



RED PINE BIOME DOCUMENTATION

Hello,

This documentation has been created to provide you with information about the details of the Red Pine Biome package and its proper usage.

If you have any questions, requests, or needs, please don't hesitate to reach out to us. We are here to guide and assist you throughout your game development journey.

Welcome to the CropCraft Studios family, and we hope you have a successful game development experience using "Red Pine Biome"!

Best regards, CropCraft Team 😊

cropcraftstudios@gmail.com

Package Included

The package includes various sizes of Mediterranean red pine trees, endemic vegetation, rocks and cliffs, a dirt road, various scatters, and background mountains.

To detail:

- 7 red pine trees
- 21 endemic plants
- 6 rocks
- 7 cliffs
- 14 scatters
- 2 background meshes
- 1 Dirt Road

Total of 58 meshes.

7 Master Material, 10 Material Functions, 42 Material Instance

2 Map : Showcase and Example Map

Procedural Foliage Spawners

Global Wind Parameter

Material System

Our customizable material system provides you with the ability to adjust various settings for each instance, such as Roughness, Brightness, Desaturation, Specular, SSS (Subsurface Scattering), Normal Strength, various color adjustments, adding Moss and Dirt , Wind reaction settings.

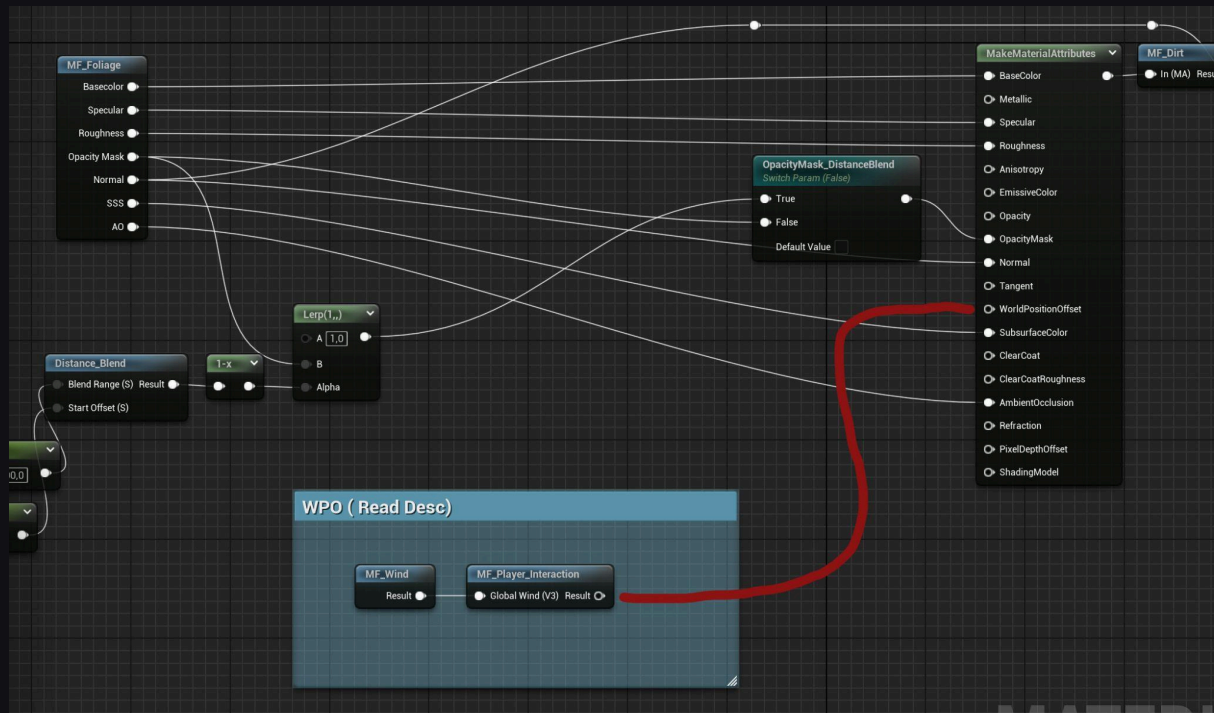
This allows you to have full control over the appearance and behavior of the materials in your project.

Wind

Foliage with wind interaction is set up on two separate master materials to balance performance and minimize FPS loss. The M_Foliage_WindON material is primarily used for ground plants. By connecting the MF_Wind function to World Position Offset in the M_Foliage_WindON material, wind is activated for these plants. This is the recommended method for optimal performance. The M_Foliage material also contains necessary wind and player interaction functions. By connecting these functions, you can activate wind across all foliage. However, this may cause significant performance drops.

Note: Using world position offset on objects with the Nanite system currently results in significant performance losses. We plan to update our products and notify you once this issue is resolved in future Unreal Engine releases.)

Additional features include a Character Interaction function in both materials. If you want to use interaction, connect the MF_Player_Interaction function to the World Position Offset instead of MF_Wind and complete the character setup.



The wind system we utilize is recommended by Unreal Engine and works in conjunction with Vertex Paint, similar to how it is employed in certain Megascans packages. This system provides you the ability to make global adjustments to the wind's direction, intensity, and various other nuanced settings. Moreover, it operates through a material parameter collection, allowing for swift integration with your software and facilitating real-time modifications.

"The "wind" tab on material instances is specifically where you adjust the plant's reactions to the wind. Resetting the settings on this tab ensures that the plant won't respond to the wind. In other words, the wind's effect on the plant will be nullified, and the plant will remain static.

Procedural Foliage Spawners

Procedural Foliage Spawners come pre-configured for your convenience. If you want to use these spawners with different landscape materials, you

will need to make a few minor adjustments. First, open the Static Mesh Foliage within the Procedural Foliage Spawner and navigate to the Placement - Advanced - Inclusion Landscape Layers sections. Enter the name of the layer from your landscape material where you want the foliage to spawn (e.g., GrassLayer). After setting this for each Static Mesh Foliage within the Procedural Foliage Spawner, the spawners will work correctly with your desired landscape material.

Note: Please remember to enable Edit - Editor Preferences - Procedural Foliage.

Additionally, if you want to increase or decrease the density of trees in the forest area (which can be preferable for performance), you can open all Static Mesh Foliage within the PFS_ForestTrees and adjust the following settings: Procedural - Clustering - Initial Seed Density. Increase the value for more density and decrease it for less density.

Technical Details & Recommended Usage

- The package is ideal for Unreal Engine users who aim to develop realistic mini Forest-themed games.
- It is suitable for users who want to reflect all the features of the Mediterranean region and achieve a realistic natural look.
- When used correctly and with proper adjustments, it can be used on very large maps without experiencing performance issues.
- **The package's promotional images and videos have been created using Unreal Engine 5.2, and it is strongly recommended for ideal usage on versions 5.2 and higher.**

Package' triangle counts

- **Lowest triangle count: 34 (Foliage_12)**
- **Highest triangle count: 452,00 (SM_Background_A)**
- **Average triangle count: 20,000**

Note: All objects in the package utilize Nanite, When using this package with Unreal Engine 5.2 and above, it is strongly recommended to utilize the Nanite and Lumen systems.

<https://docs.unrealengine.com/5.0/en-US/lumen-global-illumination-and-reflections-in-unreal-engine/>

Performance

System : Amd Ryzen 9 7950x - 32gb Ram - Nvidia GeForce RTX 4090 -4k Screen
Epic Settings

Example Map 67 - 78 fps

Showcase Map 120 fps [Link](#) to full screen Editor Mode

System : Amd Ryzen 9 7950x - 32gb Ram - Nvidia GeForce RTX 4090 -4k Screen
High Settings

Example Map 98 - 110 fps

Showcase Map 120 fps [Link](#) to full screen Editor Mode