Supplementary Table S1. Palmer amaranth field sampling sites in South Carolina by county, GPS location, and year collected.

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| --- | --- | --- | --- | --- |
| Sample# | County | Latitude | Longitude | Year |
| 1 | Aiken | 33.566390 N | -81.342640 W | 2020 |
| 2 | Aiken | 33.538205 N | -81.646939 W | 2020 |
| 3 | Allendale | 32.995789 N | -81.195190 W | 2020 |
| 4 | Allendale | 33.132600 N | -80.580220 W | 2020 |
| 5 | Bamberg | 33.368517 N | -81.202203 W | 2020 |
| 6 | Bamberg | 33.354613 N | -81.080071 W | 2020 |
| 7 | Barnwell | 33.400746 N | -81.302874 W | 2020 |
| 8 | Barnwell | 33.364380 N | -81.335440 W | 2020 |
| 9 | Calhoun | 33.681113 N | -80.760280 W | 2020 |
| 10 | Calhoun | 33.660640 N | -80.971015 W | 2020 |
| 11 | Colleton | 33.059698 N | -80.863993 W | 2020 |
| 12 | Colleton | 33.426768 N | -80.783046 W | 2020 |
| 13 | Dillon | 34.439748 N | -79.394315 W | 2020 |
| 14 | Dillon | 34.484971 N | -79.433053 W | 2020 |
| 15 | Dorchester | 33.141377 N | -80.619596 W | 2020 |
| 16 | Dorchester | 33.898206 N | -80.739994 W | 2020 |
| 17 | Hampton | 32.863809 N | -81.147306 W | 2020 |
| 18 | Hampton | 32.933344 N  | -81.203541 W | 2020 |
| 19 | Horry | 33.969225 N | -79.099285 W | 2020 |
| 20 | Horry | 33.985303 N | -79.077726 W | 2020 |
| 21 | Kershaw | 34.187353 N | -80.511725 W | 2020 |
| 22 | Kershaw | 34.189177 N | -80.549704 W | 2020 |
| 23 | Lee | 34.243910 N | -80.273672 W | 2020 |
| 24 | Marion | 34.156553 N | -79.246152 W | 2020 |
| 25 | Marion | 34.142812 N | -79.257911 W | 2020 |
| 26 | Orangeburg | 33.481364 N | -81.043570 W | 2020 |
| 27 | Orangeburg | 33.720226 N | -80.649899 W | 2020 |
| 28 | Aiken | 33.436147 N | -81.485430 W | 2021 |
| 29 | Aiken | 33.533399 N | -81.663002 W  | 2021 |
| 30 | Aiken | 33.520329 N | -81.646130 W | 2021 |
| 31 | Allendale | 33.041150 N | -81.164180 W | 2021 |
| 32 | Allendale | 33.033900 N | -81.191000 W | 2021 |
| 33 | Allendale | 33.053333 N | -81.250685 W | 2021 |
| 34 | Anderson | 34.633640 N | -82.377320 W | 2021 |
| 35 | Anderson | 34.300300 N | -82.540650 W | 2021 |
| 36 | Bamberg | 33.374173 N | -81.178352 W | 2021 |
| 37 | Bamberg | 33.380200 N | -81.149707 W | 2021 |
| 38 | Bamberg | 33.377959 N | -81.130931 W | 2021 |
| 39 | Bamberg | 33.364332 N | -81.089118 W | 2021 |
| 40 | Bamberg | 33.341946 N | -81.093635 W | 2021 |
| 41 | Barnwell | 33.347682 N | -81.303092 W | 2021 |
| 42 | Barnwell | 33.351533 N | -81.325721 W | 2021 |
| 43 | Barnwell | 33.322027 N | -81.262463 W | 2021 |
| 44 | Barnwell | 33.347682 N | -81.303092 W | 2021 |
| 45 | Calhoun | 33.666100 N | -80.971100 W | 2021 |
| 46 | Calhoun | 33.729549 N | -80.651410 W | 2021 |
| 47 | Calhoun | 33.600920 N | -80.740470 W | 2021 |
| 48 | Colleton | 33.024444 N | -80.577975 W | 2021 |
| 49 | Colleton | 33.076035 N | -80.971710 W | 2021 |
| 50 | Colleton | 33.024444 N | -80.577975 W | 2021 |
| 51 | Darlington | 34.303255 N | -79.749026 W | 2021 |
| 52 | Darlington | 34.341175 N | -79.756383 W | 2021 |
| 53 | Darlington | 34.390000 N | -79.900000 W | 2021 |
| 54 | Darlington | 34.292016 N | -79.741000 W | 2021 |
| 55 | Darlington | 34.341175 N | -79.756383 W | 2021 |
| 56 | Dillon | 34.407991 N | -79.425249 W | 2021 |
| 57 | Dillon | 34.378431 N | -79.422258 W | 2021 |
| 58 | Dillon | 34.450458 N | -79.417942 W | 2021 |
| 59 | Dorchester | 33.195497 N | -80.552159 W | 2021 |
| 60 | Dorchester | 33.154610 N | -80.673082 W | 2021 |
| 61 | Dorchester | 33.230646 N | -80.593713 W | 2021 |
| 62 | Edgefield | 33.817344 N | -81.804294 W | 2021 |
| 63 | Edgefield | 33.754538 N | -81.766787 W | 2021 |
| 64 | Florence | 34.288864 N | -79.737890 W | 2021 |
| 65 | Florence | 34.154582 N | -79.918055 W | 2021 |
| 66 | Florence | 34.092853 N | -79.809962 W | 2021 |
| 67 | Hampton | 32.949958 N | -81.198207 W | 2021 |
| 68 | Hampton | 32.923238 N | -81.191573 W | 2021 |
| 69 | Hampton | 32.925712 N | -81.248496 W | 2021 |
| 70 | Hampton | 32.922758 N | -81.274408 W | 2021 |
| 71 | Hampton | 32.931576 N | -81.178164 W | 2021 |
| 72 | Horry | 33.987489 N | -79.139829 W | 2021 |
| 73 | Laurens | 34.402409 N | -82.051670 W | 2021 |
| 74 | Lexington | 33.810174 N | -81.283766 W | 2021 |
| 75 | Lexington | 33.839076 N | -81.335620 W | 2021 |
| 76 | Lexington | 33.838672 N | -81.335097 W | 2021 |
| 77 | Marion | 34.166258 N | -79.234533 W | 2021 |
| 78 | Marlboro | 34.569671 N | -79.560214 W | 2021 |
| 79 | Marlboro | 34.561222N | -79.581840 W | 2021 |
| 80 | Marlboro | 34.559972 N | -79.533974 W | 2021 |
| 81 | Newberry | 34.273710 N | -81.746600 W | 2021 |
| 82 | Newberry | 34.293154 N | -81.725887 W | 2021 |
| 83 | Newberry | 34.273710 N | -81.746600 W | 2021 |
| 84 | Orangeburg | 33.551806 N | -80.598936 W | 2021 |
| 85 | Orangeburg | 33.396614 N | -80.670694 W | 2021 |
| 86 | Orangeburg | 33.553900 N | -80.589800 W | 2021 |
| 87 | Richland | 33.835700 N | -80.660500 W | 2021 |
| 88 | Richland | 33.904157 N | -80.671992 W | 2021 |
| 89 | Richland | 33.835700 N | -80.660500 W | 2021 |
| 90 | Saluda | 33.858641 N | -81.602328 W | 2021 |
| 91 | Saluda | 33.993820 N | -81.811285 W | 2021 |
| 92 | Williamsburg | 33.762936 N | -79.934840 W | 2021 |
| 93 | Williamsburg | 33.783843 N | -79.933309 W | 2021 |
| 94 | Williamsburg | 33.756061 N | -79.882046 W | 2021 |
| 95 | Allendale | 33.063250 N | -81.290410 W | 2022 |
| 96 | Allendale | 33.084302 N | -81.317840 W | 2022 |
| 97 | Anderson | 34.608100 N | -82.703840 W | 2022 |
| 98 | Anderson | 34.587950 N | -82.714900 W | 2022 |
| 99 | Bamberg | 33.380830 N | -81.180360 W | 2022 |
| 100 | Bamberg | 33.368820 N | -81.184210 W | 2022 |
| 101 | Barnwell | 33.429100 N | -81.285660 W | 2022 |
| 102 | Barnwell | 33.381180 N | -81.296750 W | 2022 |
| 103 | Chesterfield | 34.543920 N | -79.870600 W | 2022 |
| 104 | Chesterfield | 34.618230 N | -80.325720 W | 2022 |
| 105 | Clarendon | 33.709960 N | -80.349960 W | 2022 |
| 106 | Clarendon | 33.633580 N | -79.698330 W | 2022 |
| 107 | Colleton | 33.049620 N | -80.588280 W | 2022 |
| 108 | Colleton | 33.003170 N | -80.637680 W | 2022 |
| 109 | Darlington | 34.144800 N | -80.009180 W | 2022 |
| 110 | Darlington | 34.220070 N | -80.007900 W | 2022 |
| 111 | Dillon | 34.418260 N | -79.439242 W | 2022 |
| 112 | Dillon | 34.436840 N | -79.457334 W | 2022 |
| 113 | Dorchester | 33.132530 N | -80.643780 W | 2022 |
| 114 | Dorchester | 33.180190 N | -80.629320 W | 2022 |
| 115 | Edgefield | 33.805430 N | -81.726760 W | 2022 |
| 116 | Edgefield | 33.728320 N | -81.823590 W | 2022 |
| 117 | Florence | 34.041050 N | -79.811580 W | 2022 |
| 118 | Florence | 33.981480 N | -79.895740 W | 2022 |
| 119 | Horry | 33.713810 N | -79.156860 W | 2022 |
| 120 | Horry | 33.984600 N | -79.152380 W | 2022 |
| 121 | Kershaw | 34.124580 N | -80.551740 W | 2022 |
| 122 | Kershaw | 34.152530 N | -80.596070 W | 2022 |
| 123 | Laurens | 34.409240 N | -82.051560 W | 2022 |
| 124 | Laurens | 34.347790 N | -81.812810 W | 2022 |
| 125 | Lee | 34.338837 N | -80.358629 W | 2022 |
| 126 | Lee | 34.252617 N | -80.276564 W | 2022 |
| 127 | Lexington | 33.818000 N | -81.414830 W | 2022 |
| 128 | Lexington | 33.865760 N | -81.370690 W | 2022 |
| 129 | Marion | 34.242620 N | -79.304630 W | 2022 |
| 130 | Marion | 34.264900 N | -79.299280 W | 2022 |
| 131 | Marlboro | 34.490620 N | -79.640040 W | 2022 |
| 132 | Marlboro | 34.484930 N | -79.611790 W | 2022 |
| 133 | Newberry | 34.319540 N | -81.709040 W | 2022 |
| 134 | Newberry | 34.276770 N | -81.768880 W | 2022 |
| 135 | Orangeburg | 33.501001 N | -81.118943 W | 2022 |
| 136 | Orangeburg | 33.580372 N | -80.974788 W | 2022 |
| 137 | Saluda | 34.105250 N | -81.749560 W | 2022 |
| 138 | Saluda | 33.996380 N | -81.810349 W | 2022 |
| 139 | Sumter | 34.002890 N | -80.363230 W | 2022 |
| 140 | Sumter | 33.953180 N | -80.165800 W | 2022 |
| 141 | Williamsburg | 33.637990 N | -79.908510 W | 2022 |
| 142 | Williamsburg | 33.677230 N | -79.583190 W | 2022 |