Variable name	initial value, calculation	Unit	Reference/comment	used in procedure
BeeTArtificialDepleted	NA (not used for initial analysis)	Days	Estimation	BeeTProc
BeeTCell	BeeTLarvae at time of capping	g	Amount of BeeTLarvae at time of capping	MitesReleaseProc
BeeTLarvae	BeeTLarvae + (BeeTstoredHive / PollenStore_g) * (needPollenLarvae / 1000)	g	Amount of BeeT at the larvae. Note differs for Honey and Pollen (see code)	Pollenconsumptionproc, HoneyconsumptionProc
BeeTLarvaeInvasion	BeeTLarvae	g	Amount of BeeT at time of invasion	MitesInvasionProc
BeeTMassFraction	Based on literature	g BeeT/g Medium	Determined based on literature/experiments and treatment	BeeTProc
BeeTPatch	0	g		BeeTProc
BeeTPeriodEnd	Depends on period	Julian Day		BeeTProc
BeeTPeriodStart	Depends on period	Julian Day		BeeTProc
BeeTScalingVariable	range	NA		MitesReleaseProc
BeeTstoredHive	BeeTStoredHive + BeeTPatch * (DeltaStored / StoredPatch)	g	Also degrades daily.	BeeTProc
DaysBetweenRefills	10	days	Based on Avni et al.	BeeTProc
DeltaRefill	0	g	Used for calculations	BeeTProc
FractionToLarvae	TotalBeeTConsumedLarvae / (TotalBeeTstoredHive)	NA	Used to evaluate how much BeeT ends up with the larvae	Pollenconsumptionproc, HoneyconsumptionProc
hourlyRemovalRate	Based on literature	hours	Depends on chosen treatment	BeeTProc
mortalityMitesInCell	mortalityNoBeeT + (BeeTCell / ((1 / (BeeTScalingVariable)) + BeeTCell))	NA	value between 0 and 1, affects mortalityMitesInCell with a random poisson distribution	MitesReleaseProc
mortalityNoBeeT	0	NA	Mortality without BeeT taken in account with mite fertility	MitesReleaseProc
PeriodLength	BeeTPeriodEnd - BeeTPeriodStart	days		BeeTProc
RefillAmount	600 (TBD)	g	Currently based on Avni et al. Not maximum uptake of sugar water	BeeTProc

RefillTime	8	hours	Hours after start of day that treatment is applied (currently 8 am)	BeeTProc
StoredPatch	Updated based on refillAmount, hourlyRemovalRate and degradationBeeTPatch	g		BeeTProc
TotalBeeT	TotalBeeT + DeltaRefill * BeeTMassFraction	g		BeeTProc
TotalBeeTConsumedLarvae	TotalBeeTConsumedLarvae + (BeeTstoredHive / PollenStore_g) * (needPollenLarvae / 1000)	g	Slightly different calculation for honey (different units)	Pollenconsumptionproc, HoneyconsumptionProc
TotalBeeTstoredHive	TotalBeeTStoredHive + BeeTPatch * (DeltaStored / StoredPatch)	g	Used to calculate FractionToLarvae	BeeTProc
DegradationBeeTHive	Range	g/day		BeeTProc
DegradationBeeTPatch	Range	g/day		BeeTproc