Farming Simulator 22 - Precision Farming DLC

Prepare Mod Maps for Precision Farming

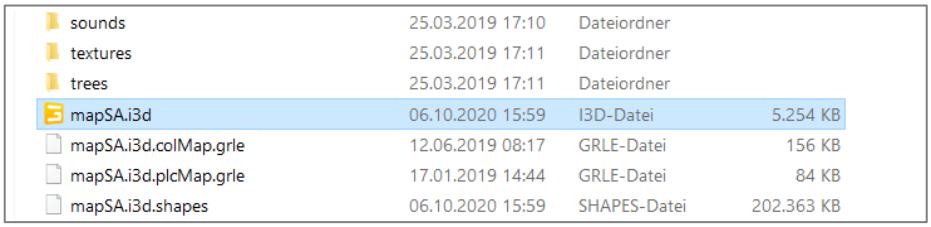
This tutorial shows how to create a custom soil map for your mod map and how to define nitrogen requirements for custom fruit types.

Requirements:

- Giants Editor installed
- Text Editor (e.g. Notepad++)
- Image Editing Program (Paint.net, Photoshop etc.)
- Your Mod Map unpacked as a folder

Add Custom Soil Map:

1. Open your map.i3d file with a text editor



sounds	25.03.2019 17:10	Dateiordner	
textures	25.03.2019 17:11	Dateiordner	
trees	25.03.2019 17:11	Dateiordner	
mapSA.i3d	06.10.2020 15:59	I3D-Datei	5.254 KB
mapSA.i3d.colMap.grle	12.06.2019 08:17	GRLE-Datei	156 KB
mapSA.i3d.plcMap.grle	17.01.2019 14:44	GRLE-Datei	84 KB
mapSA.i3d.shapes	06.10.2020 15:59	SHAPES-Datei	202.363 KB

```
<?xml version="1.0" encoding="iso-8859-1"?>

<i3D name="untitled" version="1.6" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" ..
  <Asset>
    <Export program="GIANTS Editor 64bit" version="8.2.0"/>
  </Asset>

  <Files>
    <File fileId="691" filename="$data/fillPlanes/silage_diffuse.png"/>
    <File fileId="692" filename="$data/fillPlanes/silage_normal.png"/>
    <File fileId="693" filename="$data/fillPlanes/silage_specular.png"/>
    <File fileId="651" filename="$data/fillPlanes/straw_normal.png"/>
    <File fileId="524" filename="$data/fillPlanes/sugarCane_diffuse.png"/>
```

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2. Search for: <InfoLayer name="farmland"

```
<CombinedLayer name="c_cityAsphalt" layers="cityAsphalt01;cityAsphalt02;cityAsphalt03;
<LayerCombiner defaultDepthScale="0" defaultSharpness="1">
</LayerCombiner>
<InfoLayer name="tipCol" fileId="143" numChannels="1" runtime="true"/>
<InfoLayer name="farmland" fileId="144" numChannels="6"/>
<DetailLayer name="terrainDetail" densityMapId="145" numDensityMapChannels="13"
<DetailLayer name="terrainDetailHeight" densityMapId="159" numDensityMapChannels="11"
<FoliageMultiLayer densityMapId="162" numChannels="10" numTypeIndexChannels="5"
<FoliageType name="wheat" foliageXmlId="170"/>
<FoliageType name="grass" foliageXmlId="171"/>
```

3. Duplicate the **InfoLayer** entry. And adjust it as follows:

   <InfoLayer name="soilMap" fileId="99999" numChannels="3"/>

```
<CombinedLayer name="c_cityAsphalt" layers="cityAsphalt01;cityAsphalt02;cityAsphalt03;
<LayerCombiner defaultDepthScale="0" defaultSharpness="1">
</LayerCombiner>
<InfoLayer name="tipCol" fileId="143" numChannels="1" runtime="true"/>
<InfoLayer name="farmland" fileId="144" numChannels="6"/>
<InfoLayer name="soilMap" fileId="99999" numChannels="3"/>
<DetailLayer name="terrainDetail" densityMapId="145" numDensityMapChannels="13"
<DetailLayer name="terrainDetailHeight" densityMapId="159" numDensityMapChannels="11"
<FoliageMultiLayer densityMapId="162" numChannels="10" numTypeIndexChannels="5"
<FoliageType name="wheat" foliageXmlId="170"/>
<FoliageType name="grass" foliageXmlId="171"/>
```

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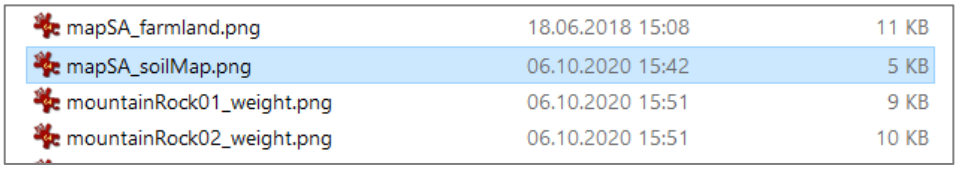
4. Search for the fileID written in the farmland entry in the files section. In our case “144”.

```
<File fileId="112" filename="mapSA/industrialMud01_weight.png"/>
<File fileId="115" filename="mapSA/industrialMud02_weight.png"/>
<File fileId="118" filename="mapSA/industrialMud03_weight.png"/>
<File fileId="121" filename="mapSA/industrialMud04_weight.png"/>
<File fileId="1" filename="mapSA/mapSA_dem.png"/>
<File fileId="144" filename="mapSA/mapSA_farmland.png"/>
<File fileId="76" filename="mapSA/mountainRock01_weight.png"/>
<File fileId="79" filename="mapSA/mountainRock02_weight.png"/>
<File fileId="82" filename="mapSA/mountainRock03_weight.png"/>
<File fileId="85" filename="mapSA/mountainRock04_weight.png"/>
```

5. Duplicate the file entry and replace the fileId with “99999”. Then adjust the filename and replace “farmland” with “soilMap”. Now save the map.i3d file.

```
<File fileId="118" filename="mapSA/industrialMud03_weight.png"/>
<File fileId="121" filename="mapSA/industrialMud04_weight.png"/>
<File fileId="1" filename="mapSA/mapSA_dem.png"/>
<File fileId="144" filename="mapSA/mapSA_farmland.png"/>
<File fileId="99999" filename="mapSA/mapSA_soilMap.png"/>
<File fileId="76" filename="mapSA/mountainRock01_weight.png"/>
<File fileId="79" filename="mapSA/mountainRock02_weight.png"/>
```

6. Create a fully black png image with a resolution of 1024x1024 pixel and save it where the filename is pointing to:



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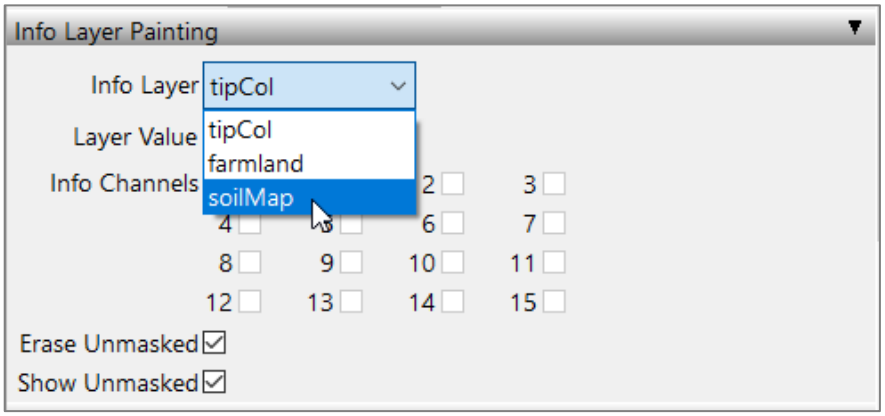
7. Open the map.i3d file with the GIANTS Editor.

8. Select the InfoLayer Paint Tool

9. Select the soilMap in the Info Layer selection of the "Terrain Editing" window



10. Now you can paint the different soil types on the map. See the table below to set the bits correctly for the different soil types. Never set bit 2!

Bit Settings for Each Soil Type	
Loamy Sand	Info Channels 0 ☐ 1 ☐ 2 ☐ 3 ☐
Sandy Loam	Info Channels 0 ☑ 1 ☐ 2 ☐ 3 ☐
Loam	Info Channels 0 ☐ 1 ☑ 2 ☐ 3 ☐
Silty Clay	Info Channels 0 ☑ 1 ☑ 2 ☐ 3 ☐

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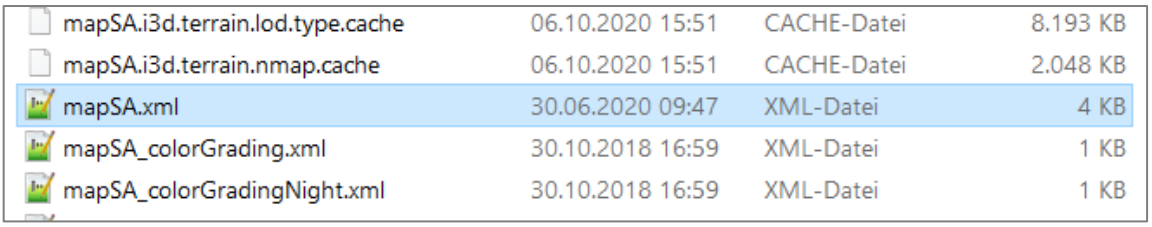
11. Now you can save the map.i3d file and close the editor.

12. Open the map xml file



mapSA.i3d.terrain.lod.type.cache	06.10.2020 15:51	CACHE-Datei	8.193 KB
mapSA.i3d.terrain.nmap.cache	06.10.2020 15:51	CACHE-Datei	2.048 KB
mapSA.xml	30.06.2020 09:47	XML-Datei	4 KB
mapSA_colorGrading.xml	30.10.2018 16:59	XML-Datei	1 KB
mapSA_colorGradingNight.xml	30.10.2018 16:59	XML-Datei	1 KB

13. Add the following section to the xml file. Replace the filename by the path to the soilMap grle file. This file has been created while the editor saved the map and is at the same place as our created png file.

```
    <precisionFarming>
        <soilMap filename="[PATH TO GRLE FILE]"/>
    </precisionFarming>
```

```
    <terrainLodTexture revision="1" />
    <splitShapes revision="1" />
    <tipCollision revision="1" />

    <precisionFarming>
        <soilMap filename="mapSA_soilMap.grle"/>
    </precisionFarming>

    <hotspots>
        <hotspot name="Shop" fullName="$l10n_map_shop" imageUV…
```

14. You can save the map xml file now and then test it in the game.

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Nitrogen Requirements for Custom Fruit Types:

To add support for your custom fruit types, add the following to the map.xml right below the just added soilMap reference.

```
<precisionFarming>
    <soilMap filename="mapSA_soilMap.grle"/>

    <fruitRequirements>
        <fruitRequirement fruitTypeName="YOUR_NEW_FRUIT_TYPE" alwaysAllowFertilization="false"
                          ignoreOverfertilization="false">
            <soil soilTypeIndex="1" targetLevel="140" reduction="140" yieldPotential="0.8"/>
            <soil soilTypeIndex="2" targetLevel="180" reduction="160" yieldPotential="1.0"/>
            <soil soilTypeIndex="3" targetLevel="200" reduction="180" yieldPotential="1.25"/>
            <soil soilTypeIndex="4" targetLevel="160" reduction="160" yieldPotential="0.9"/>
        </fruitRequirement>
    </fruitRequirements>

</precisionFarming>
```

Description of Attributes:

fruitTypeName	Name of your fruit type
alwaysAllowFertilization	Fertilization is in all growth states allowed. Otherwise only until the fruit is in ready for harvest state.
ignoreOverfertilization	Yield is not reduced if fruit has too much nitrogen.
soilTypeIndex	Index of soil type. Same order as listed in the game.
targetLevel	Target level of nitrogen in kg/ha.
reduction	Reduction after the harvest.
yieldPotential	Yield potential as percentage from basegame yield. (e.g. 1.25 = 125%)

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Custom Fruit Types for the Crop Sensor:

To add crop sensor support for your custom fruit types you can add the following attributes to the map.xml file.

```
<precisionFarming>
    <soilMap filename="mapSA_soilMap.grle"/>

    <cropSensor fruitTypes="YOUR_NEW_FRUIT_TYPE"/>

</precisionFarming>
```

Description of Attributes:

fruitTypes	List of fruit types that are supported by the crop sensor separated with a whitespace.

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Seed Rates for Custom Fruit Types:

To define your own custom seed rates for your fruit types, add the following to the map.xml file. Attributes of standard fruit types can also be overwritten.

```
<precisionFarming>
    <soilMap filename="mapSA_soilMap.grle"/>

    <seedRateMap>
        <fruitTypes>
            <fruitType name="YOUR_NEW_FRUIT_TYPE">
                <seedRates rates="180 300 420" usages="0.03 0.05 0.07" />

                <soilTypes>
                    <soilType index="1" yields="0.875 1.000 1.125" />
                    <soilType index="2" yields="0.950 1.000 1.000" />
                    <soilType index="3" yields="1.000 1.000 1.000" />
                    <soilType index="4" yields="0.777 1.000 1.111" />
                </soilTypes>
            </fruitType>
        </fruitTypes>
    </seedRateMap>

</precisionFarming>
```

Description of Attributes:

name	Name of your fruit type
rates	Three values separated by a whitespace representing the seed rate shown in the HUD. (Seeds per m²)
usages	Three values separated by a whitespace representing the actual usage. (Liter per m²)
soilType#index	Index of soil type. Same order as listed in the game.
soilType#yields	Three values separated by a whitespace representing the yield in percentage (1 = 100%) for each used seed rate on this soil type