Supplementary tables for Soleri et al, The household context of in situ conservation in Oaxaca, Mexico

Table S1a. Sierra Juárez Region. Maize and bean varieties farmers reported growing

Sierra Juárez, all communities							
Named maize varieties[1], n = 19				Named bean varieties[1], n = 17			
Local name and community where that is used	**Spanish translation, equivalent names in other communities**	**Number of households that reported growing the variety**	**Proportion of households in regional sample**	**Local name and community where that is used**	**Spanish translation, equivalent names in other communities**	**Number of households that reported growing the variety**	**Proportion of households in regional sample**
Yuá bedári idal-lá, Atepec	Blanco criollo, tierra fria; Yuk poop in Cacalotepec	6	3.0%	Daá nató, Atepec, Jaltianguis	Frijol grande	31	15.5%
Yuá bedári, Atepec	Blanco criollo; Xhuaá tzizi in Jaltianguis; Poop mook in Cacalotepec; Poo'p mook in Totontepec	125	62.5%	Daá yii yi, Atepec, Jaltianguis	Frijol de basura (ldel ejote)	4	2.0%
Yuá bedári b´yá , Atepec	Blanco bolita	2	1.0%	Daá yela, Atepec, Jaltianguis	Frijol de milpa; Mokxëjk	35	17.5%
Yuá bedári bíini , Atepec	Blanco tablita	1	0.5%	Daá cuarentena, Atepec, Jaltianguis	Daa ya-aa in Jaltianguis; Frijol cuarenteno o de conejo	4	2.0%
Yuá bedári yúubá, Atepec	Blanco criollo de tierra caliente	3	1.5%	Daá güin-nii, Atepec, Jaltianguis	Frijol delgado	76	38.0%
Yuá bedatzi , Atepec	Amarillo criollo; Xhuaá yatzi in Jaltianguis; Pu'tsmok in Cacalotepec; Pöts mook in Totontepec	84	42.0%	Daá tupií, Atepec, Jaltianguis	Frijol que silba; Satope, Daá tupií	19	9.5%
Yuá bedatsi Zogochu , Atepec	Amarillo de Zogoche, color intenso	3	1.5%	Daá ixhia	Frijol de bejuco o frijol de red	10	5.0%
Yuá bedahuií, Atepec	Maíz pinto; Xhuaá chishi in Jaltianguis; katskutun in Cacalotepec; Katst mook, Totontepec	55	27.5%	Daá chix-xí, Atepec, Jaltianguis	Frijol revuelto o mezclado	6	3.0%
Apatpoop, Cacalotepec	Maíz blanco de tierras baja con granos chicos y aplastaditos	1	0.5%	Daá bel-la tuaa, Atepec, Jaltianguis	Frijol de gusano de maguey	9	4.5%
Mutskkats, Cacalotepec	Maíz chiquito pinto que se cosecha en corto tiempo	1	0.5%	Daá yii, Atepec, Jaltianguis	Frijol de carrizo	1	0.5%
Poopkats, Cacalotepec	Maíz blanco pinto	2	1.0%	Pitxëjk, Cacalotepec	Frijol de monte	30	15.0%
Poop kutun, Cacalotepec	Maíz blanco, cabeza de cerro	1	0.5%	Mëkenya'an, Cacalotepec	Frijolón	17	8.5%

Yukpu'ts, Cacalotepec	Maíz amarillo de tierras frías o cerros, granos muy grandes	1	0.5%	Tsaptsna'an, Cacalotepec	Ejote rojo de milpa; Bejuco frijol, ejotero, Aats xëjk in Totontepec	21	10.5%
Tsapoo'p , Totontepec	Blanco, "piedra blanca," zapcot	1	0.5%	Tsaa xëjk , Cacalotepec	Frijol blanco de piedra in Cacalotepec	1	0.5%
Yëk mook , Totontepec	Negro maíz, con pinto	1	0.5%	Nö'ötk, Totontepec	Salaya	5	2.5%
Xhuaá dia , Jaltianguis	Maíz negro o morado; Kats mok in Cacalotepec	9	4.5%	Mëjü xëjk, Totontepec	Grueso, ancho, frijol grande; Daá laá	50	25.0%
Xhuaá shatoó , Jaltianguis	Maíz de monte	1	0.5%	Tigre, Totontepec	Frijol tigre	1	0.5%
Xhuaá yatzi suba , Jaltianguis	Maíz amarillo claro	2	1.0%				
Maíz amarillo de Talea , Jaltianguis	Maíz amarillo de Talea	1	0.5%				

[1] Local name in Zapotec (Atepec, Jaltianguis) , Mixe (Cacalotepec, Totontepec) or Spanish

Table S1b. Valles Centrales Region. Maize and bean varieties farmers reported growing

Named maize varieties[1], n = 14			Named bean varieties[1], n = 13		
Name	**Number of households that reported growing the variety**	**Proportion of households in regional sample**	**Name**	**Number of households that reported growing the variety**	**Proportion of households in regional sample**
Blanco bolita	29	14.1%	Delgado	83	40.5%
Blanco criollo	162	79.0%	Gruesso, Jamapa, Frijol poblano	25	12.2%
Blanco delgado	2	1.0%	Bizagu	22	10.7%
Amarillo delgado	1	8.8%	Colorado	5	2.4%
Amarillo	18	0.5%	Piñero	6	2.9%
Negrito	8	3.9%	Guishumil	1	0.5%
Belatove	1	0.5%	Gordo	7	3.4%
Rojo	2	1.0%	Bayo	2	1.0%
Pinto	2	1.0%	Serrano	4	2.0%
Tepecinte o tepecintle	6	2.9%	Blanco	3	1.5%
Tabla o tablita	2	1.0%	Rojo	1	0.5%
Blanco de tres meses	3	1.5%	Ejotero	4	2.0%
Gruesso	1	0.5%	Frijol de milpa	1	0.5%
Mejorados, incluiso el elotero	12	5.9%			

[1] Local name in Spanish or Valley Zapotec

Table S2. Model information for logits included in Figure 3

bnlogit4 (n=129 bc only those selling MZ)
a) bean diversity <2 vs >=2
summ(bnlogit4, scale = TRUE)
MODEL INFO:
Observations: 129 (277 missing obs. deleted)
Dependent Variable: BNDIV1
Type: Generalized linear model
  Family: binomial
  Link function: logit

MODEL FIT:
$\chi^2(3) = 42.16$, $p = 0.00$
Pseudo-R^2 (Cragg-Uhler) = 0.39
Pseudo-R^2 (McFadden) = 0.26
AIC = 128.64, BIC = 140.07

Standard errors: MLE

	Est.	S.E.	z val.	p
(Intercept)	-0.18	0.40	-0.44	0.66
SELLBN	1.21	0.47	2.56	0.01
REG	-2.14	0.47	-4.54	0.00
SELLMZ_AMT	-0.59	0.25	-2.40	0.02

vif(glm(BNDIV1
~ SELLBN +
REG +
SELLMZ_AMT,
data =
OAX8_2022,
family =
"binomial"))
   SELLBN   REG SELLMZ_AMT
 1.070018   1.068131   1.014269
Confusion Matrix and Statistics

        Reference
Prediction 0 1

mzlogit2A
a) maize diversity <2 vs >=2
 summ(mzlogit2A, scale = TRUE)
MODEL INFO:
Observations: 391 (15 missing obs. deleted)
Dependent Variable: MZDIV1
Type: Generalized linear model
  Family: binomial
  Link function: logit

MODEL FIT:
$\chi^2(2) = 43.72$, $p = 0.00$
Pseudo-R^2 (Cragg-Uhler) = 0.15
Pseudo-R^2 (McFadden) = 0.09
AIC = 437.75, BIC = 449.66

Standard errors: MLE

	Est.	S.E.	z val.	p
(Intercept)	-0.25	0.15	-1.74	0.08
REG	-1.44	0.25	-5.82	0.00
KGMZPP_HUM	0.34	0.13	2.68	0.01

 vif(glm(MZDIV1
~ REG +
KGMZPP_HUM,
data =
OAX8_2022,
family =
"binomial"))
      REG KGMZPP_HUM
 1.021342   1.021342
Confusion Matrix and Statistics

        Reference
Prediction   0   1

```
   0 78 14
   1  9 28

               Accuracy : 0.8217
                 95% CI : (0.7446, 0.8835)
    No Information Rate : 0.6744
    P-Value [Acc > NIR] : 0.0001337

                  Kappa : 0.5811

 Mcnemar's Test P-Value : 0.4042485

            Sensitivity : 0.8966
            Specificity : 0.6667
         Pos Pred Value : 0.8478
         Neg Pred Value : 0.7568
             Prevalence : 0.6744
         Detection Rate : 0.6047
   Detection Prevalence : 0.7132
      Balanced Accuracy : 0.7816

       'Positive' Class : 0
odds
                    OR      2.5 %     97.5 %
(Intercept) 11.6785475 2.73831470 53.3855186
SELLBN       3.3389839 1.36330712  8.7819082
REG          0.1176842 0.04473915  0.2876116
SELLMZ_AMT   0.5358033 0.31306026  0.8786096
```

```
   0 269 100
   1   6  16

               Accuracy : 0.7289
                 95% CI : (0.6819, 0.7724)
    No Information Rate : 0.7033
    P-Value [Acc > NIR] : 0.1462

                  Kappa : 0.1516

 Mcnemar's Test P-Value : <2e-16

            Sensitivity : 0.9782
            Specificity : 0.1379
         Pos Pred Value : 0.7290
         Neg Pred Value : 0.7273
             Prevalence : 0.7033
         Detection Rate : 0.6880
   Detection Prevalence : 0.9437
      Balanced Accuracy : 0.5581

       'Positive' Class : 0
odds
                    OR     2.5 %    97.5 %
(Intercept) 2.0187984 0.9608336 4.2509560
REG         0.2377706 0.1448358 0.3818839
KGMZPP_HUM  2.4375162 1.2932240 4.7839525
```

Table S2. Model information for logits included in Figure 3, continued

bnlogit5
b) bean diversity <3 vs >=3
summ(bnlogit5, scale = TRUE)
MODEL INFO:
Observations: 396 (10 missing obs. deleted)
Dependent Variable: BNDIV2
Type: Generalized linear model
  Family: binomial
  Link function: logit

MODEL FIT:
$\chi^2(3) = 40.95$, p = 0.00
Pseudo-R^2 (Cragg-Uhler) = 0.19
Pseudo-R^2 (McFadden) = 0.15
AIC = 247.46, BIC = 263.39

Standard errors: MLE

	Est.	S.E.	z val.	p
(Intercept)	-1.96	0.23	-8.41	0.00
SELLBN	1.18	0.36	3.29	0.00
REG	-1.59	0.41	-3.89	0.00
MZDIV	0.45	0.14	3.19	0.00

vif(glm(BNDIV2 ~ SELLBN + REG + MZDIV, data = OAX8_2022, family = "binomial"))
  SELLBN   REG   MZDIV
1.040436 1.043391 1.004794

Confusion Matrix and Statistics

          Reference
Prediction   0   1
         0 351 41

mzlogit3A
b) maize diversity <3 vs >=3
 summ(mzlogit3A, scale = TRUE)
MODEL INFO:

Observations: 405 (1 missing obs. deleted)
Dependent Variable: MZDIV2
Type: Generalized linear model
  Family: binomial
  Link function: logit

MODEL FIT:
$\chi^2(1) = 6.49$, p = 0.01
Pseudo-R^2 (Cragg-Uhler) = 0.04
Pseudo-R^2 (McFadden) = 0.03
AIC = 185.18, BIC = 193.19

Standard errors: MLE

	Est.	S.E.	z val.	p
(Intercept)	-2.84	0.23	-12.48	0.00
BNDIV	0.50	0.20	2.56	0.01

[no VIF as only 1 I.Var.]

Confusion Matrix and Statistics

          Reference
Prediction   0   1
         0 380 25

```
      1   0   4

          Accuracy : 0.8965
            95% CI : (0.8622, 0.9247)
   No Information Rate : 0.8864
   P-Value [Acc > NIR] : 0.2946

             Kappa : 0.1474

 Mcnemar's Test P-Value : 4.185e-10

         Sensitivity : 1.00000
         Specificity : 0.08889
      Pos Pred Value : 0.89541
      Neg Pred Value : 1.00000
          Prevalence : 0.88636
      Detection Rate : 0.88636
  Detection Prevalence : 0.98990
    Balanced Accuracy : 0.54444

     'Positive' Class : 0
odds
                OR      2.5 %    97.5 %
(Intercept) 0.2705114 0.07545542
0.9742509
SELLBN      3.2477394 1.60048182 6.5722374
REG         0.2044316 0.08690264
0.4365559
MZDIV       1.9758734 1.29409423
3.0035808
```

```
      1   0   0

          Accuracy : 0.9383
            95% CI : (0.9102, 0.9597)
   No Information Rate : 0.9383
   P-Value [Acc > NIR] : 0.5529

             Kappa : 0

 Mcnemar's Test P-Value : 1.587e-06

         Sensitivity : 1.0000
         Specificity : 0.0000
      Pos Pred Value : 0.9383
      Neg Pred Value :    NaN
          Prevalence : 0.9383
      Detection Rate : 0.9383
  Detection Prevalence : 1.0000
    Balanced Accuracy : 0.5000

     'Positive' Class : 0

> odds <-exp(cbind(OR = coef(mzlogit3A), confint(mzlogit3A)))

Waiting for profiling to be done...
> odds
                  OR      2.5 %     97.5 %

(Intercept) 0.03138054 0.01358346 0.06422367
BNDIV       1.68858458 1.13012290 2.53162582
```

Table S3. Environments and fields of maize and bean sown, as reported by farming households, 2007

Region, community	Maize farming, household^{-1}				Bean farming, household^{-1}	
	Number of environments planted, maximum = 3: fría, templada, caliente		Total number of fields across all environments		Number of environments planted, maximum = 3 = fría, templada, caliente	
	Mean	SD	Mean	SD	Mean	SD
Sierra Juárez, all communities	1.23	0.464	1.67	1.076	1.15	0.591
San Juan Atepec	1.27	0.451	1.65	0.770	1.31	0.616
Santa María Jaltianguis	1.42	0.642	2.46	1.487	1.32	0.683
Asunción Cacalotepec	1.15	0.357	1.29	0.544	1.04	0.544
Totontepec Villa de Morelos	1.06	0.238	1.27	0.802	0.92	0.392
	Maize farming, household^{-1}				**Bean farming, household^{-1}**	
	Number of environments planted, maximum = 2: summer/ rainfed, winter/ irrigated		**Total number of fields across all environments**		**Number of environments planted, maximum = 2 = summer/ rainfed, winter/ irrigated**	
Valles Centrales, all communities	1.13	0.352	2.48	2.139	0.70	0.545
Santa Marta Chichihualtepec	1.06	0.242	2.41	1.606	0.71	0.500
San Agustín Amatengo	1.10	0.298	2.06	1.468	0.73	0.598
San Andrés Zautla	1.08	0.344	1.73	1.056	0.82	0.441
Valdeflores Zimatlán	1.27	0.447	3.57	3.156	0.57	0.599

Source: authors' interviews