Rapport\_CORproject

Diego Ayala, Camille Imbert, Nicolas Rode, Stan Zanvo

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Table of Contents

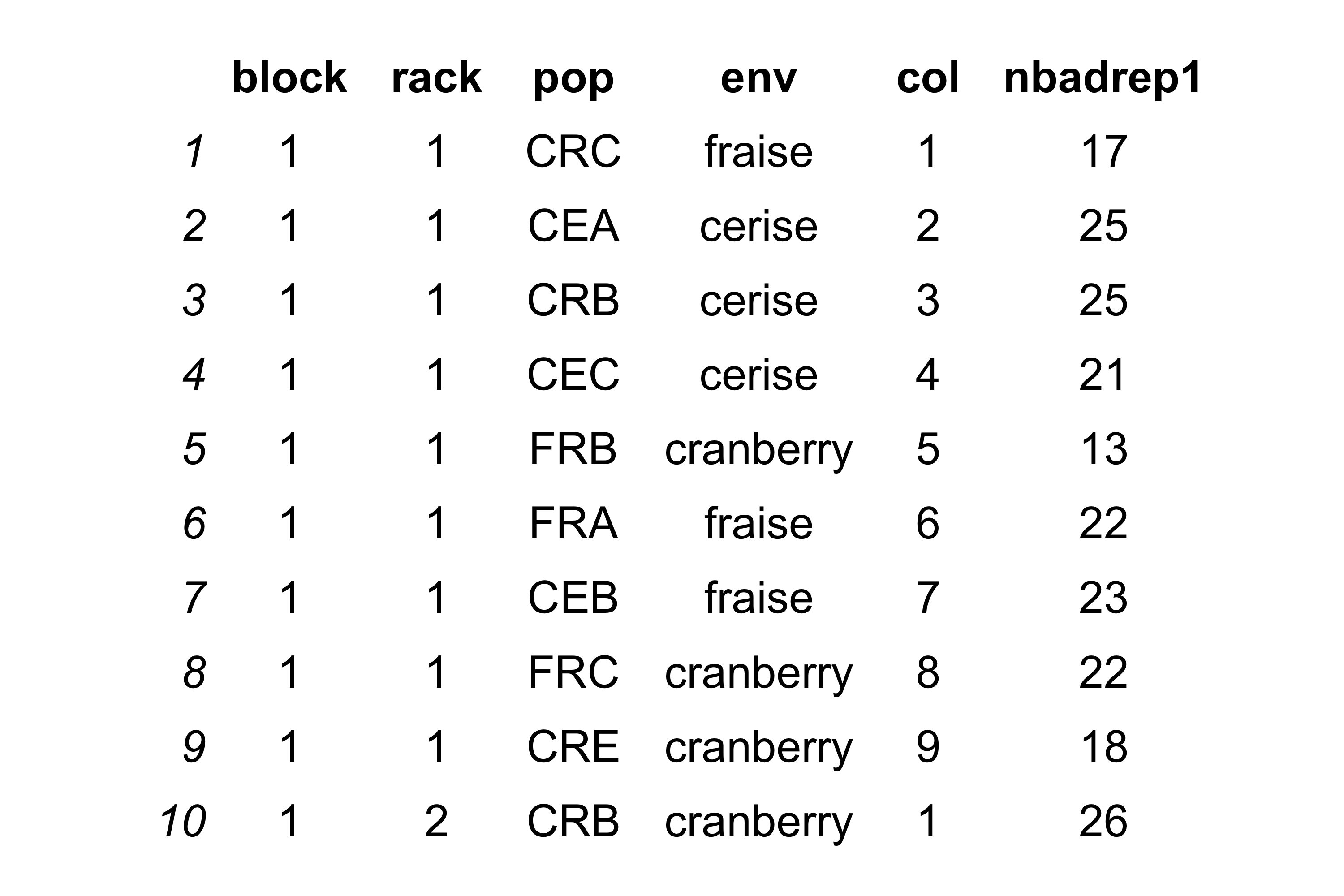
# 1 Create png

## 1.1 Simulate data

createpng(csvpath="./../data/FitnessExperimentalDesign\_G60Final.csv", outputpng="./../data/testnew.png")

## quartz\_off\_screen   
## 2

## 1.2 Initial image



# 2 Run OCR

## 2.1 English, no cleaning

data <- ocrpng(impagepath = "./../data/test.png", n.col=NULL, lang="eng", header=TRUE, cleaning=FALSE, outcsv="./../data/fitnessOCR.csv")

## [1] "OCR in eng without cleaning"  
## block rack pop env col nbadrep1  
##   
## 7 1 1 CRC fraise 1 17  
## 2 1 1 CEA cerise 2 29  
## 3 1 1 CRB cerise 3 29  
## 4 1 1 CEC cerise 4 21  
## 5 1 1 FRB cranberry 95 13  
## 6 61 1 FRA fraise 6 22  
## [1 1 CEB fraise T 23  
## § 1 1 FRC cranberry 8 22  
##   
## GQ 1 1 CRE cranberry 9 18  
## 101 2 CRB cranberry 1 26  
## 171 2 CEA fraise 2 21  
## 172 1 2 CEC cranberry 3 17  
## 131 2 CRC cerise 4 18  
## 14 — 1 2 CEB cranberry 5 18  
## 15 1 2 FRB fraise 6 21  
## 161 2 FRC fraise T 16  
## 17 1 2 FRA \_ cerise 8 23  
## 181 2 CRE \_ cerise 9 22  
## 19 «1 3. FRB cerise 1 24  
## 20 1 3 FRC \_ cerise 2 23  
## 21 = 1 3. CRB fraise 3 20  
## 22.1 3 CEA cranberry 4 11  
## 231 3. CEC fraise 5 22  
## 24 1 3 CRC cranberry 6 24  
## 25 1 3. CEB cerise if 16  
## 26 1 3 FRA cranberry 8 17  
## 2/1 3. CRE fraise 9 18  
## 28 2 4 FRA cranberry 1 17  
## 29 2 4 CRE cranberry 2 21  
## 30 2 4 CEA cranberry 3 19  
## 31 2 4 CEB fraise 4 13  
## 32 2 4 FRB cerise 3 24  
## 33 2 4 CRC cerise 6 18  
## 34 2 4 CRB fraise T 20  
## 35 2 4 FRC fraise 8 18  
## 36 2 4 CEC cerise 9 2/  
## 3f 2 5 FRB fraise 1 22  
## 38 2 5 CRE fraise 2 17  
## 39 2 5 CRC cranberry 3 22  
## 40 2 5 FRA \_ cerise 4 16  
## 41 2 5 CEB cerise 5 13  
## 42 2 5 CEC cranberry 6 23  
## 43 2 5 FRC cranberry /7 19  
## 44 2 5 CEA \_ fraise 8 23  
## 45 2 5 CRB \_ cerise 9 21  
## 46 2 6 CRE \_ cerise 1 17  
## 4f/ 2 6 FRA fraise 2 16  
## 48 2 6 CEA \_ cerise 3 26  
## 49 2 6 FRC \_ cerise 4 28  
## 50 2 6 CRC \_ fraise 5 18  
## 51 2 6 CEC fraise 6 15  
## 52 2 6 CEB cranberry /7 14  
## 53 2 6 CRB cranberry 8 30  
## 54 2 6 FRB cranberry 9 19  
## 55 3 7 CEB fraise 1 23  
## 56 3 7 FRA cranberry 2 20  
## 5/3 7 CRB fraise 3 16  
## 58 3 7 FRB cerise 4 13  
## 59 3 7 CRE cranberry 5 26  
## 60 3 7 CRC cerise 6 20  
## 67 3 7 CEA cranberry /7 29  
## 62 3 7 FRC fraise 8 22  
## 63 3 7 CEC cerise 9 16  
## 64 3 8 FRB fraise 1 19  
## 65 3 8 FRA — cerise 2 22  
## 66 3 8 CRE fraise 3 24  
## 6/7 3 8 CEB cerise 4 20  
## 68 3 8 CRB cerise 5 19  
## 69 3 8 CRC cranberry 6 15  
## /0 3 8 CEA fraise 7 17  
## /1 3 8 CEC cranberry 8 25  
## 2 3 8 FRC cranberry 9 23  
## [3 3 9 CRE \_ cerise 1 19  
## [4 3 9 CEB cranberry 2 18  
## 15 3 9 CEA cerise 3 18  
## /6 3 9 FRC cerise 4 24  
## /f 3 9 FRA fraise 5 18  
## /8 3 9 CRC fraise 6 25  
## 19 3 9 CEC fraise 7 22  
## 80 3 9 CRB cranberry 8 25  
## 81 3 9 FRB cranberry 9 16  
## 82 4 10 CEB fraise 1 20  
## 83 4 10 FRA cranberry 2 23  
## 84 4 10 FRB cerise 3 2/  
## 85 4 10 CRC cerise 4 22  
## 86 4 10 CEC cerise 5 14  
## 8/ 4 10 CRE cranberry 6 21  
## 88 4 10 CRB fraise T 24  
## 89 4 10 FRC fraise 8 23  
## 90 4 10 CEA cranberry 9 16  
## 97 4 11 FRA — cerise 1 15  
## 92 4 11 FRB fraise 2 14  
## 93 4 11 CEB cerise 3 2/  
## 94 4 11 CRE fraise 4 23  
## 95 4 11 CRC cranberry 5 24  
## 96 4 11 CEC cranberry 6 21  
## 97 4 11 CEA fraise T 2/  
## 98 4 11 CRB cerise 8 17  
## 99 4 11 FRC cranberry 9 20  
## 100 4 12 CRE cerise 1 20  
## 107 4 12 CEA \_ cerise 2 12  
## 102. 4 12 FRA fraise 3 18  
## 103. 4 12 CEB cranberry 4 18  
## 104 4 12 CRB cranberry 5 18  
## 105 4 12 CRC fraise 6 22  
## 106 4 12 FRC cerise T 19  
## 107 4 12 CEC fraise 8 17  
## 108 4 12 FRB cranberry 9 15

## Error in strsplit(text, split = "\n"): l'argument n'est pas une chaîne de caractères

## 2.2 French, cleaning

data <- ocrpng(impagepath = "./../data/test.png", n.col=NULL, lang="fra", header=TRUE, cleaning=TRUE, outcsv="./../data/fitnessOCR.csv")

## [1] "OCR in fra with cleaning"  
## block rack pop env col nbadrep1  
##   
## 1 1 1 CRC fraise 1 17  
## 2 1 CEA cerise 2 25  
## 3 1 1 CRB cerise 3 25  
## CS 1 CEC cerise 4 21  
## 5 1 1 FRB cranberry 5 13  
## 6 71 1 FRA fraise 6 22  
## 7 1 1 CEB fraise ll 23  
## 8 1 1 FRC cranberry 8 22  
## 9 1 1 CRE cranberry 9 18  
## 10 1 2 CRB cranberry 1 26  
## 11 1 2 CEA fraise 2 21  
## 12 1 2 CEC cranberry 3 17  
## 13 1 2 CRC cerise 4 18  
## 14 1 2 CEB cranberry 5 18  
## 15 1 2 FRB fraise 6 21  
## 16 1 2 FRC fraise ll 16  
## 17 1 2 FRA cerise 8 23  
## 18 71 2 CRE cerise 9 22  
## 19 1 3 FRB cerise 1 24  
## 20 1 3 FRC cerise 2 23  
## 21 1 3 CRB fraise 3 20  
## 22 1 3 CEA cranberry 4 11  
## 23 1 3 CEC fraise 5 22  
## 24 1 3 CRC cranberry 6 24  
## 25 1 3 CEB cerise 7 16  
## 26 71 3 FRA cranberry 8 17  
## 27 1 3 CRE fraise 9 18  
## 28 2 4 FRA cranberry 1 17  
## 29 2 4 CRE cranberry 2 21  
## 30 2 4 CEA cranberry 3 19  
## 31 2 4 CEB fraise 4 13  
## 32 2 4 FRB cerise 5 24  
## 33 2 4 CRC cerise 6 18  
## 34 2 4 CRB fraise 7 25  
## 35 2 4 FRC fraise 8 18  
## 36 2 4 CEC cerise 9 27  
## 37 2 5 FRB fraise 1 22  
## 38 2 5 CRE fraise 2 17  
## 39 2 5 CRC cranberry 3 22  
## 40 2 5 FRA cerise 4 16  
## 41 2 5 CEB cerise 5 13  
## 42 2 5 CEC cranberry 6 23  
## 43 2 5 FRC cranberry 7 19  
## 44 2 5 CEA fraise 8 23  
## 45 2 5 CRB cerise 9 21  
## 46 2 6 CRE cerise 1 17  
## 47 2 6 FRA fraise 2 16  
## 48 2 6 CEA cerise 3 26  
## 49 2 6 FRC cerise 4 28  
## 50 2 6 CRC fraise 5 18  
## 51 2 6 CEC fraise 6 15  
## 52 2 6 CEB cranberry 7 14  
## 53 2 6 CRB cranberry 8 30  
## 54 2 6 FRB cranberry 9 19  
## 55 3 7 CEB fraise 1 23  
## 56 3 7 FRA cranberry 2 20  
## 57 3 7 CRB fraise 3 16  
## 58 3 7 FRB cerise 4 13  
## 59 3 7 CRE cranberry 5 26  
## 60 3 7 CRC cerise 6 20  
## 61 3 7 CEA cranberry 7 29  
## 62 3 7. FRC fraise 8 22  
## 63 3 7 CEC cerise 9 16  
## 64 3 8 FRB fraise 1 19  
## 65 3 8 FRA cerise 2 22  
## 66 3 8 CRE fraise 3 24  
## 67 3 8 CEB cerise 4 20  
## 68 3 8 CRB cerise 5 19  
## 69 3 8 CRC cranberry 6 15  
## 70 3 8 CEA fraise 7 17  
## 71 3 8 CEC cranberry 8 25  
## 72 3 8 FRC cranberry 9 23  
## 73 3 9 CRE cerise 1 19  
## 74. 3 9 CEB cranberry 2 18  
## 75 3 9 CEA cerise 3 18  
## 76 3 9 FRC cerise 4 24  
## 17 3 9 FRA fraise 5 18  
## 78 3 9 CRC fraise 6 25  
## 79 3 9 CEC fraise 7 22  
## 80 3 9 CRB cranberry 8 25  
## 81 3 9 FRB cranberry 9 16  
## 82 4 10 CEB fraise 1 25  
## 83 4 10 FRA cranberry 2 23  
## 84 4 10 FRB cerise 3 27  
## 85 4 10 CRC cerise 4 22  
## 86 4 10 CEC cerise 5 14  
## 87 4 10 CRE cranberry 6 21  
## 88 4 10 CRB fraise 7 24  
## 89 4 10 FRC fraise 8 23  
## 90 4 10 CEA cranberry 9 16  
## 91 4 11 FRA cerise 1 15  
## 92 4 11 FRB fraise 2 14  
## 93 4 11 CEB cerise 3 27  
## 94 4 11 CRE fraise 4 23  
## 95 4 11 CRC cranberry 5 24  
## 96 4 11 CEC cranberry 6 21  
## 97 4 11 CEA fraise 7 27  
## 98 4 11 CRB cerise 8 17  
## 99 4 11 FRC cranberry 9 20  
## 100 4 12 CRE cerise 1 20  
## 101 4 12 CEA cerise 2 12  
## 102 4 12 FRA fraise 3 18  
## 103 4 12 CEB cranberry 4 18  
## 104 4 12 CRB cranberry 5 18  
## 105 4 12 CRC fraise 6 22  
## 106 4 12 FRC cerise 7 19  
## 107 4 12 CEC fraise 8 17  
## 108 4 12 FRB cranberry 9 15

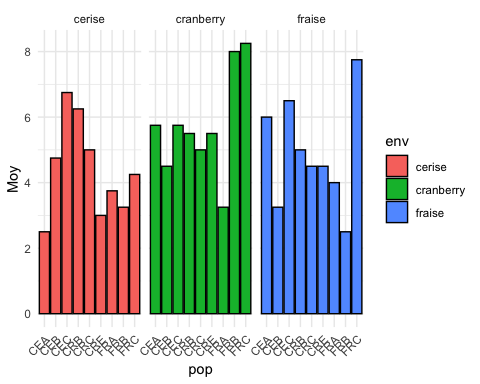
## Warning in ocrpng(impagepath = "./../data/test.png", n.col = NULL, lang =  
## "fra", : wrong number of columns for rows 2 4

## [1] " % of rows with wrong numbers of columns 1.82 %"  
## [1] ""  
## [1] ""  
## [1] "Here is a clean dataframe"  
## row\_number block rack pop env col nbadrep1  
## 1 1 1 1 CRC fraise 1 17  
## 2 3 1 1 CRB cerise 3 25  
## 3 5 1 1 FRB cranberry 5 13  
## 4 6 71 1 FRA fraise 6 22  
## 5 7 1 1 CEB fraise ll 23  
## 6 8 1 1 FRC cranberry 8 22  
## 7 9 1 1 CRE cranberry 9 18  
## 8 10 1 2 CRB cranberry 1 26  
## 9 11 1 2 CEA fraise 2 21  
## 10 12 1 2 CEC cranberry 3 17  
## 11 13 1 2 CRC cerise 4 18  
## 12 14 1 2 CEB cranberry 5 18  
## 13 15 1 2 FRB fraise 6 21  
## 14 16 1 2 FRC fraise ll 16  
## 15 17 1 2 FRA cerise 8 23  
## 16 18 71 2 CRE cerise 9 22  
## 17 19 1 3 FRB cerise 1 24  
## 18 20 1 3 FRC cerise 2 23  
## 19 21 1 3 CRB fraise 3 20  
## 20 22 1 3 CEA cranberry 4 11  
## 21 23 1 3 CEC fraise 5 22  
## 22 24 1 3 CRC cranberry 6 24  
## 23 25 1 3 CEB cerise 7 16  
## 24 26 71 3 FRA cranberry 8 17  
## 25 27 1 3 CRE fraise 9 18  
## 26 28 2 4 FRA cranberry 1 17  
## 27 29 2 4 CRE cranberry 2 21  
## 28 30 2 4 CEA cranberry 3 19  
## 29 31 2 4 CEB fraise 4 13  
## 30 32 2 4 FRB cerise 5 24  
## 31 33 2 4 CRC cerise 6 18  
## 32 34 2 4 CRB fraise 7 25  
## 33 35 2 4 FRC fraise 8 18  
## 34 36 2 4 CEC cerise 9 27  
## 35 37 2 5 FRB fraise 1 22  
## 36 38 2 5 CRE fraise 2 17  
## 37 39 2 5 CRC cranberry 3 22  
## 38 40 2 5 FRA cerise 4 16  
## 39 41 2 5 CEB cerise 5 13  
## 40 42 2 5 CEC cranberry 6 23  
## 41 43 2 5 FRC cranberry 7 19  
## 42 44 2 5 CEA fraise 8 23  
## 43 45 2 5 CRB cerise 9 21  
## 44 46 2 6 CRE cerise 1 17  
## 45 47 2 6 FRA fraise 2 16  
## 46 48 2 6 CEA cerise 3 26  
## 47 49 2 6 FRC cerise 4 28  
## 48 50 2 6 CRC fraise 5 18  
## 49 51 2 6 CEC fraise 6 15  
## 50 52 2 6 CEB cranberry 7 14  
## 51 53 2 6 CRB cranberry 8 30  
## 52 54 2 6 FRB cranberry 9 19  
## 53 55 3 7 CEB fraise 1 23  
## 54 56 3 7 FRA cranberry 2 20  
## 55 57 3 7 CRB fraise 3 16  
## 56 58 3 7 FRB cerise 4 13  
## 57 59 3 7 CRE cranberry 5 26  
## 58 60 3 7 CRC cerise 6 20  
## 59 61 3 7 CEA cranberry 7 29  
## 60 62 3 7. FRC fraise 8 22  
## 61 63 3 7 CEC cerise 9 16  
## 62 64 3 8 FRB fraise 1 19  
## 63 65 3 8 FRA cerise 2 22  
## 64 66 3 8 CRE fraise 3 24  
## 65 67 3 8 CEB cerise 4 20  
## 66 68 3 8 CRB cerise 5 19  
## 67 69 3 8 CRC cranberry 6 15  
## 68 70 3 8 CEA fraise 7 17  
## 69 71 3 8 CEC cranberry 8 25  
## 70 72 3 8 FRC cranberry 9 23  
## 71 73 3 9 CRE cerise 1 19  
## 72 74. 3 9 CEB cranberry 2 18  
## 73 75 3 9 CEA cerise 3 18  
## 74 76 3 9 FRC cerise 4 24  
## 75 17 3 9 FRA fraise 5 18  
## 76 78 3 9 CRC fraise 6 25  
## 77 79 3 9 CEC fraise 7 22  
## 78 80 3 9 CRB cranberry 8 25  
## 79 81 3 9 FRB cranberry 9 16  
## 80 82 4 10 CEB fraise 1 25  
## 81 83 4 10 FRA cranberry 2 23  
## 82 84 4 10 FRB cerise 3 27  
## 83 85 4 10 CRC cerise 4 22  
## 84 86 4 10 CEC cerise 5 14  
## 85 87 4 10 CRE cranberry 6 21  
## 86 88 4 10 CRB fraise 7 24  
## 87 89 4 10 FRC fraise 8 23  
## 88 90 4 10 CEA cranberry 9 16  
## 89 91 4 11 FRA cerise 1 15  
## 90 92 4 11 FRB fraise 2 14  
## 91 93 4 11 CEB cerise 3 27  
## 92 94 4 11 CRE fraise 4 23  
## 93 95 4 11 CRC cranberry 5 24  
## 94 96 4 11 CEC cranberry 6 21  
## 95 97 4 11 CEA fraise 7 27  
## 96 98 4 11 CRB cerise 8 17  
## 97 99 4 11 FRC cranberry 9 20  
## 98 100 4 12 CRE cerise 1 20  
## 99 101 4 12 CEA cerise 2 12  
## 100 102 4 12 FRA fraise 3 18  
## 101 103 4 12 CEB cranberry 4 18  
## 102 104 4 12 CRB cranberry 5 18  
## 103 105 4 12 CRC fraise 6 22  
## 104 106 4 12 FRC cerise 7 19  
## 105 107 4 12 CEC fraise 8 17  
## 106 108 4 12 FRB cranberry 9 15

# 3 Visualisation des donnees

Moyenne pour chaque population dans chaque environnement

graphe(csvpath="./../data/fitness.csv")



# 4 Comparaison des groupes

analyse\_stat(csvpath="./../data/fitness.csv")

## boundary (singular) fit: see ?isSingular

## Generalized linear mixed model fit by maximum likelihood (Laplace  
## Approximation) [glmerMod]  
## Family: poisson ( log )  
## Formula: nbadrep1 ~ env + pop + (1 | block)  
## Data: data  
## AIC BIC logLik deviance df.resid   
## 629.4473 661.6328 -302.7236 605.4473 96   
## Random effects:  
## Groups Name Std.Dev.  
## block (Intercept) 0   
## Number of obs: 108, groups: block, 4  
## Fixed Effects:  
## (Intercept) envcranberry envfraise popCEB popCEC   
## 3.018207 -0.011004 -0.006863 -0.067823 -0.016529   
## popCRB popCRC popCRE popFRA popFRB   
## 0.086328 0.004090 0.008163 -0.072218 -0.072218   
## popFRC   
## 0.051908   
## convergence code 0; 0 optimizer warnings; 1 lme4 warnings

## plotSimulatedResiduals is deprecated, please switch your code to simply using the plot() function

## Analysis of Deviance Table (Type II Wald chisquare tests)  
##   
## Response: nbadrep1  
## Chisq Df Pr(>Chisq)  
## env 0.0450 2 0.9778  
## pop 6.1011 8 0.6359

## Error in mcp(pop = "Tukey"): impossible de trouver la fonction "mcp"

