GECO2 - Input Data For Carbon Calculator

Please answer the question to run the carbon calculator.
Question with * are mandatory. If you do not know some value please insert -9999.
In this case a default value will be assumed for computation.
Please in case of non integer numbers DO NOT USE COMMA to separate integer from decimal digits (e.g. 18.4 correct 18,4 wrong).

*Campo obbligatorio

General data

1. Name and Surname of compiler *

   Please fill in with the name of the person who is compiling the form. It would be necessary to contact him in case of unclear answers.

2. Email of the compiler *

3. Name of enterprise *

   If the enterprise has a double (or manifold) name, please join the names through the character "_" e.g. Sweetcherry_and_peach_ltd

4. Email address *

   Enterprise contact. This contact will be used for authentication

5. VAT number *

   if you don't have it write -9999

6. Tax code *

   Codice fiscale in Italy

7. Name of the project manager

   Name of the reference person within the enterprise

8. Surname of the project manager

   Surname of the reference person within the enterprise

9. Number of the experimental field *

   Insert an integer number in ascending order from 1. Required if the same enterprise has more than one field

10. Country *

Contrassegna solo un ovale.

- CROATIA
- ITALY

11. Region or County *

Contrassegna solo un ovale.

- Emilia-Romagna
- Molise
- Puglia
- Marche
- Zadar
- Dubrovnik_Neretva
- Split_Dalmatia

12. Year of assessment *

13. Brief description of the field

14. Field latitude *

In degrees. Positive northern Hemisphere, negative southern Hemisphere Example: 44.78

15. Field longitude *

In degrees. Positive eastern Hemisphere, negative western Hemisphere Example: 11.40

16. Field size (hectares) *

17. Field slope (%) *

Climate data

18. Annual average temperature in °C (If not known write -9999) *

19. Annual rainfall in mm (If not known write -9999) *

20. Reference Evapotranspiration (ET0) in mm. If not known write -9999)

21. Climatic Water Balance in mm. If not known write -9999)

Soil data

22. Soil depth (cm, if not known write -9999) *

23. Soil drainage properties *

Contrassegna solo un ovale.

- Poor
- Good

24. Soil pH (enter a numeric value) *

25. Soil texture *

Contrassegna solo un ovale.

- Medium
- Fine
- Coarse

26. Soil organic matter (% use dot for decimals) *

27. Soil skeleton (%) *

28. Field Capacity (mm)

29. Total Nitrogen in soil (%)

30. C:N ratio (-)

Crop and field management data

31. Type of crop *

Contrassegna solo un ovale.

- APPLE_TREE
- PEAR_TREE
- GRAPEVINE
- TABLE_GRAPEVINE
- OLIVE_TREE
- STONE_FRUIT_TREE
- CITRUS
- CHERRY_TREE
- ACTINIDIA
- FRUIT_SHRUB
- OTHER_FAST_GROWTH_TREE
- OTHER_SLOW_GROWTH_TREE
- KAKI

32. Density of trees in the present year (nr./ha) *

33. Density of trees in the last year minus density of trees in the present year (do not account replaced trees nr/ha the result can namely be also negative) *

34. Orchard/Vineyard age (years) *

35. Tree/vine DBH (cm DBH= Diameter at Breast Height, namely 130 cm)

36. Tree height (cm)

37. Organic management *

Contrassegna solo un ovale.

- Yes
- No

38. Yield (fresh weight in t/ha) *

39. Area managed through no-tillage (square metres) *

40. Area managed through minimum-tillage area (square metres) *

41. Area where winter cover crops are used (square metres) *

42. Permanent grass or grassed orchard/grassed vineyard area (square metres) *

43. Forestry crop area (square metres) *

44. Sparse vegetation, shrubs, hedges (square metres) *

45. Above ground woody residue dry weight treatment 1 (tons/ha). If not known write -9999 *

46. Above ground woody residue dry weight treatment 2 (tons/ha). If not known write -9999. If no second choice is needed please put 0. *

47. Woody Residue treatment 1 *

Contrassegna solo un ovale.

- Left_on_field_incorporated_or_mulch
- Burned
- Biochar
- Exported_off_farm
- Removed_left_untreated_in_heaps_or_pits
- Removed_nonforced_aeration_compost
- Removed_forced_aeration_compost

48. Woody Residue treatment 2 *

Contrassegna solo un ovale.

- None
- Burned
- Biochar
- Exported_off_farm
- Removed_left_untreated_in_heaps_or_pits
- Removed_nonforced_aeration_compost
- Removed_forced_aeration_compost
- Left_on_field_incorporated_or_mulch

49. Above ground green residue dry weight treatment 1 (tons/ha). If not known write -9999 *

_____

50. Above ground green residue dry weight treatment 2 (tons/ha). If not known write -9999. If no second choice is needed please put 0. *

_____

51. Green Residue treatment 1 *

Contrassegna solo un ovale.

- Left_on_field_incorporated_or_mulch
- Burned
- Biochar
- Exported_off_farm
- Removed_left_untreated_in_heaps_or_pits
- Removed_nonforced_aeration_compost
- Removed_forced_aeration_compost

52. Green Residue treatment 2 *

Contrassegna solo un ovale.

- None
- Burned
- Biochar
- Exported_off_farm
- Removed_left_untreated_in_heaps_or_pits
- Removed_nonforced_aeration_compost
- Removed_forced_aeration_compost
- Left_on_field_incorporated_or_mulch

Agronomic input data

53. Cumulated weight of active principles of non organic applied pesticides (Enter a numeric value in kg/ha) *

_____

54. Fertilizer n. 1 *

Contrassegna solo un ovale.

- None
- Ammonium_Bicarbonate
- Ammonium_Nitrate
- Ammonium_Sulphate
- Ammonium_Sulphate_Nitrate_26
- Anhydrous_Ammonia
- Calcium_Ammonium_Nitrate
- Calcium_Nitrate
- Compound_NK_14N_44_K2O
- Compound_NPK_15N_15K2O_15P2O5
- Diammonium_Phosphate _18N_46P2O5
- Kainit_Magnesium_Sulphate_11K2O_5MgO
- Lime_52CaO
- Limestone_55CaCO3_29CaO
- Lime_algal_30CaO
- Monoammonium_Phosphate _11N_52P2O5
- Muriate_Of_Potash_Potassium_Chloride _60K2O
- Phosphate_Rock_Phosphate _25P2O5
- Potassium_Sulphate_50_K2O_45SO3
- Super_Phosphate_21_P2O5
- Triple_Super_Phosphate_48P2O5
- Urea_46_4N
- Urea_Ammonium_Nitrate_Solution_32N
- Other_Nitrogen_Fertilizer
- Other_Non_Nitrogen_Fertilizer

55. Fertilizer n. 2 *

Contrassegna solo un ovale.

- None
- Ammonium_Bicarbonate
- Ammonium_Nitrate
- Ammonium_Sulphate
- Ammonium_Sulphate_Nitrate_26
- Anhydrous_Ammonia
- Calcium_Ammonium_Nitrate
- Calcium_Nitrate
- Compound_NK_14N_44_K2O
- Compound_NPK_15N_15K2O_15P2O5
- Diammonium_Phosphate _18N_46P2O5
- Kainit_Magnesium_Sulphate_11K2O_5MgO
- Lime_52CaO
- Limestone_55CaCO3_29CaO
- Lime_algal_30CaO
- Monoammonium_Phosphate _11N_52P2O5
- Muriate_Of_Potash_Potassium_Chloride _60K2O
- Phosphate_Rock_Phosphate _25P2O5
- Potassium_Sulphate_50_K2O_45SO3
- Super_Phosphate_21_P2O5
- Triple_Super_Phosphate_48P2O5
- Urea_46_4N
- Urea_Ammonium_Nitrate_Solution_32N
- Other_Nitrogen_Fertilizer
- Other_Non_Nitrogen_Fertilizer

56. Fertilizer n. 3 *

Contrassegna solo un ovale.

- None
- Ammonium_Bicarbonate
- Ammonium_Nitrate
- Ammonium_Sulphate
- Ammonium_Sulphate_nitrate_26
- Anhydrous_Ammonia
- Calcium_Ammonium_Nitrate
- Calcium_Nitrate
- Compound_NK_14N_44_K2O
- Compound_NPK_15N_15K2O_15P2O5
- Diammonium_Phosphate _18N_46P2O5
- Kainit_Magnesium_Sulphate_11K2O_5MgO
- Lime_52CaO
- Limestone_55CaCO3_29CaO
- Lime_algal_30CaO
- Monoammonium_Phosphate _11N_52P2O5
- Muriate_Of_Potash_Potassium_Chloride _60K2O
- Phosphate_Rock_Phosphate _25P2O5
- Potassium_Sulphate_50_K2O_45SO3
- Super_Phosphate_21_P2O5
- Triple_Super_Phosphate_48P2O5
- Urea_46_4N
- Urea_Ammonium_Nitrate_Solution_32N
- Other_Nitrogen_Fertilizer
- Other_Non_Nitrogen_Fertilizer

57. Fertilizer n. 4 *

Contrassegna solo un ovale.

- None
- Ammonium_Bicarbonate
- Ammonium_Nitrate
- Ammonium_Sulphate
- Ammonium_Sulphate_Nitrate_26
- Anhydrous_Ammonia
- Calcium_Ammonium_Nitrate
- Calcium_Nitrate
- Compound_NK_14N_44_K2O
- Compound_NPK_15N_15K2O_15P2O5
- Diammonium_Phosphate _18N_46P2O5
- Kainit_Magnesium_Sulphate_11K2O_5MgO
- Lime_52CaO
- Limestone_55CaCO3_29CaO
- Lime_Algal_30CaO
- Monoammonium_Phosphate _11N_52P2O5
- Muriate_of_potash_Potassium_Chloride _60K2O
- Phosphate_Rock_Phosphate _25P2O5
- Potassium_Sulphate_50_K2O_45SO3
- Super_Phosphate_21_P2O5
- Triple_Super_Phosphate_48P2O5
- Urea_46_4N
- Urea_Ammonium_Nitrate_Solution_32N
- Other_Nitrogen_Fertilizer
- Other_Non_Nitrogen_Fertilizer

58. Product application rate for fertilizer n. 1 (Enter a numeric value in kg/ha) *

_____

59. Product application rate for fertilizer n. 2 (Enter a numeric value in kg/ha) *

60. Product application rate for fertilizer n. 3 (Enter a numeric value in kg/ha) *

61. Product application rate for fertilizer n. 4 (Enter a numeric value in kg/ha) *

62. Application method for fertilizer n. 1 *

Contrassegna solo un ovale.

- Apply_in_solution
- Spread
- Spread_or_incorporate_then_flood
- Spread_to_floodwater_at_panicle_initiation
- Incorporate
- Subsurface_drip
- Not_applied

63. Application method for fertilizer n. 2 *

Contrassegna solo un ovale.

- Apply_in_solution
- Spread
- Spread_or_incorporate_then_flood
- Spread_to_floodwater_at_panicle_initiation
- Incorporate
- Subsurface_drip
- Not_applied

64. Application method for fertilizer n. 3 *

Contrassegna solo un ovale.

- Apply_in_solution
- Spread
- Spread_or_incorporate_then_flood
- Spread_to_floodwater_at_panicle_initiation
- Incorporate
- Subsurface_drip
- Not_applied

65. Application method for fertilizer n. 4 *

Contrassegna solo un ovale.

- Apply_in_solution
- Spread
- Spread_or_incorporate_then_flood
- Spread_to_floodwater_at_panicle_initiation
- Incorporate
- Subsurface_drip
- Not_applied

66. Emissions inhibitors for fertilizer n. 1 *

Contrassegna solo un ovale.

- None
- Nitrification_inhibitor
- Polymer_coated_inhibitor

67. Emissions inhibitors for fertilizer n. 2 *

Contrassegna solo un ovale.

- None
- Nitrification_inhibitor
- Polymer_coated_inhibitor

68. Emissions inhibitors for fertilizer n. 3 *

Contrassegna solo un ovale.

- None
- Nitrification_inhibitor
- Polymer_coated_inhibitor

69. Emissions inhibitors for fertilizer n. 4 *

Contrassegna solo un ovale.

- None
- Nitrification_inhibitor
- Polymer_coated_inhibitor

70. Amendment n. 1 *

Contrassegna solo un ovale.

- None
- Compost_Zero_Emissions_1N
- Compost_Fully_Aerated_Production_1N
- Compost_Nonfully_Aerated_Production_1N
- Cattle_Farmyard_Manure_0_6N
- Pig_Farmyard_Manure_0_7N
- Sheep_Farmyard_Manure_0_7N
- Horse_Farmyard_Manure_0_7N
- Poultry_Layer_Manure_1_9N
- Broiler_Turkey_Litter_3_N
- Cattle_Slurry_0_26N
- Pig_Slurry_0_36N
- Separated_Pig_Slurry_Liquid_Part_0_36N
- Separated_Pig_Slurry_Solid_Part_0_5N
- Digestate_6Percent_Drymatter
- Biochar
- Volcanic_Rock_Dust
- Wood_Chips
- Straw
- Other_Amendment

71. Amendment n. 2 *

Contrassegna solo un ovale.

- None
- Compost_Zero_Emissions_1N
- Compost_Fully_Aerated_Production_1N
- Compost_Nonfully_Aerated_Production_1N
- Cattle_Farmyard_Manure_0_6N
- Pig_Farmyard_Manure_0_7N
- Sheep_Farmyard_Manure_0_7N
- Horse_Farmyard_Manure_0_7N
- Poultry_Layer_Manure_1_9N
- Broiler_Turkey_Litter_3_N
- Cattle_Slurry_0_26N
- Pig_Slurry_0_36N
- Separated_Pig_Slurry_Liquid_Part_0_36N
- Separated_Pig_Slurry_Solid_Part_0_5N
- Digestate_6Percent_Drymatter
- Biochar
- Volcanic_Rock_Dust
- Wood_Chips
- Straw
- Other_Amendment

72. Amendment n. 3 *

Contrassegna solo un ovale.

- None
- Compost_Zero_Emissions_1N
- Compost_Fully_Aerated_Production_1N
- Compost_Nonfully_Aerated_Production_1N
- Cattle_Farmyard_Manure_0_6N
- Pig_Farmyard_Manure_0_7N
- Sheep_Farmyard_Manure_0_7N
- Horse_Farmyard_Manure_0_7N
- Poultry_layer_manure_1_9N
- Broiler_Turkey_Litter_3_N
- Cattle_Slurry_0_26N
- Pig_Slurry_0_36N
- Separated_Pig_Slurry_Liquid_Part_0_36N
- Separated_Pig_Slurry_Solid_Part_0_5N
- Digestate_6Percent_Drymatter
- Biochar
- Volcanic_Rock_Dust
- Wood_Chips
- Straw
- Other_Amendment

73. Amendment n. 4 *

Contrassegna solo un ovale.

- None
- Compost_Zero_Emissions_1N
- Compost_Fully_Aerated_Production_1N
- Compost_Nonfully_Aerated_Production_1N
- Cattle_Farmyard_Manure_0_6N
- Pig_Farmyard_Manure_0_7N
- Sheep_Farmyard_Manure_0_7N
- Horse_Farmyard_Manure_0_7N
- Poultry_Layer_Manure_1_9N
- Broiler_Turkey_Litter_3_N
- Cattle_Slurry_0_26N
- Pig_Slurry_0_36N
- Separated_Pig_Slurry_Liquid_Part_0_36N
- Separated_Pig_Slurry_Solid_Part_0_5N
- Digestate_6Percent_Drymatter
- Biochar
- Volcanic_Rock_Dust
- Wood_Chips
- Straw
- Other_Amendment

74. Product application rate for amendment n. 1 (Enter a numeric value for dry weight in kg/ha. If you don't know the dry weight use the the table in the vademecum in order to convert) *

_____

75. Product application rate for amendment n. 2 (Enter a numeric value for dry weight in kg/ha. If you don't know the dry weight use the the table in the vademecum in order to convert) *

76. Product application rate for amendment n. 3 (Enter a numeric value for dry weight in kg/ha. If you don't know the dry weight use the the table in the vademecum in order to convert) *

77. Product application rate for amendment n. 4 (Enter a numeric value for dry weight in kg/ha. If you don't know the dry weight use the the table in the vademecum in order to convert) *

78. Application method for amendment n. 1 *

Contrassegna solo un ovale.

- Apply_in_solution
- Spread
- Spread_or_incorporate_then_flood
- Spread_to_floodwater_at_panicle_initiation
- Incorporate
- Subsurface_drip
- Not_applied

79. Application method for amendment n. 2 *

Contrassegna solo un ovale.

- Apply_in_solution
- Spread
- Spread_or_incorporate_then_flood
- Spread_to_floodwater_at_panicle_initiation
- Incorporate
- Subsurface_drip
- Not_applied

80. Application method for amendment n. 3 *

Contrassegna solo un ovale.

- Apply_in_solution
- Spread
- Spread_or_incorporate_then_flood
- Spread_to_floodwater_at_panicle_initiation
- Incorporate
- Subsurface_drip
- Not_applied

81. Application method for amendment n. 4 *

Contrassegna solo un ovale.

- Apply_in_solution
- Spread
- Spread_or_incorporate_then_flood
- Spread_to_floodwater_at_panicle_initiation
- Incorporate
- Subsurface_drip
- Not_applied

82. Emissions inhibitors for amendment n. 1 *

Contrassegna solo un ovale.

- None
- Nitrification_inhibitor
- Polymer_coated_inhibitor

83. Emissions inhibitors for amendment n. 2 *

Contrassegna solo un ovale.

- None
- Nitrification_inhibitor
- Polymer_coated_inhibitor

84. Emissions inhibitors for amendment n. 3 *

Contrassegna solo un ovale.

- None
- Nitrification_inhibitor
- Polymer_coated_inhibitor

85. Emissions inhibitors for amendment n. 4 *

Contrassegna solo un ovale.

- None
- Nitrification_inhibitor
- Polymer_coated_inhibitor

Energy data

86. Energy from biodiesel (litres/ha) (Enter a numeric value). Please note that we want the amount per hectare *

_____

87. Energy from bioethanol (litres/ha) (Enter a numeric value). Please note that we want the amount per hectare. *

_____

88. Energy from diesel (litres/ha) (Enter a numeric value). Please note that we want the amount per hectare. *

_____

89. Energy from oil (litres/ha) (Enter a numeric value). Please note that we want the amount per hectare. *

_____

90. Energy from petrol (litres/ha) (Enter a numeric value). Please note that we want the amount per hectare. *

_____

91. Energy from LPG (litres/ha) (Enter a numeric value).Please note that we want the amount per hectare. *

_____

92. Energy from coal (kg/ha) (Enter a numeric value).Please note that we want the amount per hectare. *

_____

93. Energy from high energy density biomass/ pellet (kg/ha) (Enter a numeric value). Please note that we want the amount per hectare. *

_____

94. Energy from wood (kg/ha) (Enter a numeric value). Please note that we want the amount per hectare. *

_____

95. Energy from methane (kg/ha) (Enter a numeric value). Please note that we want the amount per hectare. *

_____

96. Energy from grid (kWh/ha) (Enter a numeric value). Please note that we want the amount per hectare. *

97. Percentage of renewables of your provider (%). If you don't know write -9999. It will be adopted the default value of your contry (recorded or forecast) *

98. Energy from own hydropower plant (kWh/ha) (Enter a numeric value). Please note that we want the amount per hectare. *

99. Energy from own photovoltaic plant (kWh/ha) (Enter a numeric value). Please note that we want the amount per hectare. *

100. Energy from own aeolian plant (kWh/ha) (Enter a numeric value). Please note that we want the amount per hectare. *

Conservative Actions

In this section we ask for the conservative actions adopted before, along and after the GECO2 experimentations

101. Number of practices used in farm management in the frame of GECO2 Enter the number of practices used in farm management in order to increase organic carbon in the soil Set a number between 3 and 10. (Please find the list of project practices in question below)

Contrassegna solo un ovale.

- ◯ 3
- ◯ 4
- ◯ 5
- ◯ 6
- ◯ 7
- ◯ 8
- ◯ 9
- ◯ 10

102. Highlight the practices already in use in farm management (before participation in GECO2) Please select the boxes related to the following management practices:

Seleziona tutte le voci applicabili.

- ☐ Organic farm management
- ☐ Application of a conservative soil tillage (no tillage or minimum tillage)
- ☐ Use of cover crops and/ or permanent grass / meadow
- ☐ Farm management with hedge, rows and forest patch integrated within field crops
- ☐ Reuse of wood residues in order to improve soil organic matter
- ☐ Reuse of green residues (e.g. green mulch) in order to improve soil organic matter
- ☐ Use of organic amendments (which therefore store carbon in the soil)
- ☐ No application of synthesis fertilizers and use soil improvers (e.g. biochar, earthworm compost, bio-stimulating product)
- ☐ Reduced pesticide application (application rate lower than 3 kg / ha of pesticides, 'pesticide' prevents, destroys, or controls a harmful organism ('pest') or disease. Pesticides include Plant Protection Products (PPPs) and biocides)
- ☐ Optimal management of farm residues (emission lower than 20 kgCO2Eq / ha). This means that biomass burning and biomass accumulation by means of heap is avoided

103. Declare which management improvement will be implemented for the GECO2 project Please choose at least three of the following farm management practices (remember that a minimum of three practices is needed to be entitled to participate to GECO2):

Seleziona tutte le voci applicabili.

- [ ] Organic farm management
- [ ] Application of a conservative soil tillage (no tillage or minimum tillage)
- [ ] Use of cover crops and/ or permanent grass / meadow
- [ ] Farm management with hedge, rows and forest patch integrated within field crops
- [ ] Reuse of wood residues in order to improve soil organic matter
- [ ] Reuse of green residues (e.g. green mulch) in order to improve soil organic matter
- [ ] Use of organic amendments (which therefore store carbon in the soil)
- [ ] No application of synthesis fertilizers and use soil improvers (e.g. biochar, earthworm compost, bio-stimulating product)
- [ ] Reduced pesticides application (application rate lower than 3 kg/ha of pesticides, 'pesticide' prevents, destroys, or controls a harmful organism ('pest') or disease. Pesticides include Plant Protection Products (PPPs) and biocides)
- [ ] Optimal management of farm residues (emission lower than 20 kgCO2Eq / ha). This means that biomass burning and biomass accumulation by means of heap is avoided

104. Declare which management improvements will be continued and implemented after GECO2 conclusion in order to maintainand increase soil organic carbon: Please select between the following farm management practices

Seleziona tutte le voci applicabili.

- [ ] Organic farm management
- [ ] Application of a conservative soil tillage (no tillage or minimum tillage)
- [ ] Use of cover crops and/ or permanent grass / meadow
- [ ] farm management with hedge, rows and forest patch integrated within field crops
- [ ] Reuse of wood residues in order to improve soil organic matter
- [ ] Reuse of green residues (e.g. green mulch) in order to improve soil organic matter
- [ ] Use of organic amendments (which therefore store carbon in the soil)
- [ ] No application of synthesis fertilizers and use soil improvers (e.g. biochar, earthworm compost, bio-stimulating product)
- [ ] Reduced pesticides application (application rate lower than 3 kg/ha of pesticides, 'pesticide' prevents, destroys, or controls a harmful organism ('pest') or disease. Pesticides include Plant Protection Products (PPPs) and biocides)
- [ ] Optimal management of farm residues (emission lower than 20 kgCO2Eq / ha). This means that biomass burning and biomass accumulation by means of heap is avoided