INTENSIVE TROPICAL WILDLIFE [NON-DOMESTIC] PRODUCTION SYSTEMS

MODULE # IV
Unit # 17: Species Model-The Iguana
[*Iguana iguana*]

With contributions
by

Delila Alice Cabb
B.Sc.(Agric), M.Sc.(Trop. Anim. Sc. & Prod.)

By:

Gary Wayne "Dr. G" Garcia
Senior Lecturer in Animal Production
and
Coordinator The Open Tropical Forage-Animal Production Laboratory
[OTFAPL]

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Gary Wayne Garcia (2001)

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Module IV : Some Species Production Modeling

Unit 17 : A Reptile Species Model- The Iguana (*Iguana iguana*)

With contributions ----------1

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17.1 Learning Objectives of this unit are as follows:

1. to be able to describe the animal production factors affecting the iguana;

2. to understand the animal production coefficients and parameters for the iguana production and to see how this would relate to production of this species in captivity;

3. to become familiar with an approach to the intensification of iguana production.

17.2 How is this Unit Organized?

In this section / unit we would first attempt to tell you something about the life cycle of the green iguana, then we would introduce you to iguana housing and feeding.

17.3 Factors Affecting Iguana Production:

Remember that the iguana is a reptile !!!
It therefore requires artifical heat or sunlight.

17.4 Some specific considerations of these factors applied to Iguana Production in Captivity:

As the Iguana is a reptile what do you think would be some of the considerations for captive rearing?

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17.5 An approach at developing an Intensive Animal Production System for the Iguana:

CONSIDERATIONS FOR SPECIES PRODUCTION MODELLING

The Species: *Iguana iguana*
Common iguana
An egg laying reptile (lizard)

[I] The Objectives of the Production System or Model

(I) To get adult iguanas to breed in captivity

(2) To collect and incubate iguana eggs to produce hatchlings.

(3) To grow out the male hatchlings to market weight for meat.

(4) To grow out the female hatchlings to be used as replacement breeders.

(5) To use some of these replacement breeders for repopulating the wild

[II] The Species Life Cycle

LIFE CYCLE OF THE GREEN IGUANA (Iguana iguana):

The life cycle of the green iguana could be said to begin sixty (60) to sixty-five (65) days after mating, when the gravid female lays a clutch of fertile eggs. After an incubation period of about 90 days, a hatchling emerges from each egg. This young iguana, from one week after

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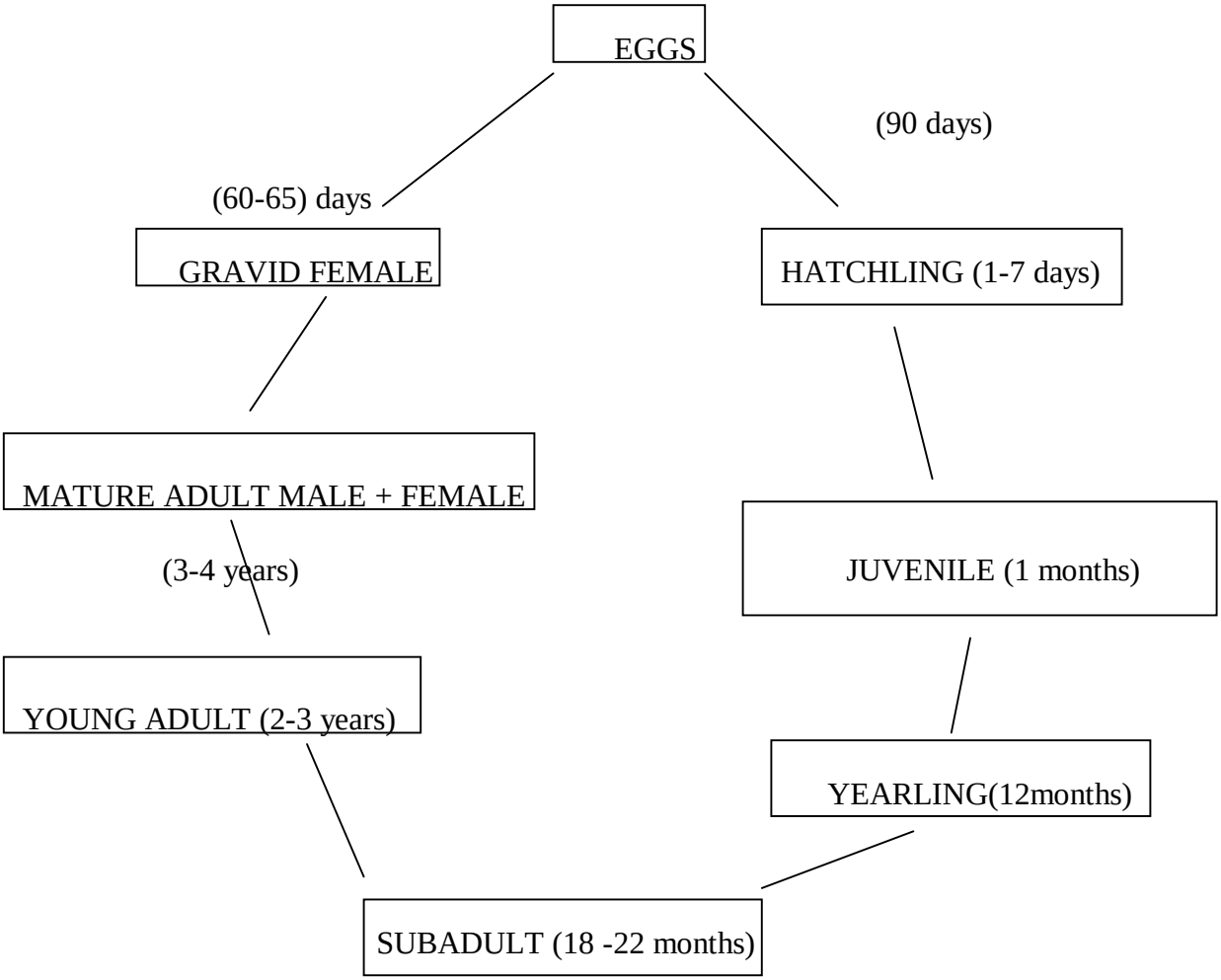
hatching to about seven (7) months of age, is classified as a juvenile. At twelve (12) months of age is then called a yearling. The next physiological stage that follows is that of the subadult. The age range for subadults ranges from 18 to 22 months. Young adults are two years of age. Most iguanas may not reach full maturity until the age of 3 to 4 years (Frye, 1995). Chart showing life cycle of the green iguana:



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Adult Mature Female + Mature Male
Eggs
Hatchlings
Juveniles
Yearlings/ sub adults

III] The Physiological States for the Production Flow

STAGES IN THE LIFE OF THE IGUANA
[FOR PRODUCTION PURPOSES]

You can start your production system with any of the following stages: **eggs, hatchlings, juveniles, yearling, adult male and adult female, gravid female.**

(a) eggs

- you can obtain females from the wild, during the period of March and April, when the female iguanas have eggs. After they lay the eggs, you could release the females into the wild.

(b) hatchling

- your farming can also be started with hatchlings These are one day old to 1 week old green iguanas. The hatchlings could be gotten from the Belize Zoo (whether these would be sold or given free of cost, the author does not know).

(c) juveniles

- These are young iguanas older than 1 week but not older than 7 months of age. Such young iguanas may also be obtained from the Belize Zoo or San Ignacio Hotel. The farmer might need to pay a price for the young iguanas.

(d) Yearlings

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- In Belize, we do not have any said place that would sell iguanas. This stage would probably be a bit difficult to obtain, unless one of the private production places, such as the San Ignacio Hotel or the Private Tourist Resort would have them on sale.

(e) Adults

- It would be easier to obtain these, particularly the females. Young adult males are easier to capture than the mature males. Adult males and females can be captured along the river banks.

(f) Gravid [PREGNANT] females -

These can be captured in the months of March and April just before they lay their eggs. Most persons tend to begin their farming with gravid females.

Yearling :

Egg uncubated ; Eggs incubating ; Hatchling ; Juvenile;

Adults Male and Females;

Gravid Females

[IV] Performance Coefficients or Growth Parameters

Birth Weight:	**10 to 12 gms**
Mature Body Weight:	
Male:	**4 to 8.5 Kg**
Female:	**1.5 to 4.5 Kg**
Growth Rate :	**3/4 ins per month** **0.58 mm / day for first 3 months**

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1 year	**0.6m (2 feet)**
2 years	**0.9 m (3 ft)**
Adult Male	**1.3 m to 2 m (4 to 6 ft)**

[V] Reproductive Parameters

Breeding Season:	**Beginning of Dry Season [4 to 6 weeks]**
Eggs Laid / Female:	**7- 88 eggs (40 average)**
Hatchability of Eggs	**90%**
Clutches / Season:	**1**
Male: Female	**1: 3 or 1: 4**
Age at First Breeding:	
Male	**1 to 3 to 4 Years**
Female	**18 months - 2 to 3 years**

[VI] Animal Specific Needs as influenced by the Factors Affecting animal Production

<u>Needs:</u> **<u>Housing</u>-**

Nesting Site
Incubator
Hatchling Enclosure
Grouing Juvenniles Enclosures
Growing Animals/ Adults Cages
Adult Breeding Cage

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Nutrition and Feeding-

FEEDING IGUANAS IN CAPTIVITY

ALL IGUANAS, NO MATTER WHAT AGE OR SIZE, ALL EAT THE SAME KIND OF FOOD. ALL IGUANAS EAT FRUITS, FLOWERS, LEAVES AND VEGETABLES.

WHEN FEEDING FOUR (4) OUT OF EVERY FIVE (5) PARTS OF FEED SHOULD BE YOUNG LEAVES. THE ONLY DIFFERENCE IS:

(1) the way the food is prepared (whether chopped, shredded, or pureed)

(2) the times the animal is fed

(3) Times vitamin/calcium supplement is given.

LIST OF PLANTS (FOOD) FOR GREEN IGUANAS

AVOCADO	BANANA	BASTARD CEDAR
BAY CEDAR	BREADFRUIT	CABBAGE
CALABASH	CANTALOUPE	CARROT
CASSAVA	COCOA YAM	CUCUMBER
BLACK MANGROVE	FIG (Ficus sp.)	GUAVA
CUSTARD APPLE	HIBISCUS	HOG PLUM
LETTUCE	MANGO	MAMMEE APPLE
MUSKMELON	PAPAYA	PAWPAW
PLANTAIN	PUMPKIN	RAIN TREE
SOURSOP	SPINACH	SUGAR CANE
SWEET ORANGE	SWEET POTATO	TRUMPET TREE
TWELVE O'CLOCK	WATERMELON	SQUASH

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PROVISION TREE SENSITIVE PLANT

RED GOMBOLIMBO LOCUST

HATCHLING:

It is normal for hatchlings not to want to eat for a few days just after hatching. Some may not eat for a week. This is normal. They do not eat, because the yolk (that they absorbed before they came out of the egg) is still keeping them full. Some hatchlings, on the other hand, will begin sampling food very early.

FEEDING HATCHLINGS daily:

(1) strained vegetables. Baby foods can be used in an emergency for baby iguanas that do not want to eat.
(2) pureed fruits and vegetables (use a blender if you have one)
(3) young leaves and fruits **(especially hibiscus and guava flowers) !!!!!!!**

Note: Iguanas should get 12 hours of sunlight for them to digest their food properly. Their body needs to get to a temperature of 30 degrees C for it to be able to digest (cook) its food.

FEEDING JUVENILES:

Juveniles should be fed twice daily or continuous availability. The food should be fine to medium chopped or shredded depending on the size. One small pinch of vitamin/mineral supplement per animal, no more than once a day should be given.

FEEDING ADULT IGUANAS:

FEED adults 5 times weekly.
What to feed?

(a) l leafy green vegetable
(b) 1 orange vegetable
(c) a bit of fruit
(d) calcium and vitamin supplement twice (x) per week.

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Table 1: Feeds Given to Iguanas

GREEN VEGETABLES	ORANGE VEGETABLES	FRUITS
green beans	carrots	figs
carrot	squash	mangoes
cabbage	sweet potato (cooked and mashed)	plums
snap peas	yams	bananas
okra		
green celery		

Some good protein source for iguanas include:
(1) boil peas
(2) chop beans
(3) boiled: white beans, red beans, black beans and kidney beans.

Health and Disease Controll-

MAJOR DISEASES AFFECTING IGUANAS

The major diseases affecting iguanas is malnutrition.
If iguanas are fed too much dog chow, they will grow very fast, but they will have deformed bones. Iguanas that are fed too much lettuce may not grow any at all, and will eventually die.

FEMALE IGUANAS

Females need to be fed diets rich in calcium, before the breeding season and during the breeding season. Females that are not fed enough calcium develop eggs, but after a few days, their body absorbs it again. Some females may not be able to lay the eggs,and later on may die as a result of egg

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retention. Others if they do lay the eggs, they might die as soon as they lay the eggs.

METHODS OF PREVENTION AND CONTROL

(1) FEED THE IGUANA PROPERLY
(2) REMOVE ALL STALE FOOD FROM THE CAGE
(3) DO NOT PUT OLDER ANIMALS WITH YOUNGER ONES
(4) WASH THE POOL DAILY.
(5) GIVE HATCHLINGS, JUVENILES, YEARLINGS AND GRAVID FEMALES MULTIVITAMINS ON A DAILY BASIS. TWICE PER WEEK FOR ADULT MALES.

(6) OBSERVE THE IGUANA(S) DAILY
- Is the iguana eating?
  - Is it very active?
- Is it behaving normal

BREATHING:
- Does the iguana have its mouth open?

EYES:
- Are the eyes alert?
- Are the iguana eyes wide open?
- Does the eyelid look swollen?

MOUTH:
- Is there swelling along the rim of the mouth?
- Is there any food, dirt, or any material along the edge of the mouth?
- Are there any lumps on the upper and lower jaws?

HANDS AND FEET:
- Are the toes swollen?
- Are there any remains of shed skin on the toes?

OVER THE BODY:
- Any cuts or swelling on the iguana's body?
- Any skin disease, lumps, or brown skin areas?
- Any limbs swollen?

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- Any signs of paralysis or inactivity?

STOOL (FAECES):

- Check for blood in the stool.
- Any signs of stains or smeared faeces around the vent?
- Is the vent swollen?

IF THE ANSWER TO ANY OF THE ABOVE QUESTIONS IS YES, THEN YOUR IGUANA(S) IS SICK. CALL A VET. OFFICER IF YOU DO NOT KNOW WHAT TO DO.

Reproductive Management-

[VII] Animal Behavior and Sociology

[VIII] Design of the Physical Environment Required

Nesting Site

Incubator

Hatchlings House

Juveniles (Post Hatchling)

Growing Animals

Breeding Adults

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[IX] Management Routines Required

- Daily

- Weekly

- Monthly

- Seasonally

- Annually

[X] Variable Inputs Required

[XI] Output Expectations of the Model/ Production Process Flow

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