

```

1 function [Result] = ConstRiskThresh(Data, CompVarNum, BaseVarNum)
2 % INPUT Matrices: ndataseq01060216 and ndataseq10060216 from crop
3 % simulation models with Columns
4 % 1 = cell30m/Unique Cell ID
5 % 2 = Replication
6 % 3 = Wheat Area in Cell (ha)
7 % 4 = Wheat Yield (kg/ha) for Comparison
8 % 5 = Wheat Yield (kg/ha) for Base
9
10 CompManNum = 1;
11 if CompVarNum == 5
12     CompManNum = 0;
13 end
14
15
16 BaseManNum = 1;
17 if BaseVarNum == 4
18     BaseManNum = 0;
19 end
20
21
22 % Outputs
23 % 1 = cell30m
24 % 2 = Comparison ID
25 % 3 = Base ID
26 % 4 = Mean Yield for Comp
27 % 5 = Standard Deviation of Yield for Comp
28 % 6 = CV of Yield for Comp
29 % 7 = Maximum Yield for Comp
30 % 8 = Minimum Yield for Comp
31 % 9 = Probability of Crop Failure for Comp
32 % 10 = Min Proportion for Comp to SOSD Base
33 % 11 = Mean Yield for Base
34 % 12 = Standard Deviation of Yield for Base
35 % 13 = CV of Yield for Base
36 % 14 = Maximum Yield for Base
37 % 15 = Minimum Yield for Base
38 % 16 = Probability of Crop Failure for Base
39 % 17 = Min Proportion for Base to SOSD Comp
40 % 18 = Difference in mean Comp - Base
41 % 19 = Difference in standard deviation Comp - Base
42 % 20 = Difference in CV Comp - Base
43 % 21 = Difference in Prob of Crop Failure Comp - Base
44 % 22 = Min Proportion for Comp to SOSD Base divided by average base yield
45 % 23 = Min Proportion for Base to SOSD Comp divided by average base yield
46 % 24 = Comp More Risky (-1)/less Risky (1)/ Indeterminant (0) compared to Base
47 % 25 = Maize Area
48
49 % Get list of cell30m
50 CELLIDS = Data;
51 CELLIDScandy = CELLIDS(:,2) ~= 1;
52 CELLIDS(CELLIDScandy,:) = [];
53 CELLIDS(:,2:3) = [];
54 LEN = length(CELLIDS);
55
56 Result = ones(Len, 25);
57
58 count = 1;
59 while count <= LEN
60
61     id = CELLIDS(count,1);
62
63     Yields = Data;
64     cellcond = Yields(:,1) ~= id;
65     Yields(cellcond,:) = [];
66
67     TEMP = SOSDConstBoundsv3(Yields(:,CompVarNum),Yields(:,BaseVarNum));
68
69     Result(count, 1) = id;
70     % Result(count, 2) = CompVar;
71     Result(count, 2) = CompManNum;
72     % Result(count, 4) = BaseVar;
73     Result(count, 3) = BaseManNum;
74     Result(count, 4:24) = TEMP.';
75     Result(count, 25) = Yields(1,3);
76
77     count = count + 1;
78 end
79
80

```