Risk Object: New Risk Object [New Risk Object_11]

Model: BN_Model_Vit_A_170613.cmp

Generated: 4/5/18 3:04 AM

VOI Configuration	
Decision Node	Farmers have trees [M0]
Uncertainty Nodes	Ability to hire labor [Ability_to_hire_labor] Ability to irrigate [M0_1_1_3_1_1_2] Annual mean temperatures [Annual_mean_temperatures] Biophysical suitability [M0_1_1_3] Effect of climatic constraints [M0_1_1_4] Effect of soil fertility constraints [Effect_of_soil_fertility_constraints] Farm income [Farm_income] Food preferences [Food_preferences] Fruit available per person (kg_yr) [Fruit_available_per_person__kg_yr_] Fruit consumed per person (kg_yr) [Fruit_consumed_per_person__kg_yr_] Fruit consumption preference per person (kg_yr) [Fruit_consumption_preference_per_person__kg_yr_] Fruit produced per person (kg_yr) [Fruit_produced_per_person__kg_yr_] Fruit production area (%) [Fruit_production_area____] Fruit production area per person (ha) [Fruit_production_area_per_person__ha_] Fruit species [M0_1_1_3_1_1_1] Fruit yield (kg_ha_yr) [Fruit_yield__kg_ha_yr_] Fruit yield potential (kg_ha_yr) [Fruit_yield_potential__kg_ha_yr_] Genetic yield potential (kg_ha_yr) [Genetic_yield_potential__kg_ha_yr_] Germplasm quality [M0_1_1_2_1] Handling, storage and processing quality (PHL) [Handling__storage_and_processing_quality__PHL_] Household composition (nutrient demand groups) [Household_composition__nutrient_demand_groups_] Household labor availability [Household_labor_availability] Household size [Household_size] Knowledge and skills [Knowledge_and_skills] Labor constraints to irrigation [Labor_constraints_to_irrigation] Labor constraints to pest and disease management [Labor_constraints_to_pest_and_disease_management] Labor constraints to postharvest and storage [Labor_constraints_to_postharvest_and_storage] Labor constraints to Soil Fertility Management (SFM) [Labor_constraints_to_Soil_Fertility_Management__SFM_] Losses due to biophysical unsuitability (%) [Losses_due_to_biophysical_unsuitability____] Losses due to pests and diseases (%) [Losses_due_to_pests_and_diseases____] Natural soil fertility [M0_1_1_1_1_1_4] Non_fruit consumption potential per person (kg_yr) [Non_fruit_consumption_potential_per_person__kg_yr_] Non_fruit production area per person (ha) [Non_fruit_production_area_per_person__ha_] Non_fruit yield (kg_ha_yr) [Non_fruit_yield__kg_ha_yr_] Non_fruit yield per person (kg_yr) [Non_fruit_yield_per_person__kg_yr_] Off farm product consumed per person (kg_yr) [Off_farm_product_consumed_per_person__kg_yr_] On farm product consumed per person (kg_yr) [On_farm_product_consumed_per_person__kg_yr_] Other off_farm Vitamin A content (RAE_kg) [Other_off_farm_Vitamin_A_content__RAE_kg_] Other on_farm Vit A content (RAE_kg) [Other_on_farm_Vit_A_content__RAE_kg_] Pest & disease management effectiveness [Pest___disease_management_effectiveness] Pest & disease management inputs [Pest___disease_management_inputs] Pest and disease pressure [Pest_and_disease_pressure] PHL (%) [PHL____] Rainfall adequacy [Rainfall_adequacy] Rainfall regime [Rainfall_regime] SFM quality [SFM_quality] Soil fertility [M0_1_1_4_1] Soil fertility needs [M0_1_1_3_1_1_1_2] Temperature suitability [Temperature_suitability] Total production area (ha) [Total_production_area__ha_] Total production area per person (ha) [Total_production_area_per_person__ha_] Vitamin A content fruit (RAE_kg) [Vitamin_A_content_fruit__RAE_kg_] Vitamin A from fruits per person (RAE_yr) [Vitamin_A_from_fruits_per_person__RAE_yr_] Vitamin A from off_farm (RAE yr) [Vitamin_A_from_off_farm__RAE_yr_] Vitamin A from on farm (RAE_yr) [Vitamin_A_from_on_farm__RAE_yr_] Vitamin A intake (RAE_yr [Vitamin_A_intake__RAE_yr] Vitamin A needs per person (RAE_yr) [Vitamin_A_needs_per_person__RAE_yr_] Water availability [Water_availability] Water needs [Water_needs] Water sufficiency [Water_sufficiency]
Utility Node	Vitamin A gap per person (RAE_yr) [Vitamin_A_gap_per_person__RAE_yr_]
Optimisation Type	maximum
Scenario	Scenario 1

Total build time: 35140456 ms

Expected Maximum Value (Utility|Decision) – EMV

Expected Value Given Perfect Information – EV|PI

Expected Value of (Partially) Perfect Information – EV(P)PI

Click on the name of an Uncertainty node to see detailed utility table showing utility values per each combination of Uncertainty and Decision states.

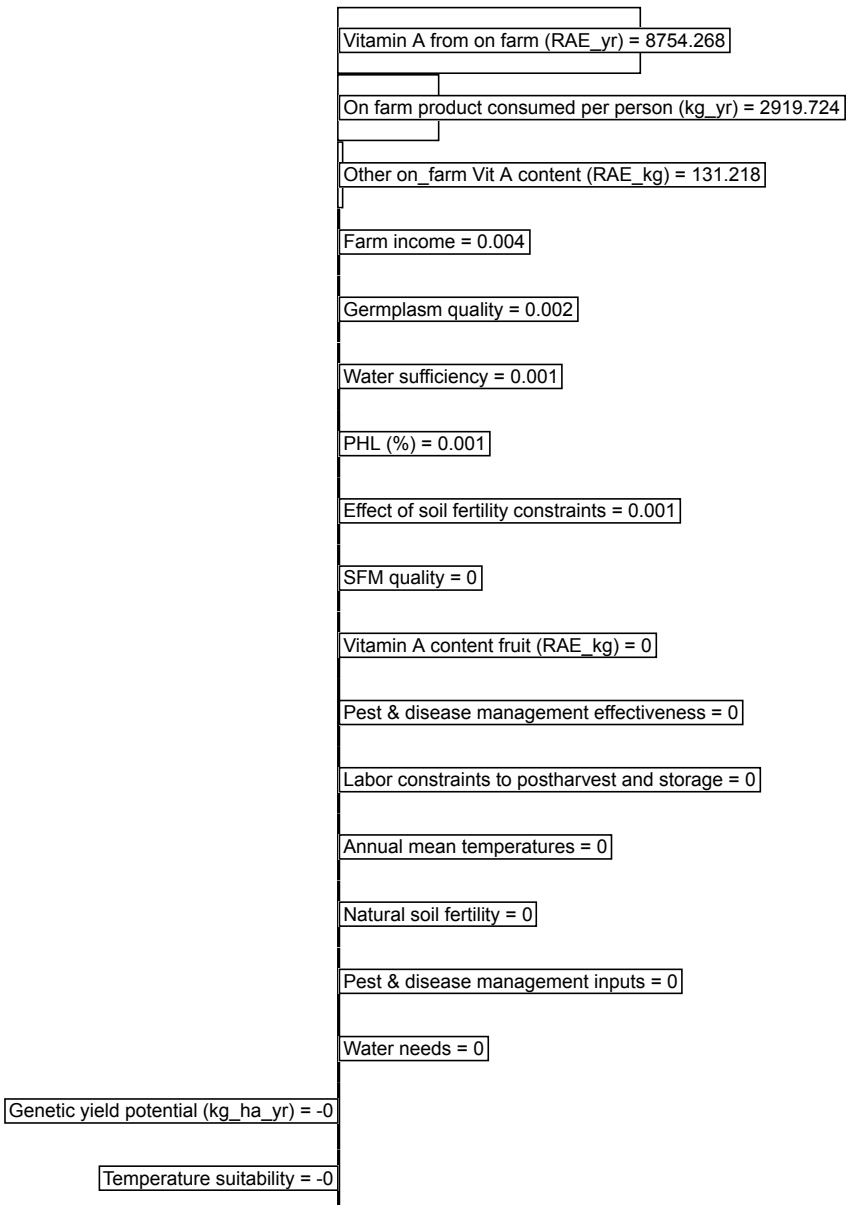
EMV	**131217.035**
	131217.033

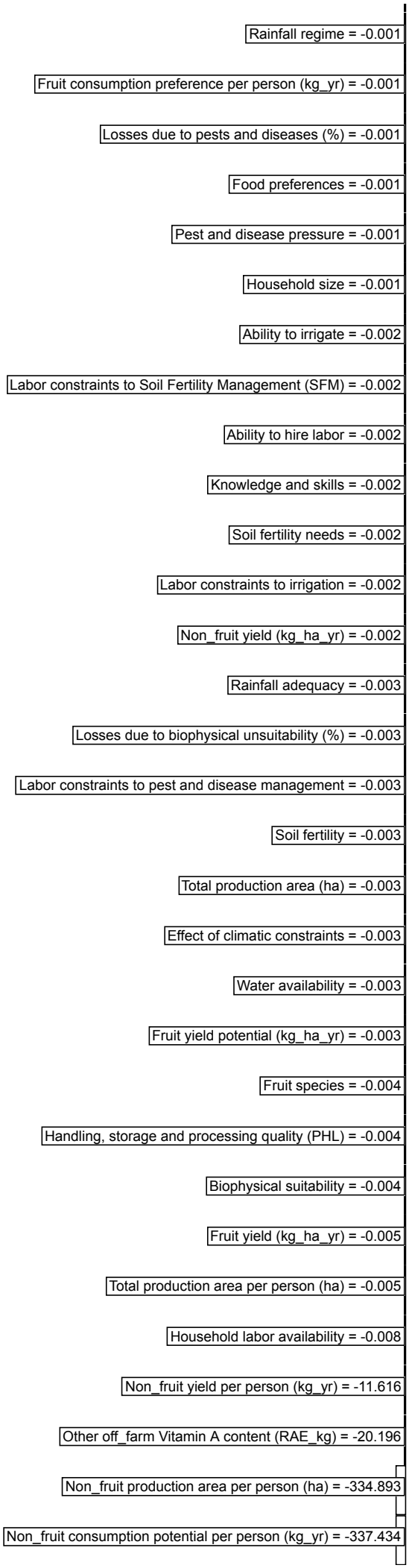
Ability to hire labor [Ability_to_hire_labor]	EV|PI	
	EV(P)PI	-0.002
Ability to irrigate [M0_1_1_3_1_1_2]	EV|PI	131217.033
	EV(P)PI	-0.002
Annual mean temperatures [Annual_mean_temperatures]	EV|PI	131217.035
	EV(P)PI	0
Biophysical suitability [M0_1_1_3]	EV|PI	131217.031
	EV(P)PI	-0.004
Effect of climatic constraints [M0_1_1_4]	EV|PI	131217.032
	EV(P)PI	-0.003
Effect of soil fertility constraints [Effect_of_soil_fertility_constraints]	EV|PI	131217.036
	EV(P)PI	0.001
Farm income [Farm_income]	EV|PI	131217.039
	EV(P)PI	0.004
Food preferences [Food_preferences]	EV|PI	131217.034
	EV(P)PI	-0.001
Fruit available per person (kg_yr) [Fruit_available_per_person__kg_yr_]	EV|PI	98589.653
	EV(P)PI	-32627.382
Fruit consumed per person (kg_yr) [Fruit_consumed_per_person__kg_yr_]	EV|PI	98816.565
	EV(P)PI	-32400.47
Fruit consumption preference per person (kg_yr) [Fruit_consumption_preference_per_person__kg_yr_]	EV|PI	131217.034
	EV(P)PI	-0.001
Fruit produced per person (kg_yr) [Fruit_produced_per_person__kg_yr_]	EV|PI	98594.392
	EV(P)PI	-32622.643
Fruit production area (%) [Fruit_production_area____]	EV|PI	98602.172
	EV(P)PI	-32614.863
Fruit production area per person (ha) [Fruit_production_area_per_person__ha_]	EV|PI	98602.365
	EV(P)PI	-32614.67
Fruit species [M0_1_1_3_1_1_1]	EV|PI	131217.031
	EV(P)PI	-0.004
Fruit yield (kg_ha_yr) [Fruit_yield__kg_ha_yr_]	EV|PI	131217.03
	EV(P)PI	-0.005
Fruit yield potential (kg_ha_yr) [Fruit_yield_potential__kg_ha_yr_]	EV|PI	131217.032
	EV(P)PI	-0.003
Genetic yield potential (kg_ha_yr) [Genetic_yield_potential__kg_ha_yr_]	EV|PI	131217.035
	EV(P)PI	-0
Germplasm quality [M0_1_1_2_1]	EV|PI	131217.037
	EV(P)PI	0.002
Handling, storage and processing quality (PHL) [Handling__storage_and_processing_quality__PHL_]	EV|PI	131217.031
	EV(P)PI	-0.004
Household composition (nutrient demand groups) [Household_composition__nutrient_demand_groups_]	EV|PI	130726.306
	EV(P)PI	-490.729
Household labor availability [Household_labor_availability]	EV|PI	131217.027
	EV(P)PI	-0.008
Household size [Household_size]	EV|PI	131217.034
	EV(P)PI	-0.001
Knowledge and skills [Knowledge_and_skills]	EV|PI	131217.033
	EV(P)PI	-0.002
Labor constraints to irrigation [Labor_constraints_to_irrigation]	EV|PI	131217.033
	EV(P)PI	-0.002

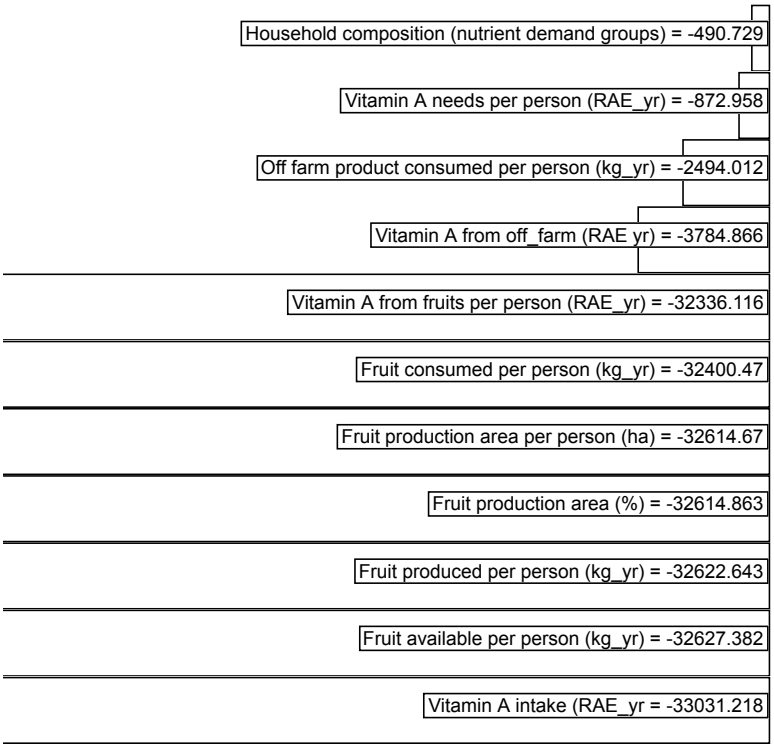
Labor constraints to pest and disease management [Labor_constraints_to_pest_and_disease_management]	EV|PI	131217.032
	EV(P)PI	-0.003
Labor constraints to postharvest and storage [Labor_constraints_to_postharvest_and_storage]	EV|PI	131217.035
	EV(P)PI	0
Labor constraints to Soil Fertility Management (SFM) [Labor_constraints_to_Soil_Fertility_Management__SFM_]	EV|PI	131217.033
	EV(P)PI	-0.002
Losses due to biophysical unsuitability (%) [Losses_due_to_biophysical_unsuitability____]	EV|PI	131217.032
	EV(P)PI	-0.003
Losses due to pests and diseases (%) [Losses_due_to_pests_and_diseases_____]	EV|PI	131217.034
	EV(P)PI	-0.001
Natural soil fertility [M0_1_1_1_1_1_4]	EV|PI	131217.035
	EV(P)PI	0
Non_fruit consumption potential per person (kg_yr) [Non_fruit_consumption_potential_per_person__kg_yr_]	EV|PI	130879.601
	EV(P)PI	-337.434
Non_fruit production area per person (ha) [Non_fruit_production_area_per_person__ha_]	EV|PI	130882.142
	EV(P)PI	-334.893
Non_fruit yield (kg_ha_yr) [Non_fruit_yield__kg_ha_yr_]	EV|PI	131217.033
	EV(P)PI	-0.002
Non_fruit yield per person (kg_yr) [Non_fruit_yield_per_person__kg_yr_]	EV|PI	131205.419
	EV(P)PI	-11.616
Off farm product consumed per person (kg_yr) [Off_farm_product_consumed_per_person__kg_yr_]	EV|PI	128723.023
	EV(P)PI	-2494.012
On farm product consumed per person (kg_yr) [On_farm_product_consumed_per_person__kg_yr_]	EV|PI	134136.759
	EV(P)PI	2919.724
Other off_farm Vitamin A content (RAE_kg) [Other_off_farm_Vitamin_A_content__RAE_kg_]	EV|PI	131196.839
	EV(P)PI	-20.196
Other on_farm Vit A content (RAE_kg) [Other_on_farm_Vit_A_content__RAE_kg_]	EV|PI	131348.253
	EV(P)PI	131.218
Pest & disease management effectiveness [Pest___disease_management_effectiveness]	EV|PI	131217.035
	EV(P)PI	0
Pest & disease management inputs [Pest___disease_management_inputs]	EV|PI	131217.035
	EV(P)PI	0
Pest and disease pressure [Pest_and_disease_pressure]	EV|PI	131217.034
	EV(P)PI	-0.001
PHL (%) [PHL_____]	EV|PI	131217.036
	EV(P)PI	0.001
Rainfall adequacy [Rainfall_adequacy]	EV|PI	131217.032
	EV(P)PI	-0.003
Rainfall regime [Rainfall_regime]	EV|PI	131217.034
	EV(P)PI	-0.001
SFM quality [SFM_quality]	EV|PI	131217.035
	EV(P)PI	0
Soil fertility [M0_1_1_4_1]	EV|PI	131217.032
	EV(P)PI	-0.003
Soil fertility needs [M0_1_1_3_1_1_1_2]	EV|PI	131217.033
	EV(P)PI	-0.002
Temperature suitability [Temperature_suitability]	EV|PI	131217.035
	EV(P)PI	-0
Total production area (ha) [Total_production_area__ha_]	EV|PI	131217.032
	EV(P)PI	-0.003

Total production area per person (ha) [Total_production_area_per_person__ha_]	**EV|PI**	131217.03
	EV(P)PI	-0.005
Vitamin A content fruit (RAE_kg) [Vitamin_A_content_fruit__RAE_kg_]	**EV|PI**	131217.035
	EV(P)PI	0
Vitamin A from fruits per person (RAE_yr) [Vitamin_A_from_fruits_per_person__RAE_yr_]	**EV|PI**	98880.919
	EV(P)PI	-32336.116
Vitamin A from off_farm (RAE yr) [Vitamin_A_from_off_farm__RAE_yr_]	**EV|PI**	127432.17
	EV(P)PI	-3784.866
Vitamin A from on farm (RAE_yr) [Vitamin_A_from_on_farm__RAE_yr_]	**EV|PI**	139971.303
	EV(P)PI	8754.268
Vitamin A intake (RAE_yr [Vitamin_A_intake__RAE_yr]	**EV|PI**	98185.817
	EV(P)PI	-33031.218
Vitamin A needs per person (RAE_yr) [Vitamin_A_needs_per_person__RAE_yr_]	**EV|PI**	130344.077
	EV(P)PI	-872.958
Water availability [Water_availability]	**EV|PI**	131217.032
	EV(P)PI	-0.003
Water needs [Water_needs]	**EV|PI**	131217.035
	EV(P)PI	0
Water sufficiency [Water_sufficiency]	**EV|PI**	131217.036
	EV(P)PI	0.001

EV(P)PI Graph




Rainfall regime = -0.001
Fruit consumption preference per person (kg_yr) = -0.001
Losses due to pests and diseases (%) = -0.001
Food preferences = -0.001
Pest and disease pressure = -0.001
Household size = -0.001
Ability to irrigate = -0.002
Labor constraints to Soil Fertility Management (SFM) = -0.002
Ability to hire labor = -0.002
Knowledge and skills = -0.002
Soil fertility needs = -0.002
Labor constraints to irrigation = -0.002
Non_fruit yield (kg_ha_yr) = -0.002
Rainfall adequacy = -0.003
Losses due to biophysical unsuitability (%) = -0.003
Labor constraints to pest and disease management = -0.003
Soil fertility = -0.003
Total production area (ha) = -0.003
Effect of climatic constraints = -0.003
Water availability = -0.003
Fruit yield potential (kg_ha_yr) = -0.003
Fruit species = -0.004
Handling, storage and processing quality (PHL) = -0.004
Biophysical suitability = -0.004
Fruit yield (kg_ha_yr) = -0.005
Total production area per person (ha) = -0.005
Household labor availability = -0.008
Non_fruit yield per person (kg_yr) = -11.616
Other off_farm Vitamin A content (RAE_kg) = -20.196
Non_fruit production area per person (ha) = -334.893
Non_fruit consumption potential per person (kg_yr) = -337.434



[+] EV|PI Graph

[+] Copyright and References