# Cartoon Interactive Grass URP Documentation

Function:
Support Android, IOS, Mac, Windows, other platforms have not been tested

One time purchase, free upgrade forever.

1. Out of the box, the whole program is generated, very simple, the interaction between the characters and the grass is good, please watch the video!
2. Can act on any grid and terrain, independent rendering
3. Optimized for mobile platforms, full GPU rendering
4. Requires Unity official URP package support
5. Support gloss, color is fully customizable!
6. Adjustable wind speed and intensity
7. Support adjustable LOD, obtain higher performance on demand
8. Support IOS Metal rendering
9. Random height, custom height and width
10. Customize lower body color and upper body color
11. Complete brush tool support, which can be added, moved, and modified

how to use?

1. As shown in the figure below, create an empty scene, and then create a Plane that comes with unity, select from the menu: Tools/Cartoon Interactive Grass URP/ Create, it will automatically create a "OneToonGrass" game object, this is Grass object
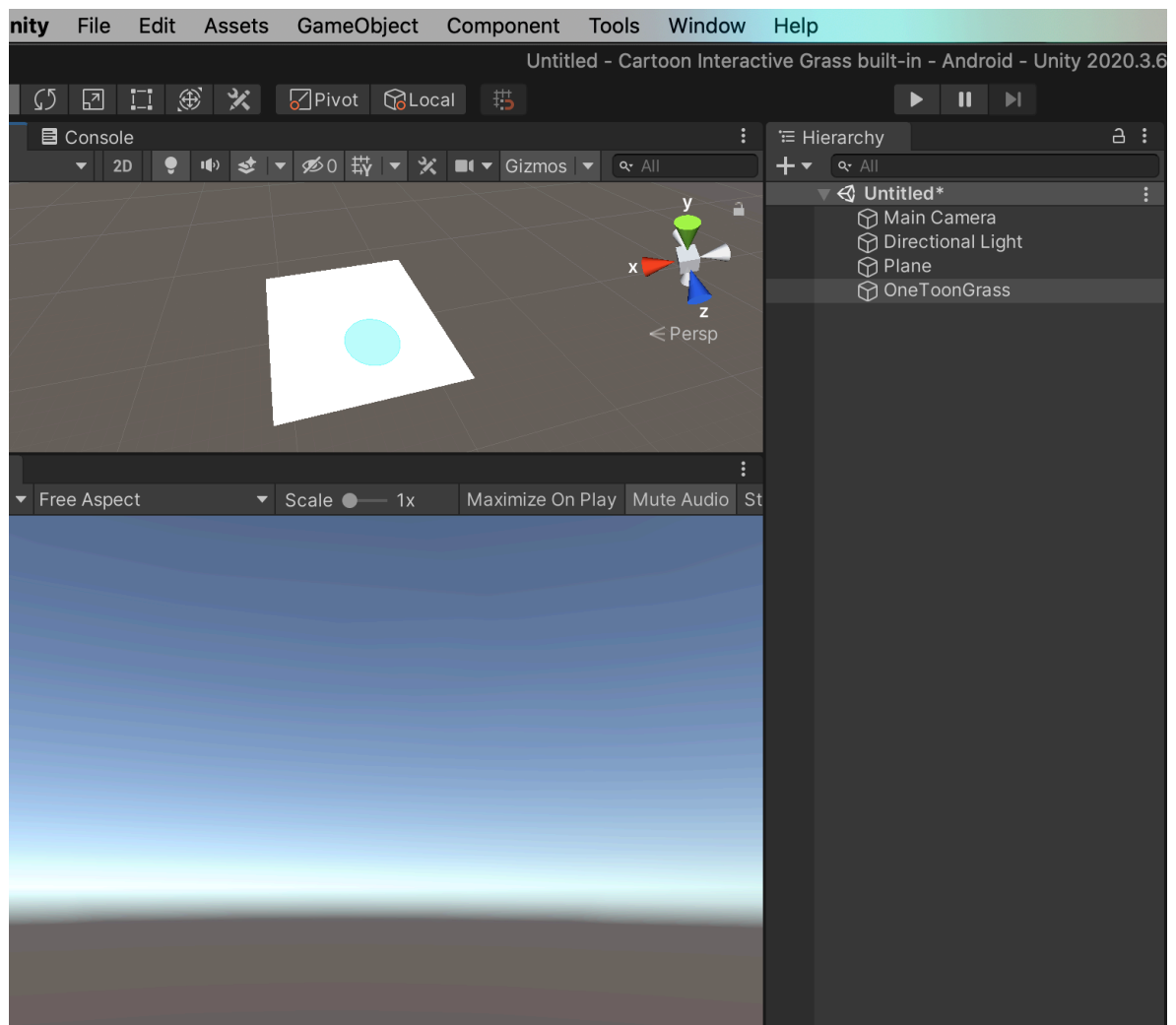
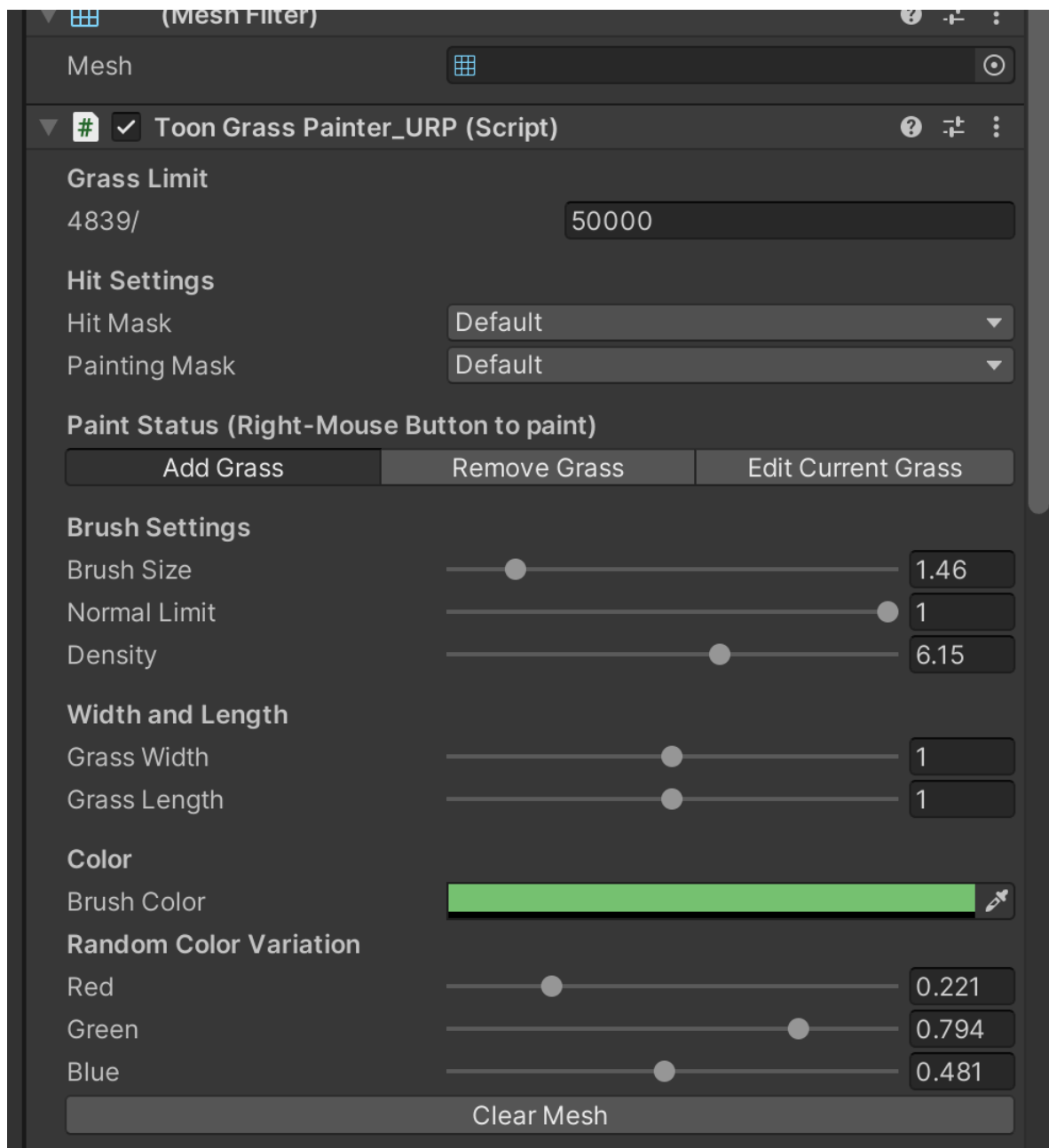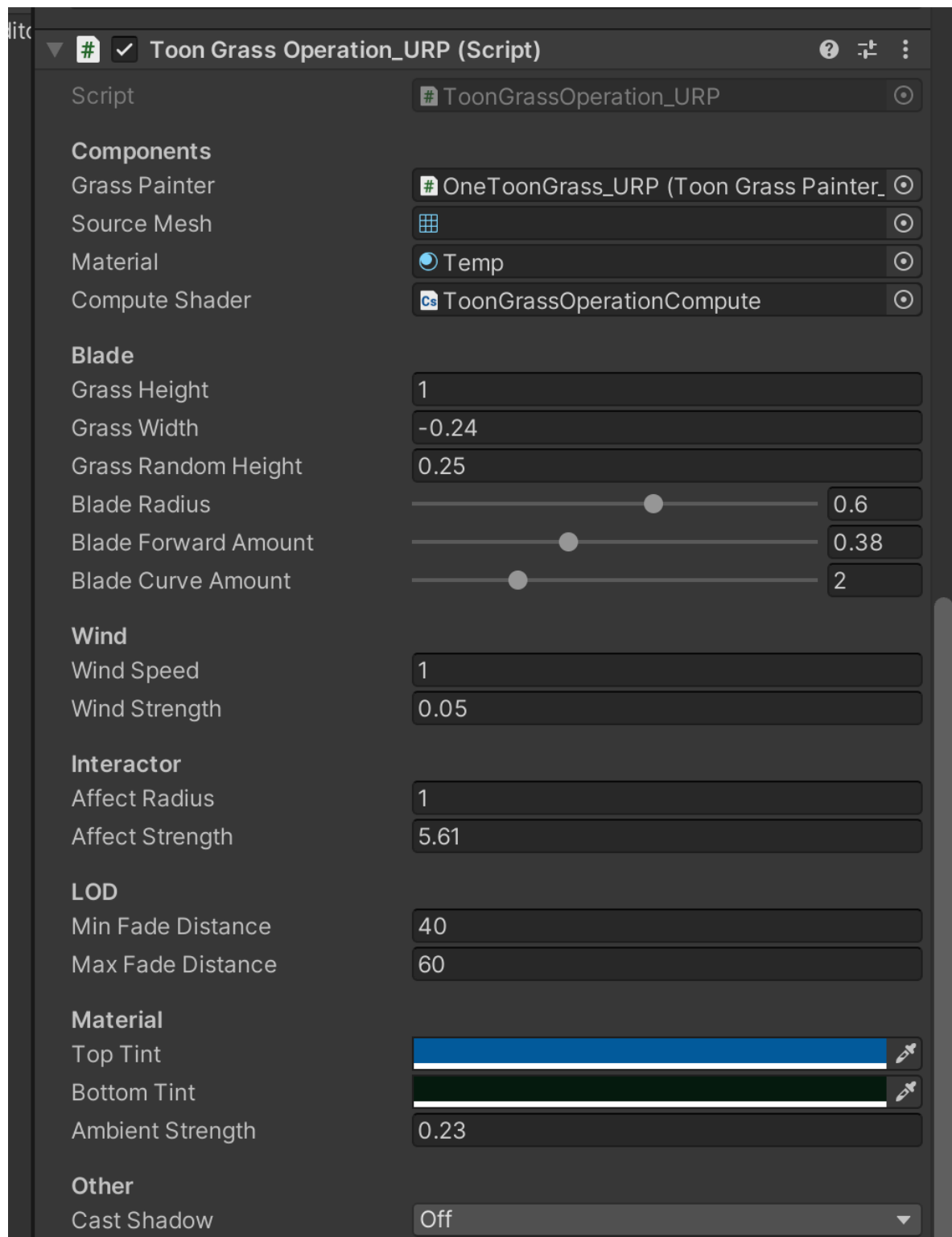2. After selecting the object, a blue circle brush will appear in the Scene viewport

After selecting the object, a blue circle will appear in the Scene viewport, and the mail will be smeared on any mesh (with collider). You can draw the grass.
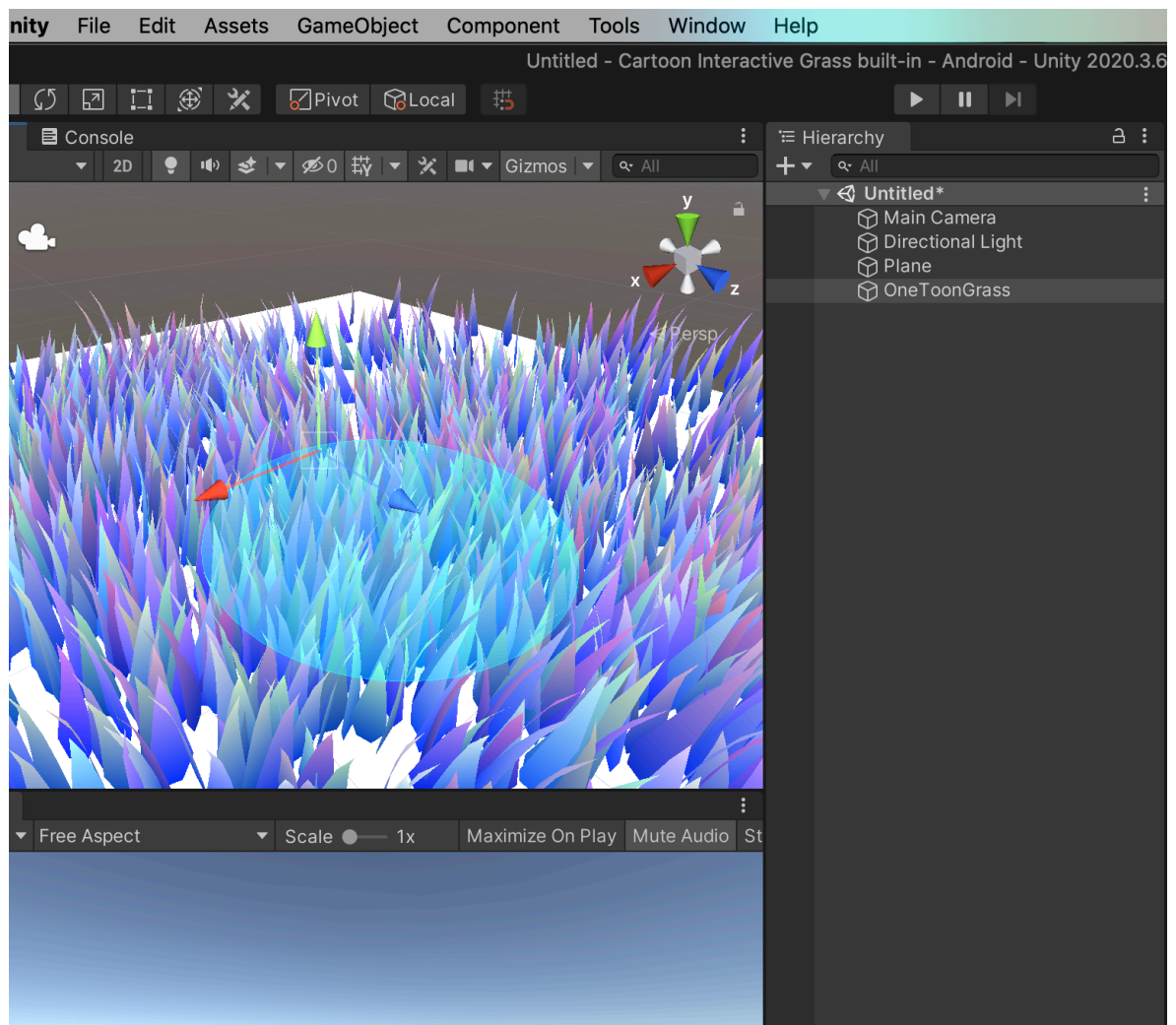
3.We provide a grass property control script ToonGrassOperation_URP.cs and a brush control script ToonGrassPainter_URP.cs.
Below we will introduce some properties of the next two scripts.

(Mesh Filter)

Mesh

Toon Grass Painter_URP (Script)

Grass Limit

4839/   50000

Hit Settings

Hit Mask   Default

Painting Mask   Default

Paint Status (Right-Mouse Button to paint)

| Add Grass | Remove Grass | Edit Current Grass |

Brush Settings

Brush Size   1.46

Normal Limit   1

Density   6.15

Width and Length

Grass Width   1

Grass Length   1

Color

Brush Color

Random Color Variation

Red   0.221

Green   0.794

Blue   0.481

| Clear Mesh |

Toon Grass Operation_URP (Script)

Script	# ToonGrassOperation_URP

Components

Grass Painter	# OneToonGrass_URP (Toon Grass Painter_
Source Mesh	⊞
Material	● Temp
Compute Shader	Cs ToonGrassOperationCompute

Blade

Grass Height	1
Grass Width	-0.24
Grass Random Height	0.25
Blade Radius	0.6
Blade Forward Amount	0.38
Blade Curve Amount	2

Wind

Wind Speed	1
Wind Strength	0.05

Interactor

Affect Radius	1
Affect Strength	5.61

LOD

Min Fade Distance	40
Max Fade Distance	60

Material

Top Tint	
Bottom Tint	
Ambient Strength	0.23

Other

Cast Shadow	Off

4.Regarding the ToonGrassOperation_URP.cs component, after creating in the menu bar by default, there is no need to change the Toon Grass, Material, SourceMesh and Compute Shader properties, they will be set automatically.
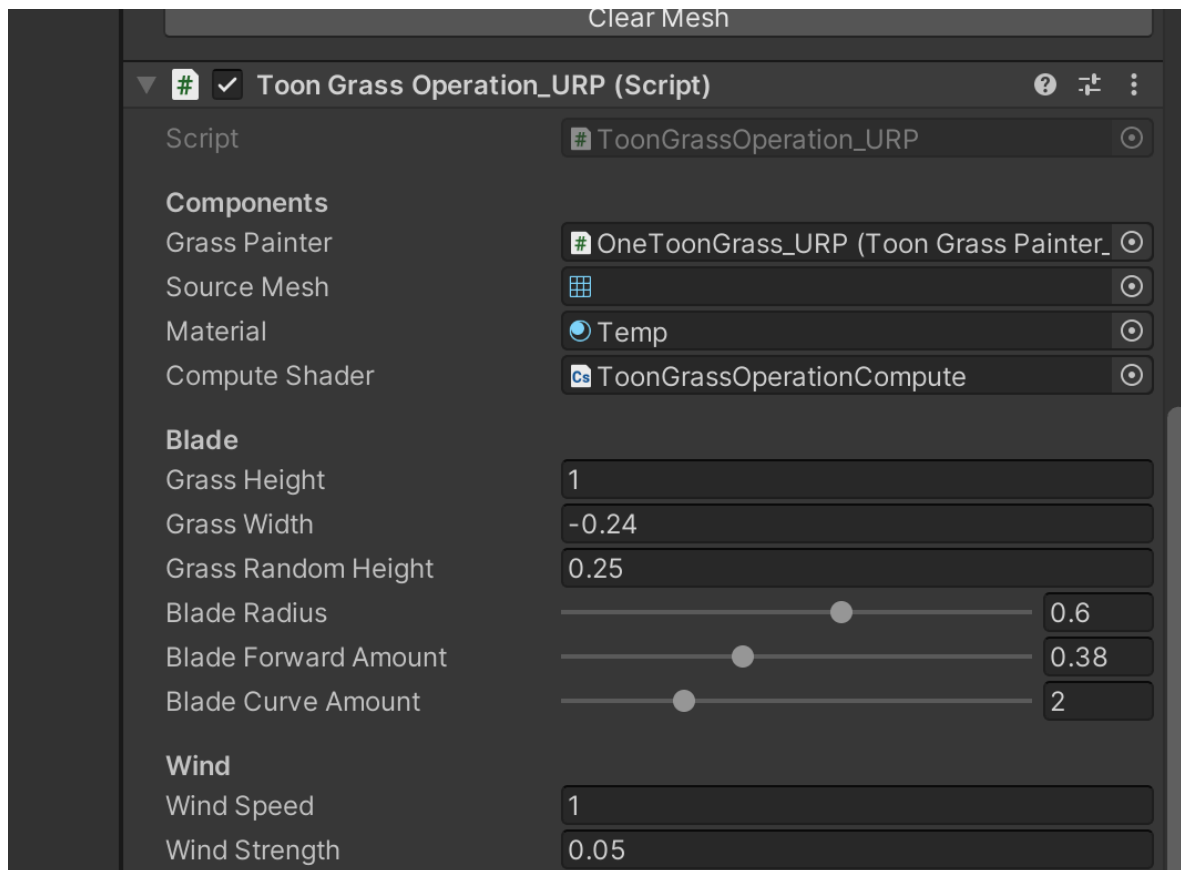
5.You can change
Grass Height: Decide how high the grass is
Grass Width: Determine the width of the grass
Grass Random Height: The grass will be random in height to create difference.
Blade Radius: Offset the nearby grass for fusion, which looks more natural
Blade Forward Amount: Determine the angle of inclination when the grass is erected
Blade Curve Amount: Curve blending in height. Control the local size of the grass.
Wind speed: Control the speed of swaying
Wind Strength: Control the strength of swaying
Affect Radius: This value determines the range of grass offset when interacting with people
Affect Strength: This value determines the offset strength of the grass when interacting with people
Min Fade Distance: the smallest LOD distance
Max Fade Distance: Maximum LOD distance
Top Tint: Top color information
Bottom Tint: bottom color information
Ambient Strength: Weaken or strengthen the overall color of the grass.

Grass Height	1.68
Grass Width	0.17
Grass Random Height	0.09
Blade Radius	1
Blade Forward Amount	0.121
Blade Curve Amount	5
Wind Speed	-0.03
Wind Strength	-0.1
Affect Radius	1.57
Affect Strength	1.16
Min Fade Distance	40
Max Fade Distance	60
Top Tint	
Bottom Tint	
Ambient Strength	0

6. Below is the control of the brush

Our biggest limitation is that every object of operation does not operate over 50,000.
You can fill multiple grass objects on a big map to achieve different needs.
We provide three modes: Add Grass, Remove Grass, and Editor Current Grass. Add Grass is selected by default

Brush Size: You can adjust the size of the brush
Normal Limit: can control the range of normal
Density: This is to control the density of grass produced when painting. The unit range can be changed as this value changes.
Width and Length: You can change the width and length of the grass when drawing.
Base Color: is the overlay color
Red Green Blue Weights: When controlling random colors, which color is more preferred
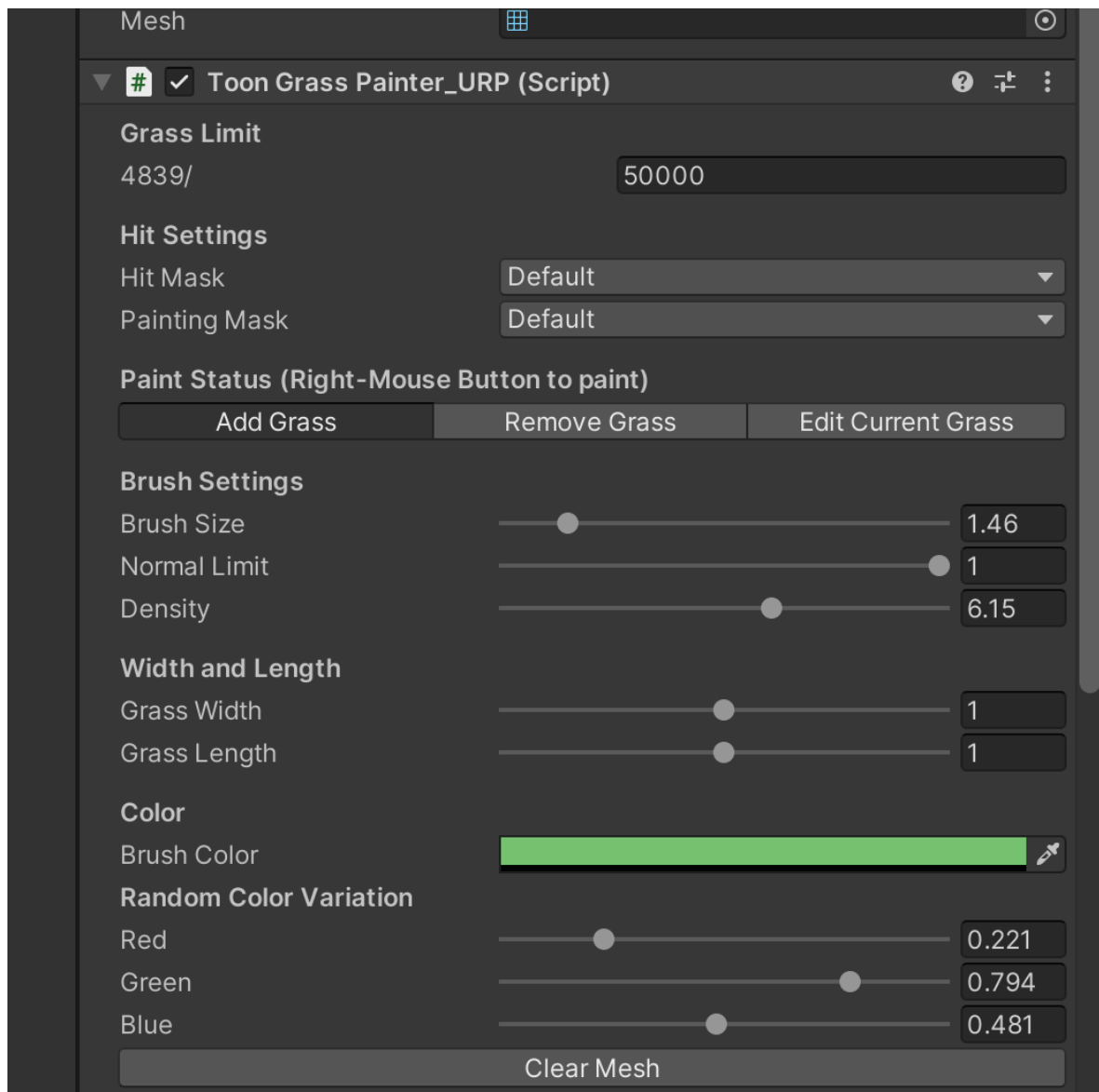
7.Character interaction script: PlayerMove_URP.cs, add this script to the character's GameObject. When unity is in the "running state", it can affect the grass according to the position of the character. As shown below:

Cartoon Interactive Grass URP

Plane
Cube (1)
Cube (2)
Player
    Cube
Canvas
EventSystem
OneToonGrass_URP
OneToonGrass_URP

| Rotation | X 0 | Y 0 | Z 0 |
| Scale | X 1 | Y 1 | Z 1 |

✓ **Player Move_URP (Script)**   ? ⇄ ⋮

Script   # PlayerMove_URP   ⊙

Add Component