



Trial year 2022 -2023



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Rice Cover Crop Variety Trial

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Project Objectives

1. Evaluate winter cover crop varieties for agronomic performance
2. Assess site characteristics and soil properties and relate to agronomic performance of cover crops
3. Evaluate potential N and C contributions

Block 1 (101-113)	Block 2 (201-213)	Block 3 (301-313)	Block 4 (401-413)
Biomaster pea 101	Balansa clover 201	Mix 3 301	Biomaster pea 401
Control 102	Purple Vetch 202	Turnip 302	Mix 3 402
Wollypod Vetch 103	Rye 203	Balansa Clover 303	Oats 403
Rye 104	Yellow mustard 204	Rye 304	Field pea 404
Balansa Clover 105	Turnip 205	Bell Bean 305	Turnip 405
Mix 3 106	Field pea 206	Mix 2 306	Balansa clover 406
Yellow mustard 107	Oats 207	Oats 307	Mix 2 407
Field pea 108	Control 208	Yellow mustard 308	Control 408
Purple vetch 109	Bell bean 209	Woodypod 309	Rye 409
Bell Bean 110	Wollypod Vetch 210	Biomaster 310	Purple Vetch 410
Turnip 111	Mix 3 211	Purple vetch 311	Woodypod vetch 411
Oats 112	Mix 2 212	Control 312	Bell bean 412
Mix 2 113	Biomaster pea 213	Field pea 313	Yellow mustard 413



Table 1: Cover crop species and seeding rates for three variety trials. Calculated for 800 square ft per site.

Cover Crop Species	lb/A
Purple Vetch	72
Woodypod Vetch	72
Bell Bean	180
Balansa Clover	18
Field Pea	110
Yellow Mustard	12
Turnip	18
Rye	98
Oats	110
Biomaster Pea	72

Table 2: Cover crop species in Mix 1 and Mix 2 percent required by species for three sites based on Lb/A.

Mix (1)	lb/A	% Mixture
Purple Vetch	13	11
Bell Bean	33	27
Field Pea	30	25
Rye	45	37
Totals	121	100
Mix (2)	lb/A	% Mixture
Purple Vetch	20	21
Balansa Clover	3	3
Field Pea	38	40
Oats	25	27
Radish	8	9
Totals	94	100

Variety Trial Seeding Dates

San Joaquin Delta	Rice Experiment Station (RES)	Colusa
11/13/23	11/09/23	11/08/23

We thank the CA Rice Research Board for supporting this project.

Cover crop growth summary for 2024 by percent cover

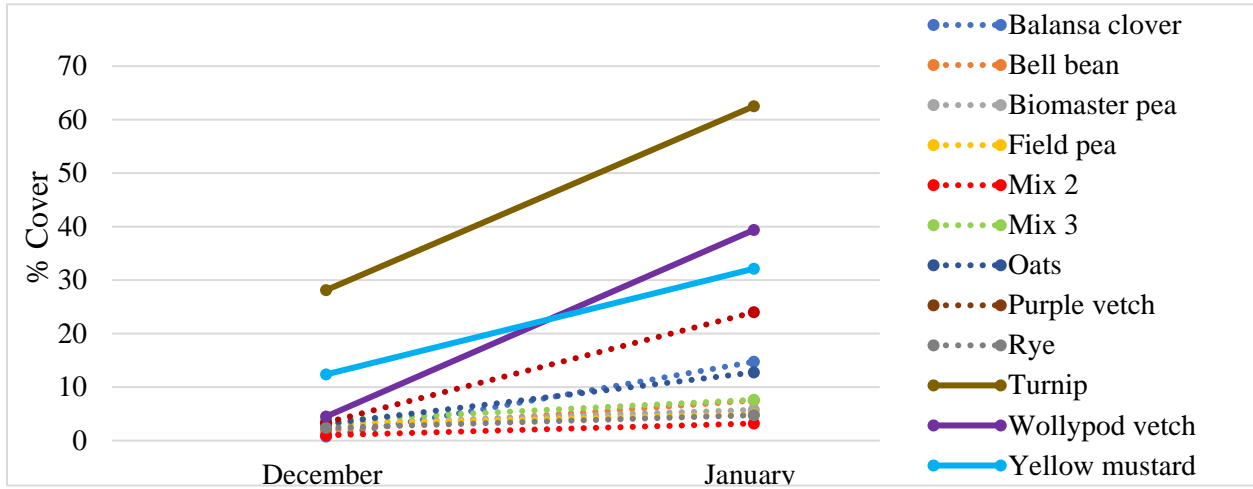


Figure 1: Average cover crop growth as percent ground cover growth at San Joaquin site from early December to late January.

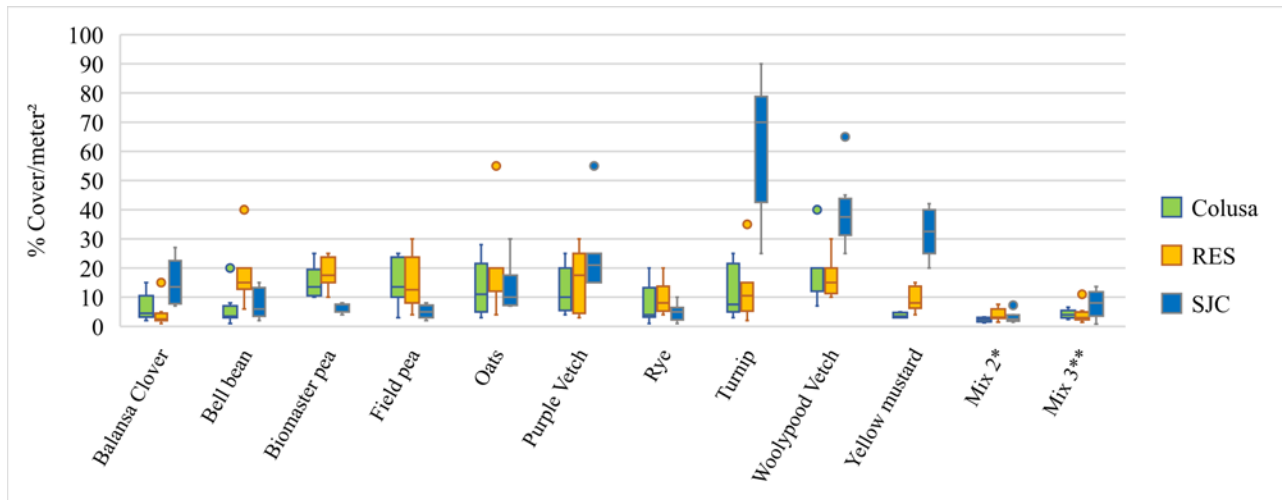


Figure 2: Average percent ground cover in January across three sites Colusa (green), Rice Experiment Station (RES, yellow) and San Joaquin (SJC, blue).

Table 3: 2022-2023 Cover crop Nitrogen and Carbon Summary – From Colusa Site

Variety	% N	% C	C:N ratio
Balansa Clover	4.2	41.5	9.9
Purple Vetch	4.1	40.9	10.1
Woollypod Vetch	4.3	41.5	9.7
Mix 1	3.7	40.8	11.4
Mix 2	2.1	42.9	21.4
Weeds	2.2	43.0	19.8
Oats	1.6	43.0	28.4
Rye	1.7	42.2	25.5

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