

COTTONTAIL 101

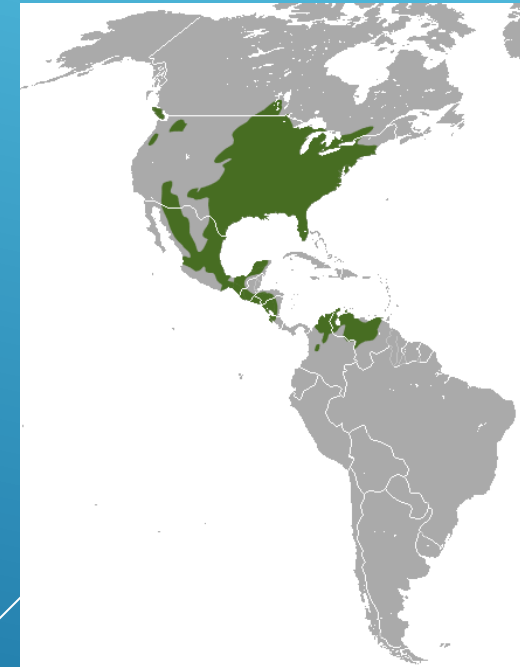
Eastern Cottontail
(*Sylvilagus floridanus*)

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FUN FACTS

- ❖ Eastern Cottontail is most common species in N. America
- ❖ 21 species of cottontail
- ❖ Habitat - fringes of open spaces, open grassy areas, fields with abundant green grasses, farms and yards
- ❖ Herbivores - grasses, clover, sedges and in winter diet includes bark, twigs, buds
- ❖ Crepuscular to nocturnal but also seen during the day
- ❖ Can have 3 to 5 litters per year with 3 to 8 kits each time
- ❖ Only about 15% born in wild survive the first year but can live up to 3 years in the wild
- ❖ Sexually mature after only 2 to 3 months
- ❖ Gestation ~ 28 days
- ❖ Kits don't have scent glands / remain odorless for much of their juvenile development / absorb odors around them so are odor camouflaged
- ❖ To escape predators will either freeze in place or can run in a zig zag pattern up to 18 miles per hour



Where do cottontails nest?



Talking to the public

“I found a bunny nest”

“My cat/dog found a nest”

“I have not seen the mother!”

“There was a baby bunny in my yard.
It was hard but I caught it”

“There is a bunny nest in my yard and I need to let
my dogs out”



Questions to ask:

- ❖ Eyes open or closed?
- ❖ Cat or dog involved?
- ❖ Is the bunny cold?
- ❖ Attracting flies or ants?
- ❖ Found alone? No nest?

“SEND ME A PHOTO!”



Educate!

- ❖ Mother comes to feed her babies at dawn and dusk only (twice a day)
- ❖ She is quick to feed so as not to draw the attention of predators
- ❖ Baby bunnies are basically odorless. Do not move the nest, Mom will not be able to find them
- ❖ Bunnies are on their own at about 5 inches long or about 4 weeks old
- ❖ If you had to chase the bunny leave it alone; it is on its own



Helpful Photos to Keep on Your Phone

How can I tell if mother bunny is coming back?

Twigs and flour!



Ring of flour and criss-crossed twigs



Mom returned; flour and twigs displaced

Let the Babies Stay With Mom!

The nest
CANNOT be
moved. Mama
bunny will most
likely not be able
to find it!



Techniques to keep out domestic pets and still
let Mom in to care for her babies

Signs that Bunnies Need Rehab Assistance

- No sign of Mom for 24 hours
- Cold
- Bellies not full
- Wounds
- Flies or ants indicating no mom is around
- Dead adult rabbit nearby
- Nest is flooded
- Cat contact



Transport Tips for Finders

- Do not feed any food or water! Minimal handling!
- Place them in a small box with a tight-fitting lid. Put some soft fleece or an old t-shirt in the box that they can nestle into
- Make sure there are air holes
- Put the box in a dark, quiet place away from noise and pets
- If babies are very young and/or cold, put the box ½ on and ½ off a heating pad on the lowest setting. If finder does not have a heating pad then a rice sock warmed in the microwave or a water bottle can be used. Do not put the heat source right next to the babies as it may burn them. Wrap in a piece of fabric and put it next to them in the box.
- Have the finder transport to you ASAP for best chance of survival

Cottontail Developmental Stages

Newborn - 3 days (~35 grams)

- Born furless
- Eyes and ears closed
- Darkish skin pigmentation
- Umbilical stump visible



3 - 5 days

- Skin becomes dark
- hair grows rapidly
- loss of umbilical cord;



1 - 2 weeks (50 to 70 grams)

- Fully furred
- Eyes will open ~ 7 -10 days
- Rapid growth



2 - 3 weeks (75 to 100 grams)

- Rapid growth



Cottontail Developmental Stages, continued



4 to 6 weeks (approx. 150 - 200 grams)

- Ears tall and pointed
- full round bodies
- active at night
- close to release
- Rabbits this size would be on their own in the wild



Age versus weight



Same
weight
different
age



- Weight does NOT determine age OR feeding needs
- Varies greatly between/within litters
- Big ≠ weaned!



Similar
age
but
different
weights



Socialization - Mixing bunnies

- ❖ If possible never raise bunnies as singlets
- ❖ Know your bunnies. Consider age and personality before mixing
- ❖ Each bunny is different but as a guide don't mix after 3 weeks of age
- ❖ Mix in the morning instead of nighttime since they may be less active during the day and you can watch them closely for at least 12 hours
- ❖ NEVER mix a bunny that has any kind of injury or sore, cut, trauma, rash or skin condition



THINGS TO LOOK FOR WHEN MIXING:

- ❖ Making threatening gestures or keeping their distance
- ❖ Aggressive or calm



IDENTIFICATION: How to Mark Your Bunnies

Sharpie or surgical marker. Use different number of dots, etc.




Nail polish. Tip of inside of ear, or top of head if newborn.





Tips for Handling Your Buns

- ❖ Move slowly and carefully
- ❖ Voice quiet and calm
- ❖ It is best to have only one caretaker
- ❖ Consistency breeds trust
- ❖ Hold firmly
- ❖ Use burrito wrap 
- ❖ Avoid distractions when feeding
- ❖ Give the task at hand your full attention!



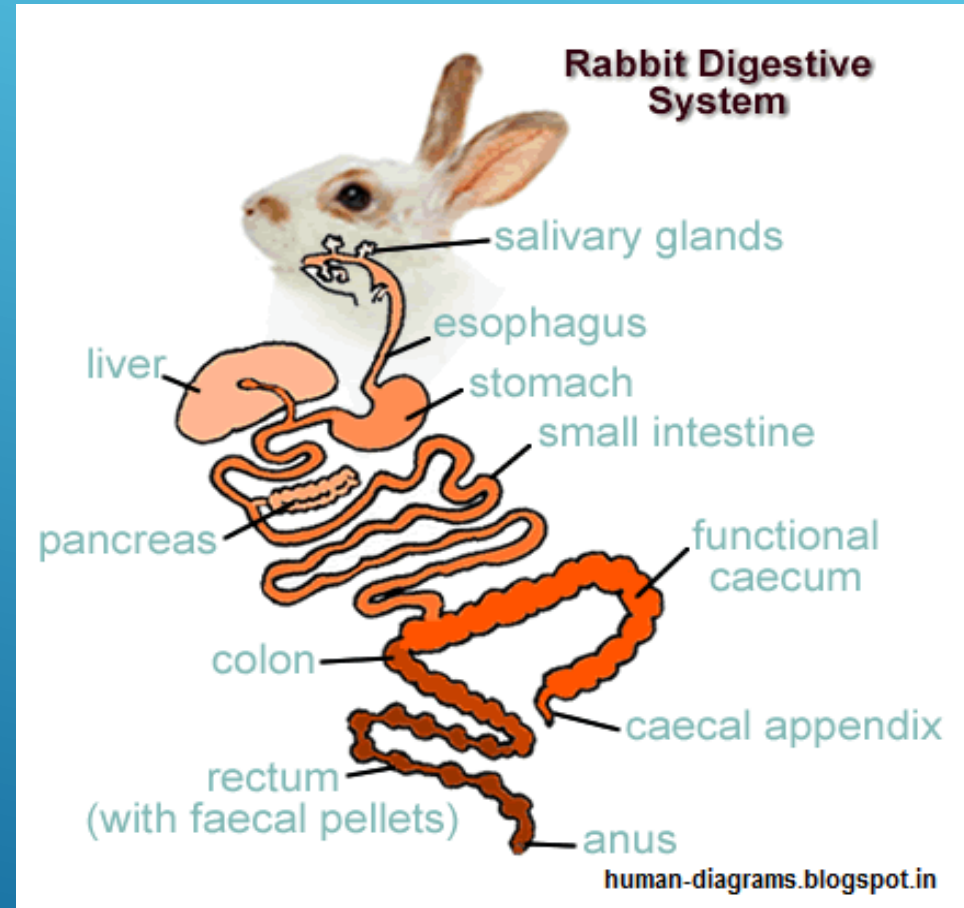
RECORD KEEPING

Intake Public (Cat) + 4 Vick Pm (1)
 yellow

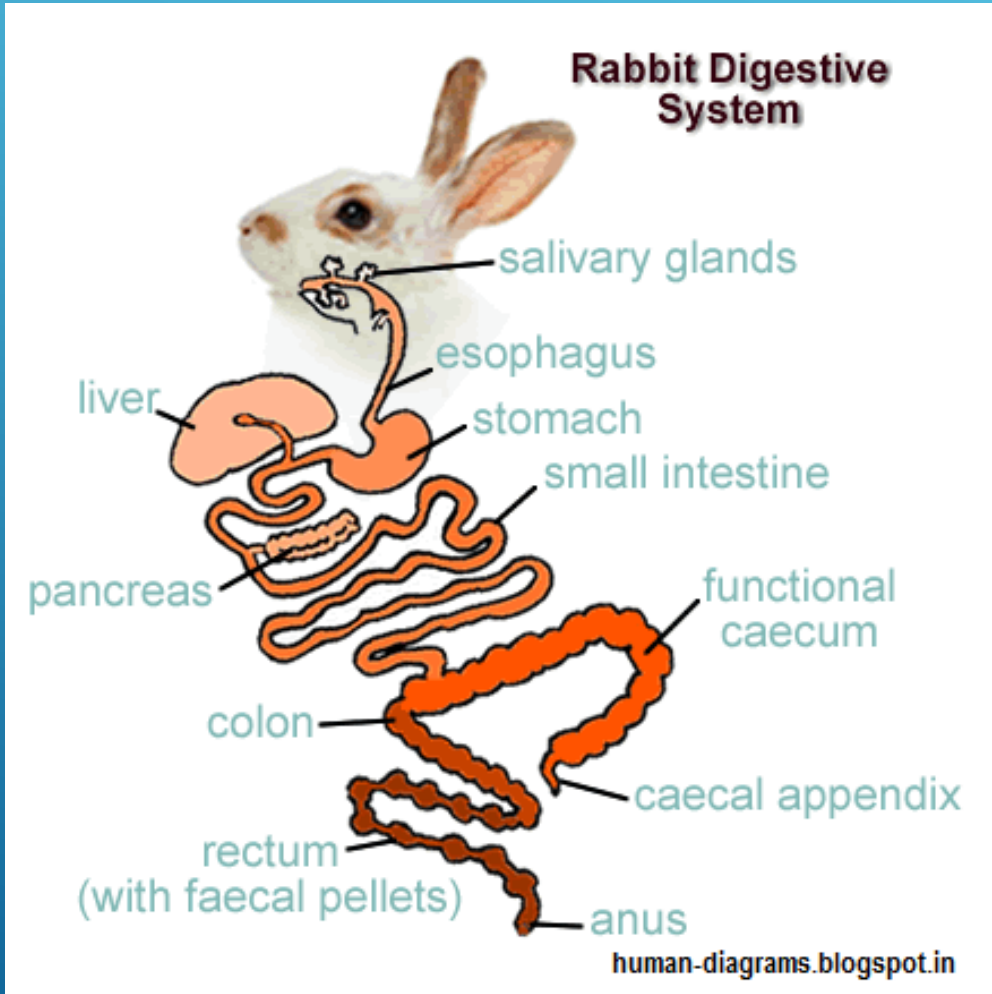
AT	Date	AM gms	AM gain	Time	AM %	AM cc	Time	Mid %	Mid cc	11:15 Pm		Notes/Progression	
										Time	PM %		PM cc
	5/10	51		11:00	100%	5cc	7:30	100%	5.50	5.75	100%	0.05 metacam 0.04 Baytril pilot cold & holding head back eyes open	
		55					7:30		5.5E			50/50	
		59							6E				
		61							6E				
		86							8.6E				
yellow	5/11	49	+2	10:00	100%	5		100%	5	7:30		eyes open 0.04 (DBL dose) Baytril A.M.	
orange		53	+3			5.8			5.8			P.M. Add wet orchard grass (yellow & green eating immediately) eyes open 0.06 DBL dose Day 3	
blue		66	+7			6.6			6.6				
white		66	+5			6.6			6.6				
green		88	+2			8.8			8.8				
yellow	5/12	57	+8	9:30	100%	5.7		7:45	100%	5.7			
orange		55	-3		110%	6			11%	6			
blue		73	+7		100%	7.3			10%	7.3			
white		66	0		110%	7.3			11%	7.3			
green		87	-1		100%	9			10%	9			
yellow	5/13	54	-3	9:45	100%	5.4	13:45	100%	5.4	16:45	100%	5.4	0.03 A.M. + 0.03 Pm
orange		59	+4		80%	5		80%	5		80%	5	Am eyes opening
blue		69	+4		100%	6.9			100%	6.9			
white		67	+1		110%	7.4			110%	7.4			
green		91	+4		100%	9.1			80%	7.3			
yellow	5/14	66	+12		80%	5.3	2:00	80%	5.3	8:00	80%	5.3	0.03 Baytril Am + Pm
orange		64	+5		80%	5.2		80%	5.2		80%	5.2	
blue		71	+2		110%	7.8			110%	7.8			
white		71	+4		100%	7.1			100%	7.1			
green		98	+7		90%	8.8			50%	5			
yellow	5/15	64	+2	8:30	90%	5.8	2:30	90%	5.8	8:00	90%	5.8	
orange		70	+6		100%	7			100%	7			
blue		72	+1		110%	7.9			110%	7.9			
white		74	+3		100%	7.4			100%	7.4			
green		94	-4		110%	10.3			50%	4.7			

Cottontail Developmental Considerations

- ❖ Hindgut fermenters, have a caecum (like horses, guinea pigs, rhinos & elephants)
- ❖ Born with a sterile gut with neutral pH
- ❖ Non-functional pancreas until the kits disperse from the nest



Caecum



- ❖ The caecum contains unique flora (yeast, enzymes and bacteria) that help digest a rabbit's high fiber diet.
- ❖ Digestible fiber has nutrients locked away inside it so the colon diverts it to the caecum for processing. The leftover indigestible fiber, which has helped carry the food through the digestive system, is passed out of the body as waste in the form of hard, round droppings.
- ❖ The colony of special flora ferment the digestible fiber in the caecum and then it is moved back into the colon where it is coated in a protective mucus. It is then excreted from the body in special droppings, called "cecotropes" or "cecal droppings".

Two Kinds of Poop!

1. FECAL DROPPINGS



2. CECOTROPES



The perfect poop is:

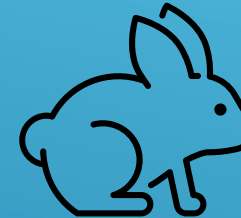
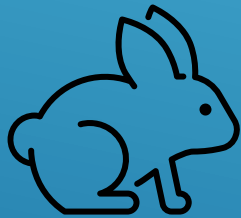
- Golden or dark brown
- Single
- Hard, round or oblong
- Dry
- You should not be able to smash between your fingers

Monitor your bun's poop:

- Quantity
- Size
- Quality
(soft/hard/diarrhea/
color)



Next up



Feeding

TOOLS TO HAVE ON HAND

- Heating pad (non-shut-off)
- Digital scale
- Fleece
- Tissues
- Miracle™ nipple (mini and regular)
- O-ring syringes (1, 3, 5, 10cc)
- Single lumen tubes (2.8, 3.5, 5)
(Utah Medical Products, Inc. ®)
- Low, heavy bowls (glass casters)
- Lactase drops
- Wet Tail Drops
- Rescue Remedy
- FV ElectroStat
- Lactated Ringers Solution
(butterflies [25g], 18g
needles)
- Baytril
- Timothy hay/orchard grass
- Formula powders FV 32/45
& FV UltraBoost or
Wombaroo
- FV LA200™
- Small tub with wire mesh lid
- Large tub with wire mesh lid

INTAKE PROTOCOL

- ❖ Place box half on and half off of a non-shut-off heating pad
- ❖ Let rest for 30 minutes after intake in a quiet, dark place
- ❖ Stimulate urination in all newly admitted rabbits
- ❖ Weigh after stimulating. Record weights & mark
- ❖ Do a quick exam:

Considerations:

Hydration (color of urine/skin pinch test)
Overall attitude
Eyes
Mouth - teeth alignment/color of mucous membranes
Fullness of belly
External parasites
Wounds (often found by feeling dried blood)

Rehabber's Golden Rule:

1. Warm
2. Weigh
3. Hydrate
4. Feed



Once warm and stable:

- ❖ Hydrate!
- ❖ 1st feeding give 10% electrolyte solution
- ❖ 2nd feeding should be 1:1 dilute
- ❖ 3rd feeding should be full strength (unless emaciated)
- ❖ If needed give warm SQ fluids

Fully
hydrated

Stimulating

- Stimulate to pee; poop on their own
- Large bladder capacity
- Always stimulate BEFORE weighing
- Tickle lightly and FAST
- Stimulate all intakes under 100 g
- Shows level of dehydration
- When to stop stimulating?



Extremely
dehydrated

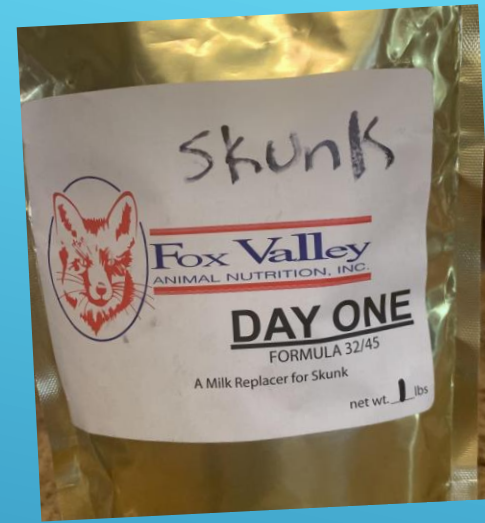


Milk Replacers

Formula options:

- FV 32/45 + FV UltraBoost (3:1) ★
- Wombaroo ★

1. Blend dry powders together in proper ratio
2. Heat water to 175 degrees and cool to 130 degrees (use thermometer)
3. 1 part powder to 2 parts water
4. Mix with shaker ball and let cool to room temperature
5. Add Lactase drops to made formula (1 drop per $\frac{1}{4}$ C)
6. Add FV LA200
7. Strain into fresh jar and refrigerate
8. Let formula sit for 12 hours to let lactase drops work
9. Stir or swirl to mix before feeding; do NOT add air bubbles!
10. Discard after 24 hours



WOMBAROO

From
Australia



- Specifically formulated to match the composition of rabbit milk
- Elevated Protein & Fat Content - for improved growth rate of kits
- Contains 'Milk Oil' - antimicrobial fatty acids that are essential for good gut health

- + Mix and feed immediately
- + Mixed formula can be frozen up to 2 weeks
- + Neonates feed only twice a day



BUNNY FEEDING FLOWCHART



INTAKE: Give an initial 10% electrolyte feed for ALL new intakes. The 2nd feed should be a 1:1 dilute feed and the 3rd should be full strength (unless emaciated). Weight does NOT determine age and will vary GREATLY between and within litters.

WEIGHT GAIN: Weigh each morning to determine feed amount for the day (littermates may be different!). Stimulate BEFORE weighing!! Intake weight will determine INITIAL feed, and then WEIGHT GAIN will determine consecutive feed amounts*.

Intake weight will determine INITIAL feed, and WEIGHT GAIN will determine subsequent feed amounts.

UNDER 65 grams: Initial Feed: 8% 3x/day			
AM Weight Gain	AM	Midday	PM**
3-4 grams	8%	8%	8%
1-2 gram	9%	9%	9%
NO GAIN/WEIGHT LOSS	10%	10%	10%
> 4 grams	Transition to 2 feeds		

*Do NOT exceed 12% per feed or bloat may result.

Transition from 3 to 2 feeds	
Day 1	Decrease midday feed to 6%
Day 2	If still gained 4-5 grams, move to 10% 2x/day (If not, move to 2 11% feeds - up to 12%)

65-80 grams Initial Feed: 10% 2x/day			
AM Weight Gain	AM	Midday	PM**
3-5 grams	10%	None	10%
1-2 gram	11%	None	11%
NO GAIN/WEIGHT LOSS	12%	None	12%
> 5 grams	Transition to 1 feeds		

Transition from 2 to 1 feed	
Day 1	Decrease NIGHTTIME feed to 8%
Day 2	If still gained 4-5 grams decrease night feed to 5%
Day 3	If still gained 4-5 grams, eliminate night feed (If not, increase MORNING feed to 11% - up to 12%)

80-95 grams Initial Feed: 10% 1x/day			
AM Weight Gain	AM	Midday	PM**
4-6 g	10%	None	None
1-3 g	11%	None	None
NO GAIN/WEIGHT LOSS	12%	None	None
> 6 g	Transition to 0 feeds		

Transition from 1 to 0 feeds	
Day 1	Decrease morning feed to 8%
Day 2	If still gained 4-5 grams, decrease to 5%
Day 3	If still gained 4-5 grams, eliminate feed (If not, continue at 5% until gaining resumes)

**95+ grams
Initial Feed: None**
May be weaned, but if does not gain 4-5 grams after the 1st day, place on a 1 feed/day schedule until weight gain is sufficient.

****MIDDAY AND NIGHT FEEDS**
Should gain at least 1 g since MORNING weight
If weight remains the same, increase feed by 1%
If weight has been lost, increase feed by 2%.
If weight gain is over 2 grams, decrease feed by 1%

TUBE FEEDING
Under 65 grams/eyes closed - 3.5 fr SINGLE HOLE tube
Over 65 grams - 5 french single or double hole tube
TIPS: Measure from nose to genitals and mark tube. Go past mark. Lube tube with formula. If stuck, twist 90°.

Bunny Formula Recipe:
Mix 2 parts FV 32/45 to 3 parts 150° water. Refrigerate 8 hours to allow powder to rehydrate, then add ¼ part HWC and probiotics before use. Use or freeze within 24 hours. Strain before use. Add colostrum for bunnies less than 3-4 days old.

Adding Greens:
-3 days after eyes open intro: orchard grass/timothy hay
- Once eating hay, slowly intro: Fresh Greens (grass/crabgrass, dandelion greens, clover, kale, wild violet leaves, plantain (broad/narrow), vetch, wild strawberry leaves)

Soft Stool/Diarrhea

To Prevent Diarrhea:
-Treat new intakes with Baycox (25mg/kg, once a day for 3 days)
-Add poop pellets to nest (Place poop pellets from HEALTHY, WEANED juveniles in nest with weaning babies to introduce good bacteria/flora.)

Treatment: Wet Tail Drops (Neomycin Sulfate)
Dosage:
Initial dose: .4 cc
Consecutive doses: .2 cc
Give 2x/day for 5 days
-Can also try Kaopectate or Bentonite Clay

Diet:
For soft stool:
Continue normal diet
For diarrhea:
1st feed: electrolytes
2nd feed: formula diluted 1:1
3rd feed: full strength formula - if diarrhea has subsided

COTTONTAIL CARE CHART

Age	Weight	Appearance	Caring	Feeding Stage	Stimulate
1-8 days	VARIABLES	No fur, eyes closed, ears sealed	Bunny Nest in Aquarium, Heat if unfurred or single	Tube feed formula	yes
9-10 days	VARIABLES	Furred, eyes closed or just opened	Bunny Nest in Aquarium	Tube feed formula	yes
11-14 days	VARIABLES	Furred, sleek fur, eyes open, ears back	Bunny Nest in Aquarium	Tube feed formula	yes
15-18 days	VARIABLES	Fully furred, ears up, active	Bunny Hut in Aquarium	Tube feed formula (Add hay)	If needed
19-20 days	VARIABLES	Critical stress period, keep quiet!	Bunny Hut in Large Cage	Tube feed formula (Add fresh greens)	no
21-27 days	VARIABLES	Should be self feeding	Bunny Hut in Large Cage	Tube feed if needed (Add oats once weaned)	no

Credit: Flowchart developed and published by Tanya Lee



BUNNY FEEDING FLOWCHART



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1-2 gram	11%	None	11%
NO GAIN/WEIGHT LOSS	12%	None	12%
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Transition from 2 to 1 feed

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80-95 grams Initial Feed: 10% 1x/day			
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4-6 g	10%	None	None
1-3 g	11%	None	None
NO GAIN/WEIGHT LOSS	12%	None	None
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Transition from 1 to 0 feeds

Day 1 – Decrease morning feed to 8%
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Day 3 – If still gained 4-5 grams, eliminate feed
(If not, continue at 5% until gaining resumes)

3 METHODS FOR FORMULA FEEDING

1. Hand feeding with O-ring syringe and Miracle nipple
2. Tube feeding
3. Lapping from a bowl (eyes open, just before weaning)

Hand Feeding Pros and Cons:

Pros:

- Does not irritate throat
- Warm and fuzzy feeling for rehabber

Cons:

- Can take a looong time
- Harder to get correct amount of formula in the bun
- Aspiration

Tube Feeding Pros and Cons:

Pros:

- Can feed lots of buns quickly
- Assure bun is getting the full amount of formula
- Helpful with difficult to feed buns

Cons:

- Aspiration if tube inserted incorrectly
- Takes a more advanced skill level

Dinnertime!!!



Tube feeding



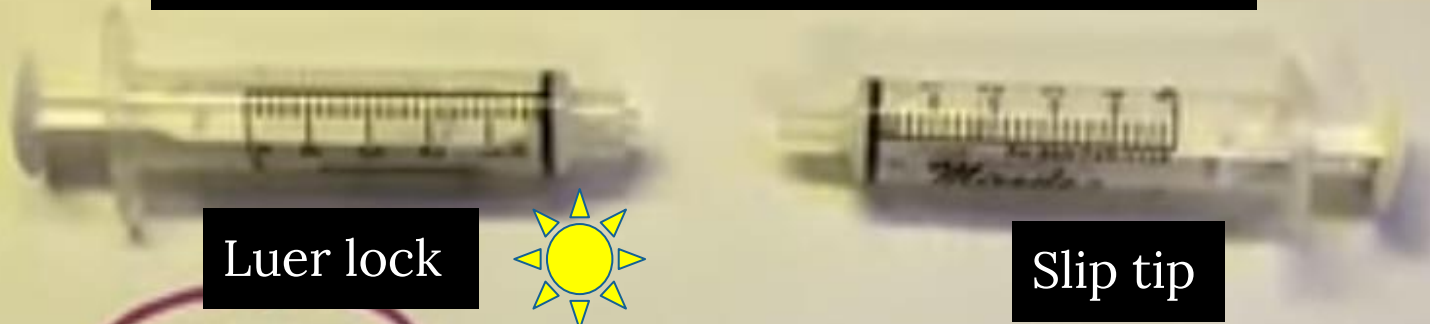
Syringe feeding formula



Lapping formula

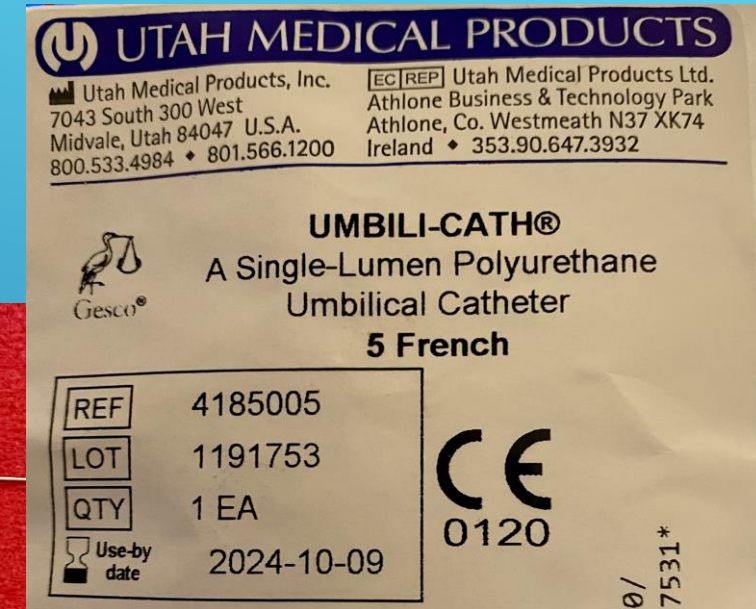
Tubes and Syringes for Tube Feeding

Always use O-ring syringes when tubing



Luer lock

Slip tip



< 65g weight = 2.8 or 3.5 French single hole

> 65g weight = 5.0 French single hole

Cottontail Tubing Videos

Tubing Young Cottontails:

https://www.youtube.com/watch?v=5TUeUN3IZ_4&feature=youtu.be

Choosing Tubes, Syringes, Cleaning and More:

<https://www.youtube.com/watch?v=h5SLA4gYOPM>

Use good quality
grass/hay

Timothy hay
Orchard grass

When first adding hay cut
into small pieces



HAY



WILD GREENS



STORE-BOUGHT GREENS



Romaine



Spring Mix

Red & Green Leaf Lettuce



Cilantro



Parsley



Kale

OTHER SOLID FOODS & WATER

Timothy-based
rabbit pellets



Oats

- Good source of vitamin E
- Oatmeal is a grass cereal
- Easy to digest
- Helps weight gain



Water bowls

Dry Oats Mix

1 cup oats
1 Tablespoon FV Ultraboost
1 Tablespoon Bee Pollen
1/4 teaspoon probiotics
1/3 capsule B complex



Nutri Rescue



.0001 X gram weight

FORMULA TO HAY TO GREENS, OH MY!

The transition from formula to solid foods is a critical time for young bunnies



Baby bunnies begin to nibble on their nest material of dried grasses when in the wild. Just before eyes open add small pieces cut hay. Orchard grass is a softer hay and a good one to start with.

Eyes open (7 to 10 days)
Over the course of 3 - 5 days slowly add greens. Best to start with spring mix. Start with one kind and add small pieces as their system gets used to digesting. Wash or spray the greens with water.

Monitor poops closely.
This is a critical time so keep quiet and avoid any stress.
NO fruits or vegetables!

As bunnies begin to nibble the greens increase the amount each day. Give fresh greens twice a day and discard old greens. Add oats and a water dish.

Successful maturation depends on the rabbits delicate systems transferring over from digesting formula to digesting solid foods.

HOUSING: Stage 1

- ❖ Small container with secure lid
- ❖ Well-ventilated
- ❖ Line with several layers of fleece. Change daily
- ❖ Nest or basket (optional)
- ❖ Heating pad on low setting under half of container, towel between tub and heating pad





HOUSING: Stage 2



- Large tubs with wire mesh top or wire cage with bars no more than ½“ apart
- Height is important since they can jump really high
- Water dish - low and heavy
- Good grass hay
- Greens
- Can use pee pads on the bottom with newspaper on top of that. Top the newspaper with paper towels so the poop can be easily monitored
- Be careful with front opening cages; buns hop out!
- Hidey box / bunny hut

HOUSING

Stage 2, continued



HANDS OFF AT THIS STAGE!

ENRICHMENT

Apple tree branches	Paper towel rolls twisted in the middle to throw	Hide treat inside another food
Hollow logs	Toilet paper or paper towel rolls with food or small treats inside (fold ends shut)	Large PVC tunnels (T-or L-shaped)
Boxes to hop on top of	Toilet paper tube with Timothy hay stuffed inside	Tunnels made from boxes, shipping tubes, oatmeal boxes
Small strips of fleece with knots to pick up and throw.	Alternate their hay each day. Orchard / Timothy	Dirt/ play sand in tubs for digging
Large paper bags for hiding in and play with.	Cardboard boxes for hiding	Willow balls and small sticks to pick up and throw.
Dry grasses for nest making practice	Pieces of bamboo for chewing	Crumbled up paper balls
Old t-shirts or blankets with different smells (possibly from other rabbits) to allow them to mark territory	Open window for nature sounds	Cat ball with oatmeal to push around and get a treat.
Cardboard boxes filled with shredded paper.	Small plastic baby toys like plastic keys, rattles that can be thrown in the air.	Small deer antler for chewing
Cardboard scratching pad like a cat uses.	Parrot and cat toys with no small parts make good rabbit toys	Outdoor greens with roots
	Baby stacking cups	



SANITATION - Important!

FEEDING UTENSILS & HOUSING

- Wash hands after stimulating, before you handle feeding utensils (stimulate everyone first, wash hands, then feed)
- Keep syringes, nipples, feeding tubes clean
- For eyes-closed buns, keep box and fleece clean and dry
- Clean 2nd stage housing at least every other day
- Discard old greens and hay and change water bowls every day
- Always sanitize tubs and cages between each litter



Simple green
All -Purpose Cleaner
for cage cleaning

RELEASE



- ❖ Release ~ 200 to 250 grams or if a bun is very stressed in captivity release earlier (read your buns!)
- ❖ Prior to release day try and open windows so they get used to outside temps and sounds
- ❖ Check for good weather for 3 to 4 days
- ❖ Release at dawn or dusk
- ❖ Cover container to reduce stress while traveling to release site
- ❖ Avoid releasing in area with free roaming cats/dogs

RELEASE DAY!

Scout out your release site prior to release day

The perfect spot!
Edges of fields and woods with a good cover of low scrubs or thorny bushes with an abundance of green vegetation

Be careful not to release in the same area too often



Wounds



- Flush with dilute Chlorohexidine
- Baytril & Metacam
- SSD Cream
- Vetricyn
- Medihoney
- Skin Glue



CAT CONTACT

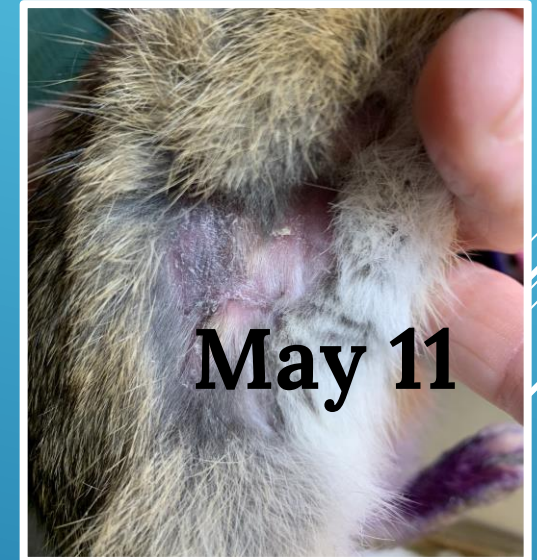
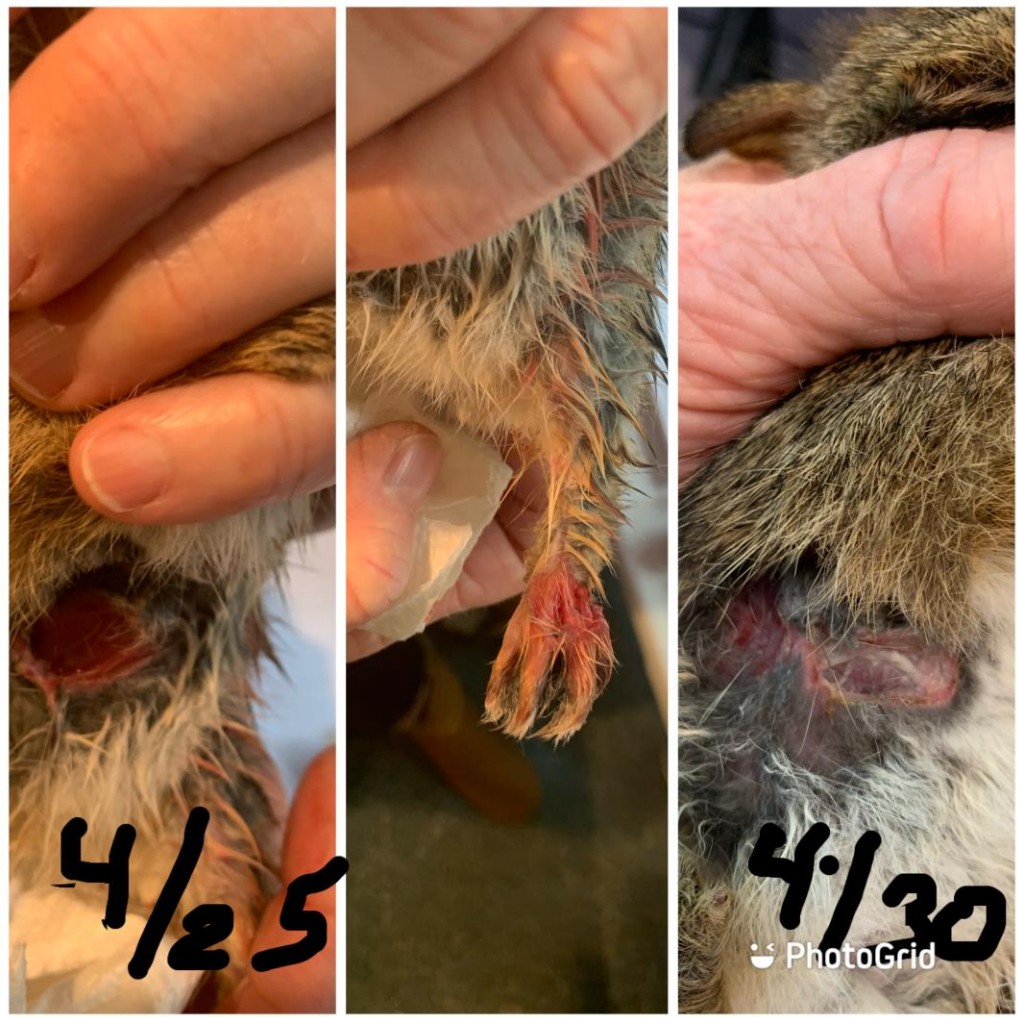


YES! Needs to come into the care of a rehabber!

- ❖ Bunnies are particularly susceptible to bacteria (*Pasteurella* spp.) that cats normally have in their saliva
- ❖ Contact your mentor and begin antibiotics even if the bun has no visible wounds but was in contact with a cat
- ❖ Baytril PO is the preferred antibiotic



- Flush day 1 & 3 dilute Chlorahexidine
- Baytril – 10 days
- Metacam – 4 days
- SSD cream 2X day for 13 days



Cataracts



- Poor nutrition
- Herbicides or pesticides
- Encephalitozoon cuniculi (E. cuniculi) protozoan parasite – can cause cataracts, kidney disease, affect the nervous system, cause a head tilt or complete paralysis.





Head Tilt



- Middle ear/ inner ear infection
- Trauma
- Stroke
- Intoxication (of poison or lead)
- E. Cuniculi
- Neoplasia (cancer)
- Cervical muscle contraction
- Cerebral larvae migraines



Skin issues

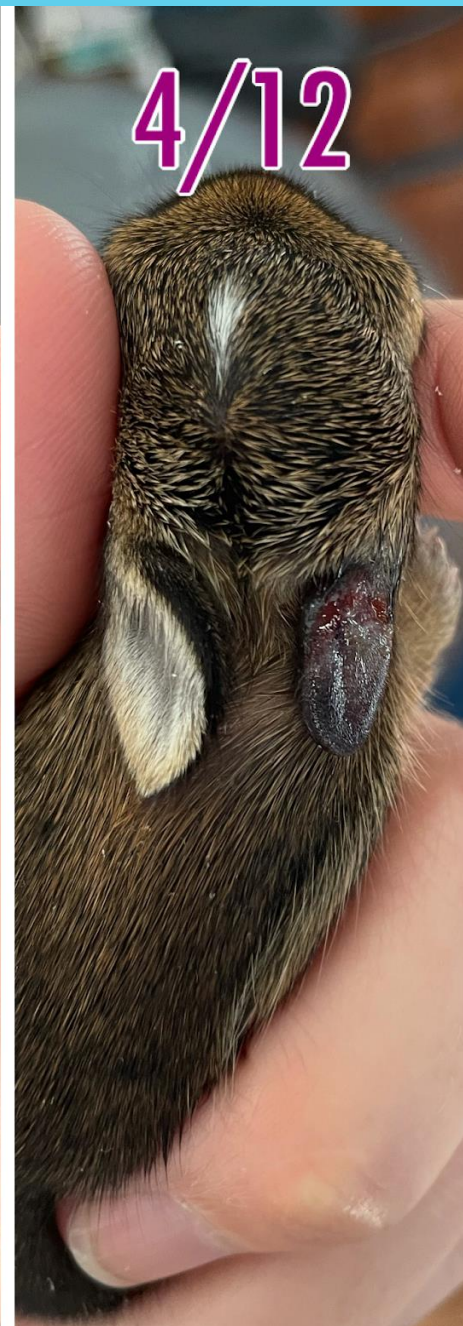
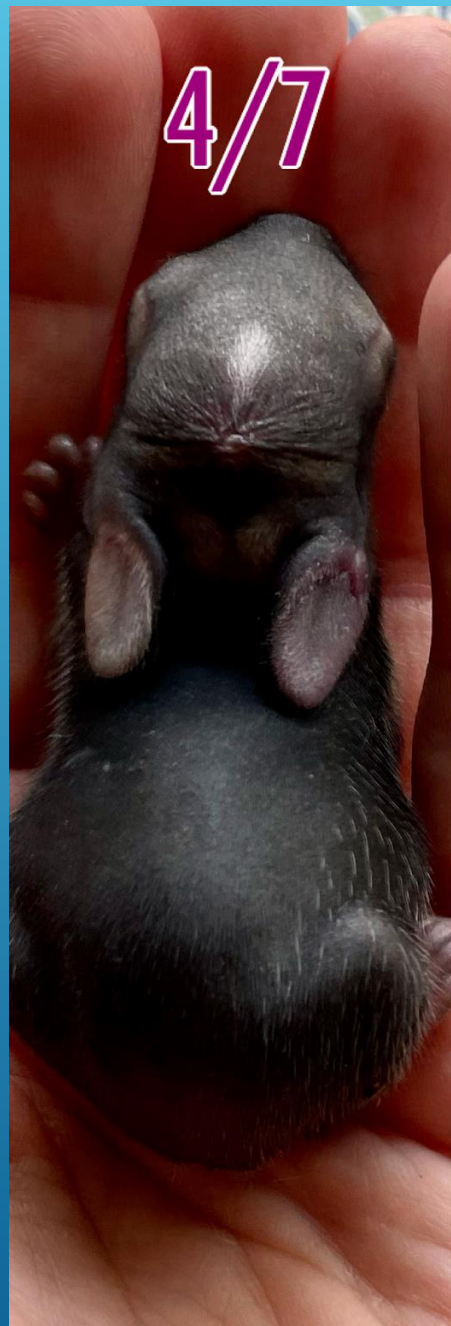


Mites



Bottom of hind feet

Check
out the
right
ear
????





Bloat

- Skip the feeding
- Try electrolyte feed / If digesting electrolytes go to 1 to 1 dilute formula then full strength
- Lay on heating pad with towel and gently stroke the sides of the abdomen
- Infant gas drops
- SQ fluids to encourage digestion/elimination
- Stimulate often
- Metacam can be given for GI distress



The Dreaded Diarrhea!

OH NO!!!



- ❖ Stress, eyes opening, sensory overload
- ❖ Weaning
- ❖ Parasites
- ❖ Unsanitary feeding utensils or cage
- ❖ Improper intestinal microflora
- ❖ Looking at them funny!



Coccidia – Protozoal parasites

- Probably the #1 cause of GI disease and death in immature cottontail rabbits in rehab
- Mainly affects young rabbits around the time of weaning
- Transmission is fecal/oral in the form of oocysts (infective stage)
- Often associated with bacterial infections, especially Clostridial Enterotoxemia

Clinical signs:
(signs can be subtle)

- Sickly looking, not moving/eating
- Hunched, puffed appearance
- Abnormal poop: Diarrhea/soft poop, small or no poop
- Agitation
- Weight loss
- Sudden death

Coccidiosis diarrhea looks different at different ages:

- Sucklings – watery, yellowish, sticks to/stains bum, hind legs
- Weanlings – brown/black, soft/mushy/pudding-like cecotropes / bum usually clean

Normal



Puffed





Coccidiosis – prophylaxis protocol

TOLTRAZURIL 5%

~ SHAKE WELL ~

For prophylactic control & treatment of RABBIT coccidiosis (symptoms: Diarrhea, dehydration, loss of appetite).

Dose at 25mg/kg 1x/day for **2** days at intake after stable/gaining weight. Also treat animal if symptoms of coccidiosis occur later: Dose at 25mg/kg 1x/day for 2 days, then repeat 5 days later.

Gram wt x 0.0005 = cc

Example: 100g = 0.05cc

Taste is bitter; mix with grenadine syrup, e.g., to mask taste.



Diarrhea Treatments

- ❖ **Hydration is extremely important!** Learn to administer subcutaneous fluids
- ❖ **No formula.** Give Electro-Stat™, Emeraid™ or Critical Care™, according to animal age. Re-introduce formula gradually.
- ❖ **No greens.** Keep hay available.
- ❖ **Wet Tail Drops™.** Neomycin Sulfate. Used for black diarrhea
- ❖ **Bio-Sponge™.** An intestinal adsorbent
- ❖ **Probiotics,** such as Benebac™
- ❖ **Consult veterinarian** if no improvement. Diarrhea is DEADLY for bunnies!



Before the season
begins
Make a plan!



Paige's Cottontail Protocol 2021

- Intake – stimulate & weigh / tube electrastat 10% of weight
- 2nd feeding 50% Formula/50% water
- 3rd feeding full strength formula
- Formula = $\frac{3}{4}$ FV skunk + $\frac{1}{4}$ Ultraboost w/ $\frac{1}{2}$ tsp LA200
- (neonates add lactase drops) (neonates & up to 80ish grams use distilled water)
- Follow feeding flowchart every day and feed according to weight gain
- Use a different fleece to weigh on scale or burrito wrap for each group. Keep the fleece with the buns bin
- Stimulate all babies in a group / wash hands / then feed
- After all babies in group open their eyes add cut orchard grass hay
- ******Don't rush to add greens******
- First greens store bought spring mix (no spinach) or other soft greens
- Can start adding timothy hay
- Once babies are gaining and well hydrated and all eyes open dose with Toltrazuril for 2 days
- After the 1st round of Toltrazuril for 2 days can begin to add wild greens
- Wait 5 days and do another 2 days of Toltrazuril
- At approximately 85 to 95 grams and on once a day feedings get babies to lap from a bowl but monitor weight gain daily
- Feed plenty of hay and greens twice a day / also oats / small water bowl changed twice a day (I add marbles to bowls)
- When getting close to release open windows or put in a safe place on porch a few hours a day to get used to outside temps and sounds
- Release criteria – (1) approximately 200 to 250 grams, but each bunny is different, some need earlier release and some later / (2) shy away from human touch / (3) eating lots of wild greens
- 3 day good weather window at dawn or dusk

Paige's Cottontail Protocol 2022

- Intake – stimulate & weigh / **subcutaneous fluids 5% of body weight**
- **1st feeding 50% Formula/50% water**
- **2nd feeding full strength formula**
- **Formula = Wambaroo + ½ tsp LA200**
- (neonates add lactase drops) (neonates & up to 80ish grams use distilled water)
- Follow feeding flowchart every day and feed according to weight gain
- Use a different fleece to weigh on scale or burrito wrap for each group. Keep the fleece with the buns bin
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RHDV2

Rabbit Hemorrhagic Disease Virus serotype 2

What is it and who does it affect?

Where is it?

What can we do?

RHDV2

What is it and who does it affect?

RHDV2 is a highly contagious, easily spread, resilient virus that affects wild and domestic rabbits, hares, and pikas that causes internal bleeding and death.

Symptoms

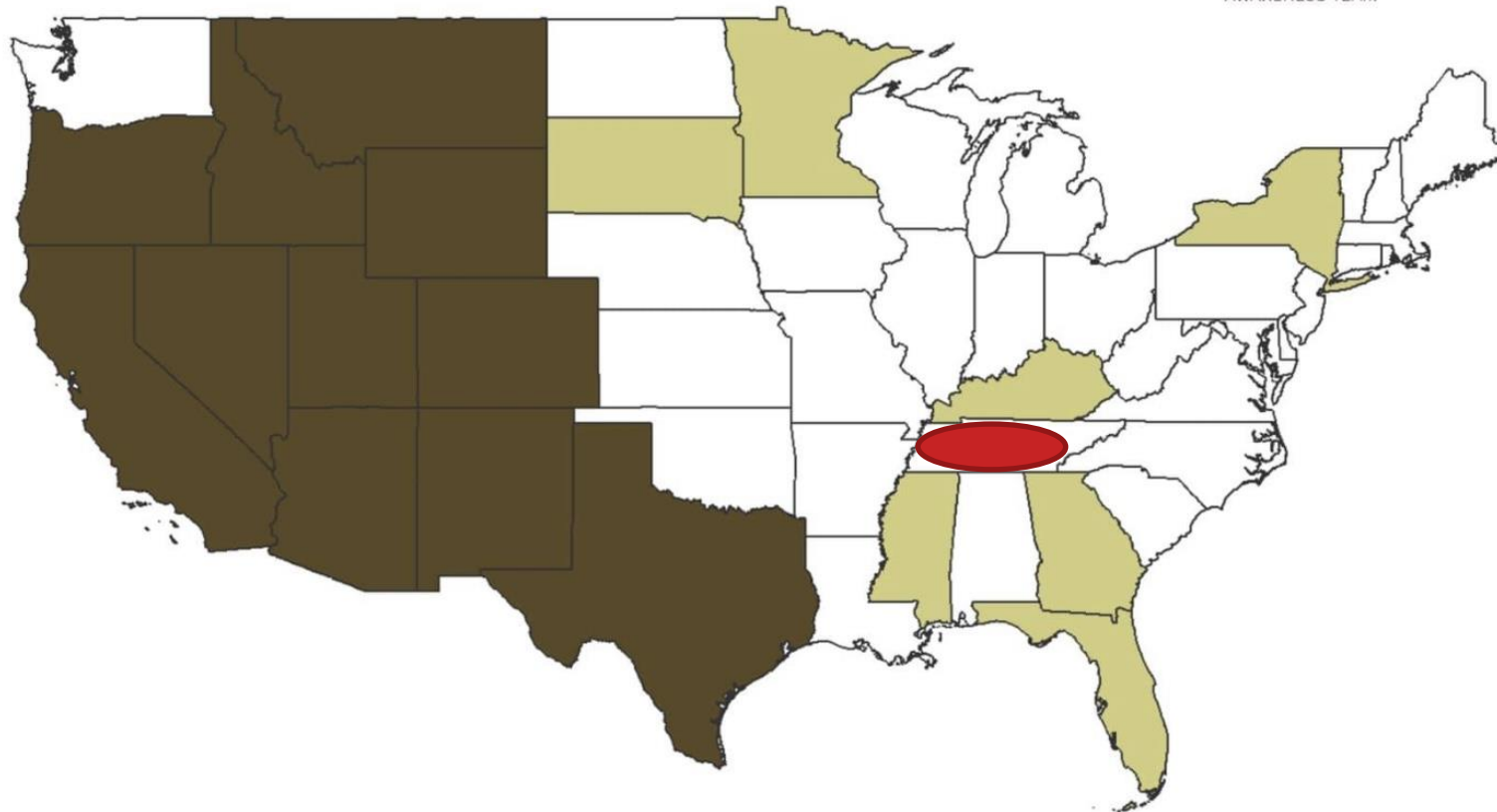
- Lethargy
- High fever
- Seizures
- Jaundice
- Bleeding from nose, mouth, or rectum
- Loss of appetite
- Difficulty breathing
- Sudden death

Transmission

- Direct - contact with infected animal
- Indirectly - by means of fomites such as food, bedding, water, clothing, cages, equipment, car tires
- Vector - transmission by scavenging mammals, birds and insects

RHDV2

December 2021



■ Domestic Cases ■ Wild Cases ■ Domestic & Wild Cases

Data Source: USDA APHIS
See RHDV2.org/resources for data disclaimer.
Domestic cases include both domestic and feral rabbit cases.

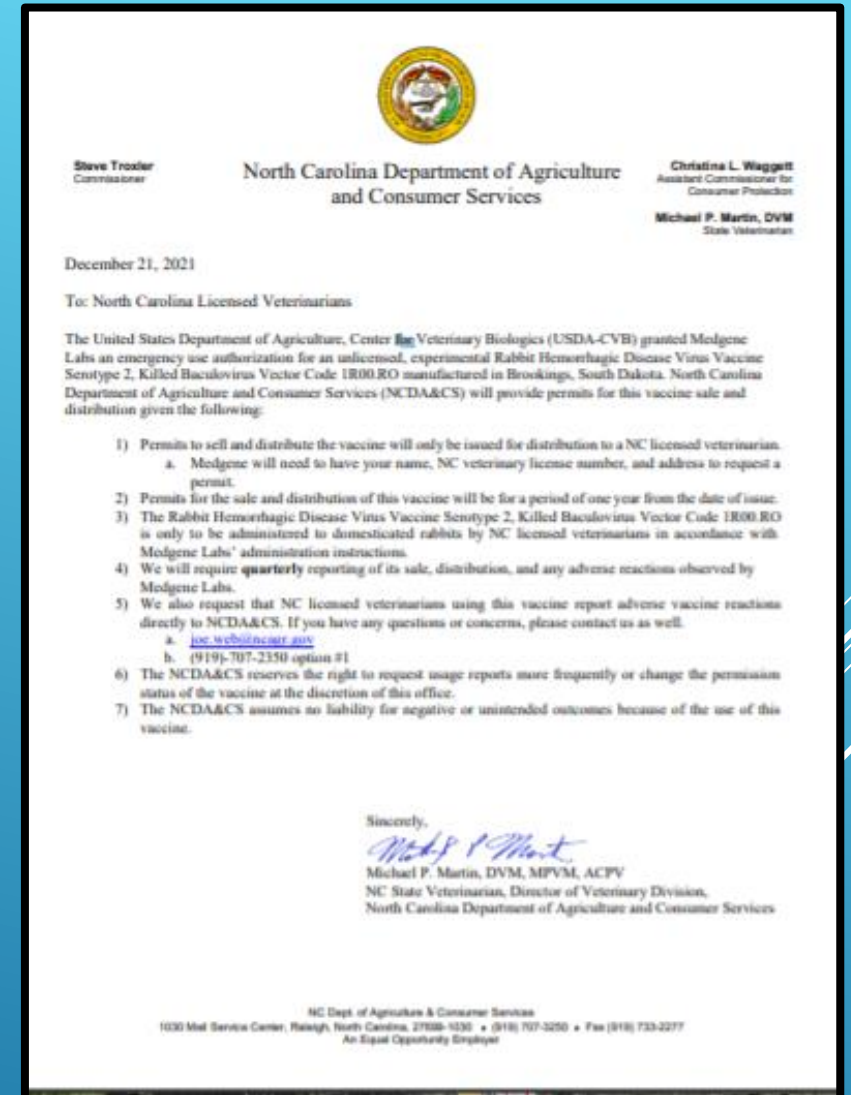
RHDV2

What can we do?

Biosecurity

- Wash hands before & after handling or caring for rabbits and between groups
- Have indoor & outdoor footwear
- Keep rabbits inside
- Be careful of where food such as hay & forage come from
- Control disease vectors
- Clean by submersion or spray with 10% household bleach or Virkon-S (Dupont) Allow 10 minutes of contact then rinse & dry

Vaccine



Top Ten List for Rehabbing Buns

1. Neonates hand feed only 3 times a day!
2. Then only 2 times a day!
3. Great animal to rehab if you work!
4. Don't have to stimulate to poop only pee!
5. Herbivores, no meat!
6. Grow up fast!
7. Not too odiferous!
8. Adorable
9. Addicting
10. Rewarding



FOR THE  OF BUNS!



Paige Person
redonthehead7@gmail.com



~The End~