Notes on testing iterations of the model

1. Model C – changed N[1] to 20+H/h from 10+H/h
   1. No real change in results
   2. Did no change back
2. Model C – changed uniform distribution for sigma from 1 to .05
   1. Results worse
   2. But makes me wonder if the sigma uniform distribution is incorrect and causing issues
3. Model C – changed S and HR sigma uniform distribution within the SS to logit scale
4. Model C – Changed Beta Priors from dunif(0,1) to dnorm(0,.1)
   1. Makes more sense in some cases
5. Model E – Need to change how N.J and N.A are calculated
   1. Think of phenology
   2. N.J[t+1] = (r\*N.A)\*S
      1. Problem here is Poult Survival. Was being captured in R.
   3. N.A[t+1] = N.A\*S.A + N.J\*S.A^12\*S.J^40
6. Model C – Appears changing the prior distribution for the Temporal process error for S and HR greatly influences estimates.
   1. Looks like I can change some values
7. Model C – specifying the prior for R
   1. R[t] ~ dlnorm(mean.R, tau) OR
   2. R[t] ~ dlnorm(log(mean.R), tau)
   3. Also expanded the uniform prior for mean.R from dunif(.1,2) to dunif(.001, 10)
8. Model C –
   * Idealized grid of a hypothetical landscape
   * All you need in simulation addressing key components of the model
   * How effectively does the model extrapolate across that special surface.
   * Don’t need spacially dynamic density, can just randomize by wmd
   * Spatial variation in harvest
   * Step through approach
   * Develop table of the scenarios you want to test
   * J 🡪 A, Make switch to adult after the first hunting season

* When simulating data, is the process error something that needs to be defined or is that what comes from the random sampling?
* General Transition from J 🡪 A. We really only have survival of juveniles from capture through June-ish? Should we be dealing with this in our model?
  + Specifically in the state space, the number of juveniles that survive to next year is based on juvenile survival rate.
  + But also in when turkeys turnover to adults
* WMD covariates for s, better to leave as is or would it make any difference to have them by intercept? Eg intercept\_s[wmd#]
* Simulating the spatial variation = gaussian random fields