry of Agriculture and Land reclamation.
- \* Started two decades ago, their farms distributed mainly in the Nile Delta.
- \* It is the largest source of fish supply in Egypt , accounting for 51% of the total fish production of the country with over 98% produced from privately owned farms which are supervised by General Organization for Veterinary Services.

### Tilapia Production in Egypt

Egypt is consider the second producer for Tilapia after China •

1990 .....	25 000 Tons
1991 .....	115 000 Tons
2009 .....	200 000 Tons

While China

2009 .....	1 million Tons
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( including 80 000 Tons from Taiwan , province of China )

### Mullet Production in Egypt

The Global production of Mullet increased as follow :-

1997 .....	25 600 Tons
2003 .....	147 000 Tons

Most of the reported increase was a result of increased production from Egypt which is the largest producer internationally ( 92% in 2003 )

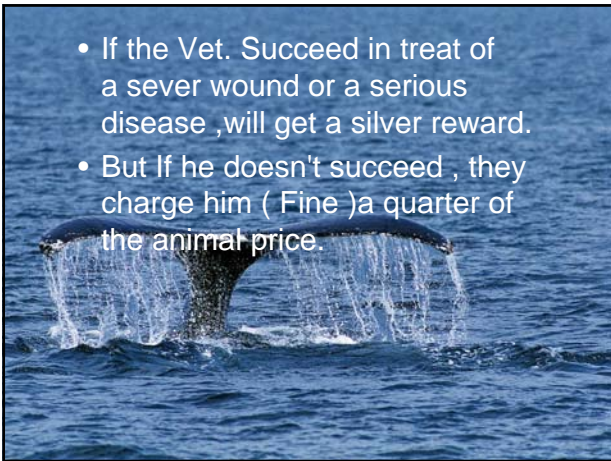
- \* Egypt does not have any notifiable disease , except for one of the Monogeneans ( parasite forms cysts on the skin , gills of the fish ) , listed in OIE Codes , it is non a Zoonotic disease.
- \* Egypt has no any problem with OIE , it is comply with its Standards , meets all its requirements , has ministerial decrees issued in accordance with its standards.

### Flash back

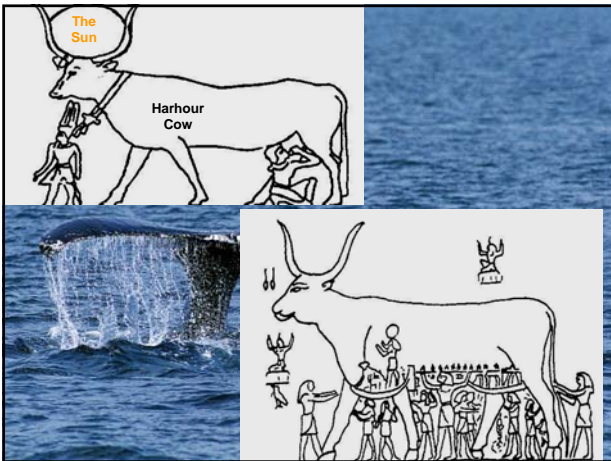
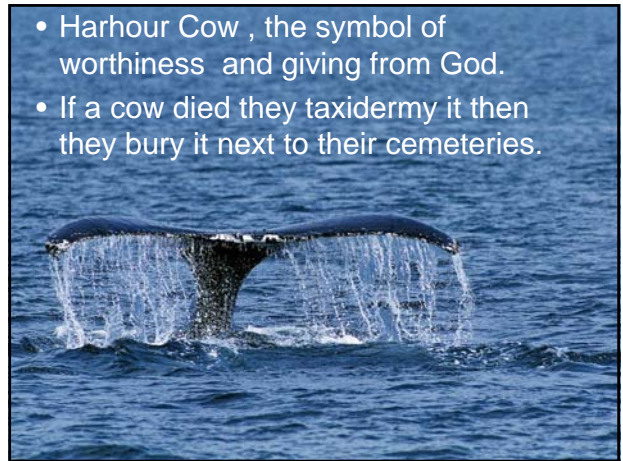
The people of ancient time  
( Pharaohs ) were interested in  
raising cattle , sheep and Gazelles

They were very keen to feed & treat  
them nicely , separate the diseased  
animals from the herd for treatment.

- If the Vet. Succeed in treat of a sever wound or a serious disease ,will get a silver reward.
- But If he doesn't succeed , they charge him ( Fine )a quarter of the animal price.



- Harhour Cow , the symbol of worthiness and giving from God.
- If a cow died they taxidermy it then they bury it next to their cemeteries.

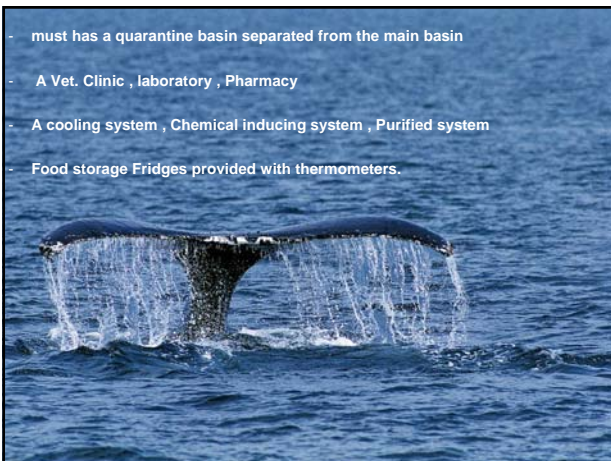


## 1- Dolphins show

### Permit Requirements

#### 1- Preliminary Inspection

- must comply with all requirements and criteria of welfare of the animals.



- must has a quarantine basin separated from the main basin
- A Vet. Clinic , laboratory , Pharmacy
- A cooling system , Chemical inducing system , Purified system
- Food storage Fridges provided with thermometers.

#### 2- post inspection

- on the arrival of the animals
- by Wildlife vets. to check
- both cites and health & vaccination certificates ,
- Temp of the basin water
- Temp of the Fridges
- Preliminary health examination which done by their employed Vet. , Blood , feces , saliva analysis.

-After issuing a license to the owner of the premises for one year which has many conditions he / she has to follow otherwise his/ her license is going to be terminated , these conditions include :

- 1- the premises under supervision of General Organization for Vet. Services.
- 2- Record all vaccinations & medications given to the animal ( s ).
- 3- Immediate notification of any disease to the Vet. Authority ( General Organization for Vet. Services)
- 4-The premises is subjected for a periodic checkup by both Wildlife & Quarantine Vets. ( at least one checkup every six months )

• **Challenges :**

- Although there are :
  - \* Lack of Manpower ( staffing )
  - \* Lack of fund.
  - \* Lack of communication with the private bodies.

Wildlife staff can overcome this problem by immediate reporting , taking action toward it.

- \* Training of Vets and paravets is required.

**2- Migratory Seabirds ( Fish eating Birds )**

During Autumn migration season ( September & October )

Among the migratory birds that migrate from Europe & Asia in the main flying way crossing the Mediterranean sea passing Zaranik Protected area , North Sinai – Egypt flying toward Africa, there are a considerable number of different species of seabirds some of them wintering in the Egyptian lakes they might be act as germs carrier

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Fish eating Birds play an important role in transfer and disseminating germs to the fish species.

Example:-

Trematodes ( Diogeneans ) ..... Clinostomum

Meracidium comes from the infected seabird with dropping & saliva

..... To certain snail and stay for few days ( 1<sup>st</sup> intermediate host)

..... Cercaria migrate the snail & invade the fish

..... Forms yellow , orange cysts in skin , gills & muscles.

( Metacercaria ) ( 2<sup>nd</sup> Intermediate. host )

..... Fish eaten by seabird ( Final host )

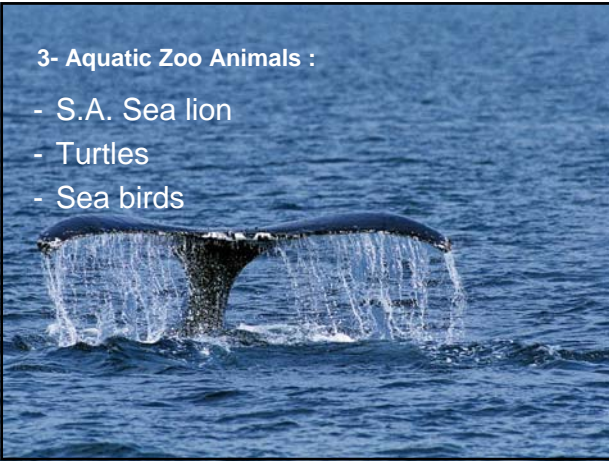
..... Repeat the cycle.

• **Challenges :**

- Although
  - \* Lack of Manpower ( staffing ).
  - \* No laboratory facilities.
  - \* Lack of equipments.
- - Many birds can be caught while they were resting in the lake , Cloacal swaps and blood samples can be taken and send daily to the Animals Research Lab in Cairo ( 350 km. ) so, the Lab in turns can notify the Veterinary authority any disease came with the migratory birds.

3- Aquatic Zoo Animals :

- S.A. Sea lion
- Turtles
- Sea birds



Thank You

