From: **Liz Allard**
Robert Douglas <rdouglas@andoverma.gov>

To...
Cc...

Subject: Fwd: FW: "Compensatory Rebound Effect" in deer reproduction - a question.

Attach... Attach0.html / Uploaded File 64K

From: Anthony DeNicola [mailto:tony.denicola@whitebuffaloinc.org]
Sent: Monday, September 16, 2019 6:58 PM

Shawn,

Your graph is exactly as I would expect, with a very gradual reduction in reproductive output as you approach BCC. The animal rights advocates make it sound like a sigmoidal curve that you traverse (from low to high output) every time you kill a deer.
Thanks for the excellent summary,
Tony

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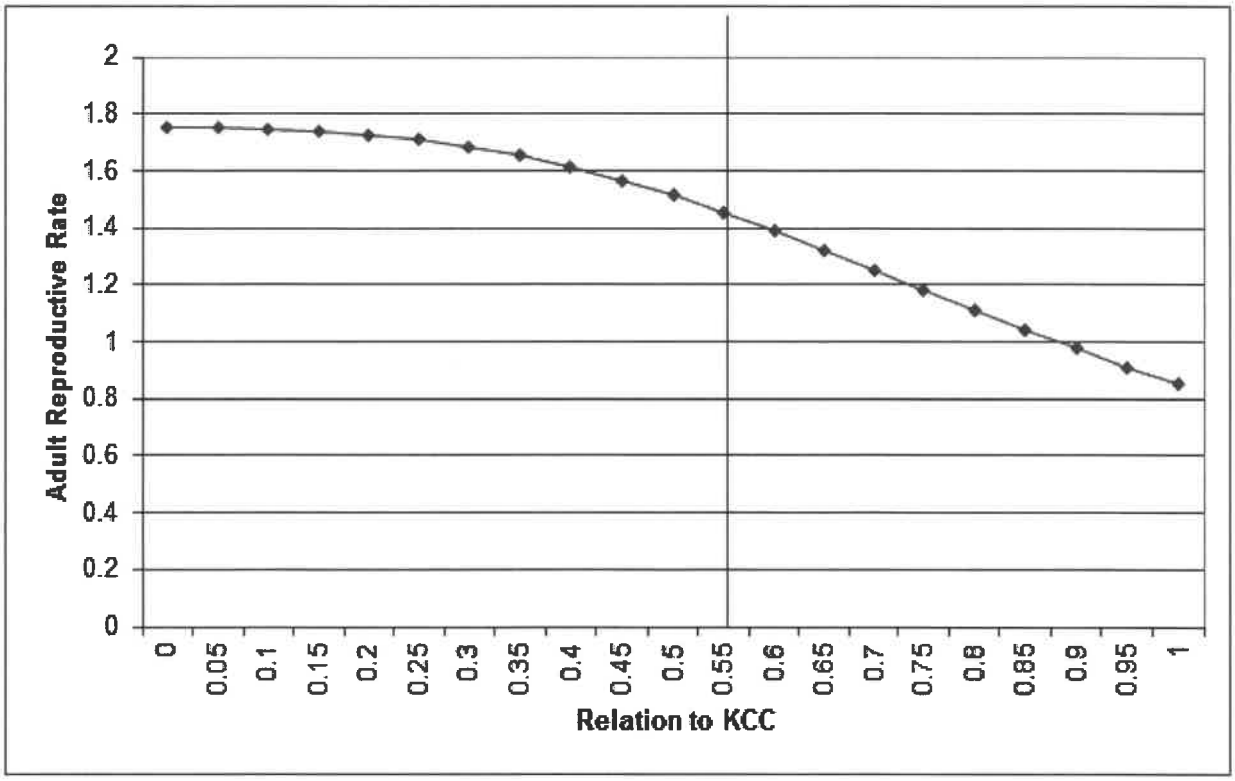
On Mon, Sep 16, 2019 at 4:13 PM Haskell, Shawn <Shawn.Haskell@maine.gov> wrote:

> As you folks have described, this appears to be a general question of density-dependence in relation to biological carrying capacity (KCC). The literature on this in cervids (spp of deer) is very large; personally I have seen/studied it in caribou, moose, mule deer, and WTD. When I was modeling VT's WTD pop dynamics 10 years ago, the below curve is what I found in the data at hand for that State. If you get a measurable positive response in repro rates due to pop reduction, then your pop was way too close to KCC and in poor physical condition b/c of it. As a rule-of-thumb, cervids should not be allowed to exceed 60% KCC or so, which is most easily estimated by monitoring the condition of the deer themselves. But not always.
>
> That is simplistic, though accurate overall. As Tony suggests, there are some exceptions where deer seem to maintain good condition regardless of density, in which case you would expect repro rates to be high before/after any management action to reduce. Deer in agricultural areas that get feed from crops is one example, and deer on coastal islands that feed on seaweed is another. Maybe there is something about suburbia that gives them a boost too, but mild climates surely help this.

The deer I studied in west TX (75/sq-mi) had high repro rates (1.6-1.9 fawns/doe), regardless of life at KCC that could fluctuate each year. When the rains came in spring/summer then KCC was relatively high and annual fawn mortality was 45% (mostly by bobcats); when the rains did not come, KCC was low, and fawn mortality was 85% (mostly by sick-starve). This was a case of an unhealthy system with good repro rates overall. Cost of gestation is much cheaper than lactation, so 'carry twins and see what comes in spring' is how that system has evolved. Climate was largely thermo-neutral, with artificial water sources and some feed provided, and no real predators of adult deer.



From: Anthony DeNicola [mailto: tony.denicola@whitebuffaloinc.org]
Sent: Friday, September 13, 2019 2:35 PM
Subject: Re: "Compensatory Rebound Effect" in deer reproduction - a question.

All,

Nice summary Tom. It is rarely the case where deer in suburbia are malnourished enough to see an increase in recruitment subsequent to a population reduction to even both giving it consideration. It is an animal rights ploy to discredit lethal deer management. More BS smoke, mirrors, and misinformation.

Tony

On Fri, Sep 13, 2019 at 10:55 AM Rawinski, Thomas - FS <thomas.rawinski@usda.gov> wrote:

Bob,

I'll hope the deer experts chime in. But for me, the easiest way to counter that argument is thus:

To the extent that a rebound can occur in deer populations, it would only be detectable if the female deer began in poor physical condition, with suppressed reproductive success, in overpopulated situations.

No one wants overpopulated, suffering deer.

Hunting/culling the overpopulated deer for several/many years would return them to physical health, especially if the habitat improved as well. If population rebound did occur, it is merely returning deer to their normal, healthy reproductive levels.

I'm sure the deer in your town of Harvard, MA are very healthy. With population modeling, a factor more important than litter size is "age at first reproduction". I suspect that a certain percentage of fawns this fall will become impregnated in Harvard. That sort of thing allows for rapid population growth. Talking with Beau Payne this summer, who has examined hundreds of culled deer, he has seen virtually no evidence of impregnated fawns, or triplets, there on Long Island, where deer are overpopulated.

Hey, again, I'm just a wildlifer wannabe.

TR

Thomas Rawinski
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Caring for the land and serving people

From: Robert Douglas <rdouglas@andoverma.gov>
Sent: Friday, September 13, 2019 10:22 AM
Subject: "Compensatory Rebound Effect" in deer reproduction - a question.

Hello all!
One term that I keep hearing at deer meetings and in the press is "Compensatory Rebound Effect". Simply put if deer are culled the survivors will rapidly produce more offspring and - very quickly – they say – there will be more deer than you started with.
So, anyone know about and scientific basis for this statement or any experience with it – or contrary to it?
Many thanks,
Bob Douglas
Andover MA