# HOW TO IMPORT VEGETATION

In this manual you will find step by step how to import new 3D vegetation to the package. It is really simple actually; you just need to know how the "vertex colours" affects the wind and how you can generate a complex wind animation.

First, let's talk about the two kind of shaders that you can use for you 3D vegetation:

To choose between them select your material and in the inspector window go to Shader Graphs
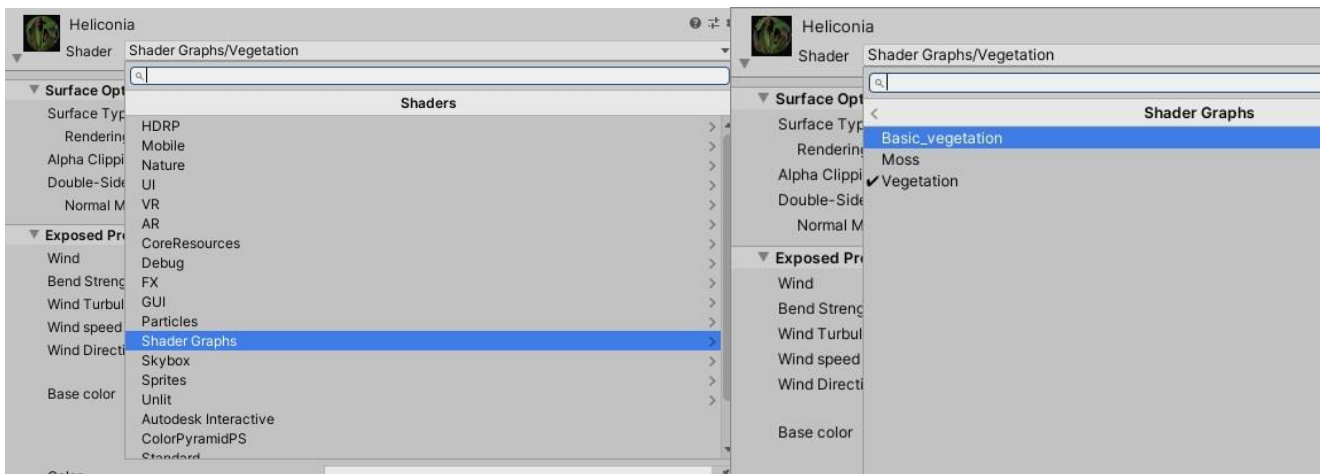
You shall find "Basic vegetation" and "Vegetation".

In the exposed parameters you will not find any difference between them, the only difference is the wind animation, but before we start to talk about the wind and how to set up this with your 3D plant here is a resume in how you must to prepare your maps.

You shall need only 3 maps:

Base Color (RGBA)

Set the opacity map in the alpha channel.

Note: Make sure "Alpha Clipping" and "Double-Sided"

are checked in "Surface Options".

Normal map (RGB)

It uses a simple RGB image

Mask map (RGBA)

It is similar to the unity mask in the lit Shader, but in this

case, you need to place a thickness map:
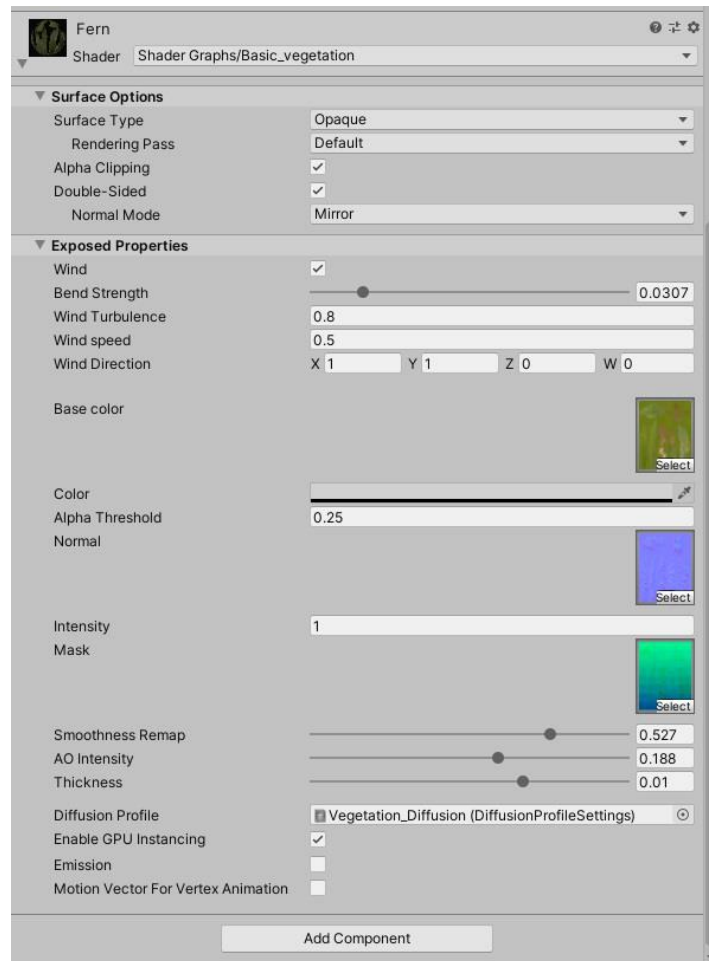
-Red channel

It must be black

-Green channel
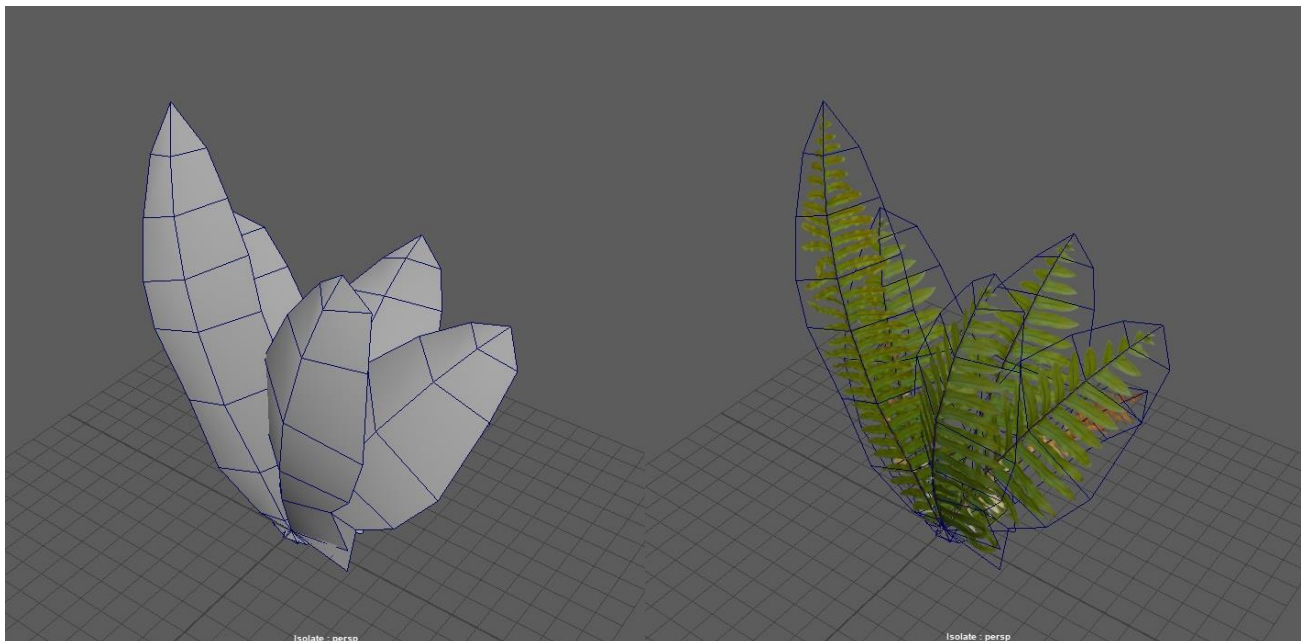
AO map

-Blue Channel

Thickness map

-Alpha channel

Smoothness (Glossiness map).

At last you need to paint the vertex colours on your 3D model, I'm going to use this fern model as example:

Let's start setting two basic colours, **Red** and **Black**. The **Black** color tells to the shader what vertices of the model does not moves and the red are the vertices with animation. Blending the colours in a smooth way will give you a much better result with the animation, the color value gives strength in movement, for example I can set a low value in the **red** color for dry leaves and those will be affected less by the wind that the other ones with a higher value:

At this step you can use the shader with the name

"Basic_vegetation" to animate your plant, and in a large

scene you can save performance using this shader.
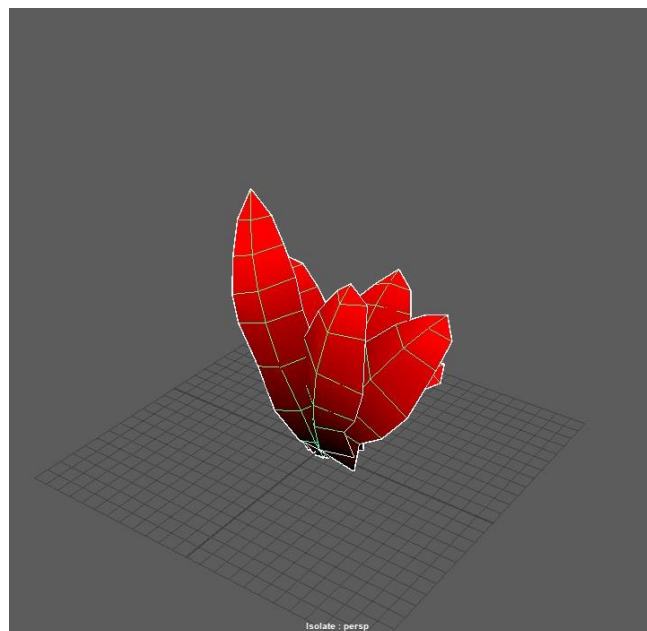
To generate a most complex wind animation you must add two extra colours: **Green** and **Blue**.

Those new colours add to our plant more variation on movement, that way you can put on more realism in the animation. You can add different *color values* in **green** and **blue** to your model and generate even more variations to your movement. Those values work as an opacity map in the shader to blend different wind noises.

All models in the package are painted for complex wind animation but you can easily change between the shaders with them, the basic animation will use only **black** and **red** colours so if you choose the "Basic_vegetation" it will skip the **green** and **blue** colours.

Remember that you must add the colours and do not replace for the existing ones. If you are looking for more examples you can import a specific model from the package to a 3D software as Maya and inspect his colours on vertices.
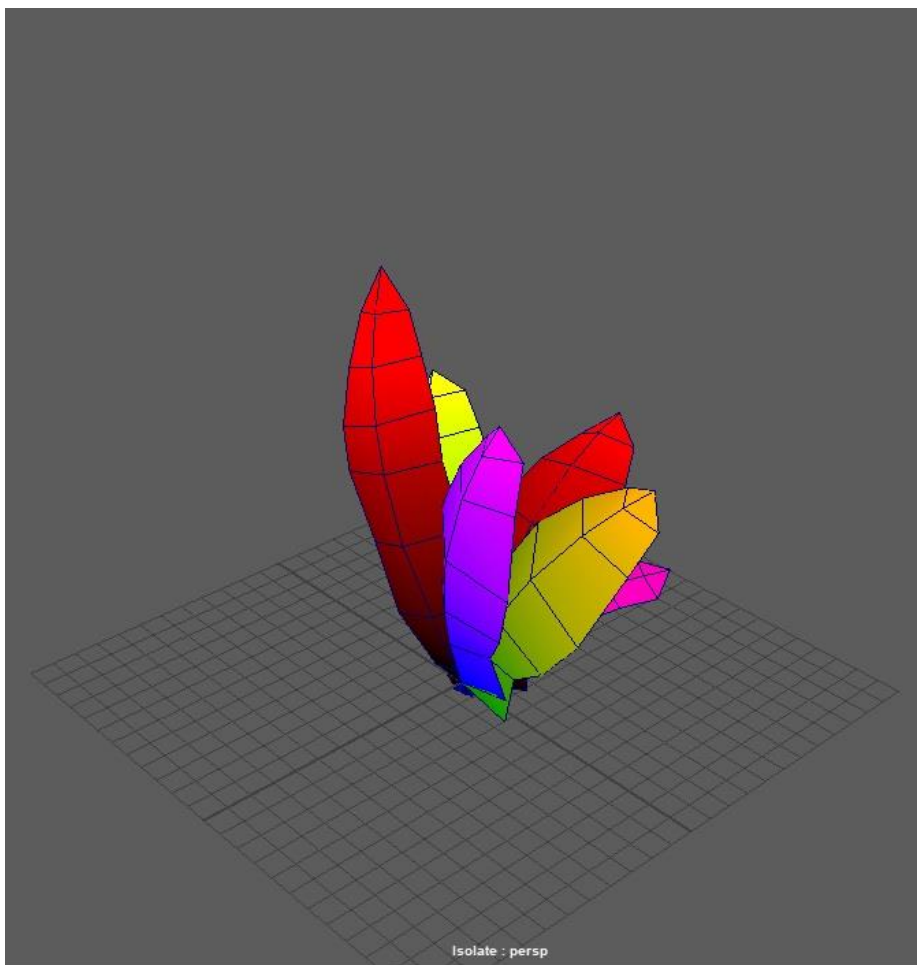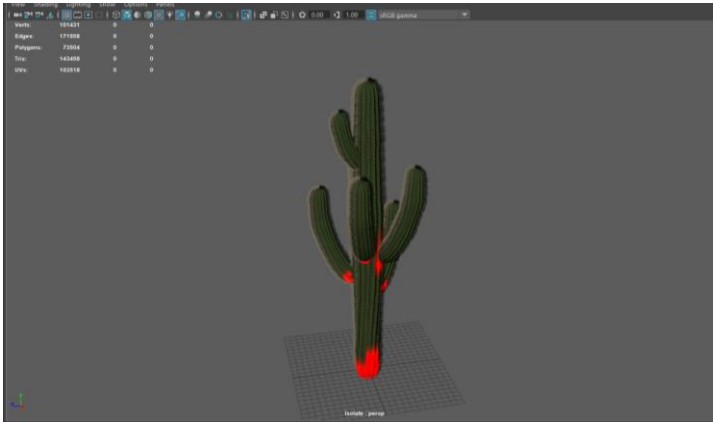

Here is a link with a video where you can see the difference between the basic animation and the complex one:

https://www.youtube.com/watch?v=-WU6x2VxhUc&feature=youtu.be

CACTUS SHADER

This shader uses 2 texture sets and needs vertex colours as well, but in this case, we are going to use only the red channel.

The Red colour on the vertex works as an opacity map between the 2 texture sets to blend them, and in the case of the cactus, it means the red area is where the cactus has damage.

The exposed parameters are pretty simple and you shall need only 3 maps per set:

Base Color (RGBA)

Normal map (RGB)

Mask map (RGBA)

It is similar to the unity mask in the lit Shader

-Red channel
Metallic
-Green channel
AO map
-Blue Channel
Do not apply
-Alpha channel
Smoothness (Glossiness map).