

Apple Snail SESI Core

Parameters

Day	ProdFactor	Day	ProdFactor
61-91	0.00176	183-214	0.00351
92-121	0.01053	215-245	0.00246
122-152	0.00702	246-275	0.00140
153-182	0.00527	276-306	0.00070

$$\text{StudyArea}(x,y) = \begin{cases} 1 & \text{if suitable.} \\ 0 & \text{otherwise.} \end{cases}$$

Suitable FGAP habitat types:
Freshwater marsh, Typha, Spartina,
Muhlenbergia, Eleocharis, Open water

Get next day

Is current day in breeding season?

yes

no

yes

More days to process in this year?

no

BREEDING SEASON (2MAR-2NOV)
for (x,y) in study area:

SUITABLE CONDITIONS

waterlevel(j) >= 10cm?
set EggProd(j) = 1

FLOODING

waterlevel(i) > waterlevel(j) + 20cm
where $i-30 < j < i$?
set EggProd(j) = 0.0 for all such j

ONE-MONTH DROUGHT

waterlevel(i) <= 0.0
for all j such that $i-30 < j < i$?
set EggProd(j) = 0.0 for all j
such that $i-30 < j < i$

TWO-MONTH DROUGHT

waterlevel(j) <= 0.0
for all j such that $i-30 < j < i$?
set EggProd(j) = 0.0 for all j
such that $i-90 < j < i-30$

for (x,y) in study area

IndexMap(x,y) =

EggProd(i) * ProductivityFactor(i)
summed over all days i in breeding season

