SUPPLEMENTARY MATERIAL

Table S11 – Statistical analysis of publications on honey-must fermentation parameters, yeast isolation, and screening for alcoholic beverage production research in key journals. NP – Number of publications; NC – Number of citations; TLS – Total Link Strength; AvC – Average number of citations. AvNC – Average normalised number of citations (Norm). Total Link Strength was calculated as the sum of all citation link strengths between each journal and the others in the network, reflecting each journal's overall connectedness.

Journal	**NP**	**NC**	**TLS**	**AvC**	**AvNC**
Chemical Engineering Transactions	5	24	4	4.80	1.03
European Food Research and Technology	5	35	13	7.00	3.01
Food Bioscience	3	21	3	7.00	7.55
Food Chemistry	4	258	1	64.50	9.64
Food Microbiology	7	146	37	20.86	9.95
Industrial Biotechnology	3	1	5	0.33	0.20
International Journal of Food Microbiology	5	145	32	29.00	6.44
Journal of Microbiology, Biotechnology and Food Sciences	3	15	0	5.00	1.02
Journal of the Institute of Brewing	10	188	36	18.80	10.11
LWT	5	154	17	30.80	11.15
Molecules	3	14	4	4.67	2.75
Yeast	3	85	0	28.33	5.46

Tables S2 – Statistical analysis of the scientific contributions of authors working in different countries' publications concerning honey-must fermentation parameters, yeast isolation, and screening for alcoholic beverage production research in the key journals listed in Table 2. NP – Number of publications; NC – Number of citations; TLS – Total Link Strength; AvC – Average number of citations; AvNC – Average normalised number of citations (Norm.). Total Link Strength was calculated as the sum of the strengths of all citation links between each country and the other countries in the network, reflecting each country's overall connectedness.

Country	**NP**	**NC**	**TLS**	**AvC**	**AvNC**
Brazil	28	257	2	9.18	25.32
China	11	137	2	12.45	19.29
France	2	134	2	67.00	5.13
Italy	13	118	1	9.08	12.13
New Zealand	1	118	1	118.00	4.15
Portugal	11	298	3	27.09	12.22
Spain	8	157	3	19.63	8.11
Turkey	4	112	0	28.00	5.18

Table S3 – Statistical analysis of selected keywords related to yeast–honey research. NO – Number of occurrences; TLS – Total Link Strength, calculated as the sum of the strengths of all co-occurrence links of a given keyword with other keywords in the dataset.

Keyword	**NO**	**TLS**
Fermentation	81	374
Yeast	65	306
Saccharomyces	47	236
Honey	44	200
Mead	43	180
Alcoholic Beverages	39	206
Alcohol	29	184
Ethanol	23	144
Volatile Compounds	21	111
Microbiology	16	106
Wine	16	92
Antioxidant	15	52
Metabolism	15	105
Aroma Profile	14	85
Food Products	14	57
Glycerol	11	80
Nitrogen	11	59
Sensory Profile	10	63

Table S4 – NP – number of publications; NC – total citations; TLS – total link strength (calculated as the sum of co-authorship link strengths with other authors in the dataset); AvC – average citations per article; AvNC – average normalised citations.

Group Number	NP	NC	AvC	AvNC
1	28	842	30,07	9,76
2	66	664	10,06	6,70
3	10	57	5,70	3,39
4	9	47	5,22	3,33
5	5	22	4,40	1,73

Table S5 – Overview of yeast strains, honey origin, must composition, fermentation conditions, and main outcomes in honey-must fermentation studies.

Yeast Strains	Honey Origin	Must Characteristics	Fermentation Parameters	Main Results	Reference
S. cerevisiae (commercial)	-	18 °Bx pH 3.6 Pasteurized at 65°C for 20 min 15-75 g/L pollen or yeast extract	25 °C 12 h	Highest cell growth with 30 g/L pollen and 30 g/L yeast.	(KEMPKA *et al.*, 2015)
S. cerevisiae *S. bayanus* (Uvaferm® BC)	Colombia	24 °Bx Pasteurized at 65°C for 20 min 5 g/kg pollen	30 °C 17 days Agitation[9]	Higher ethanol concentration and yield with Immobilized cells[11].	(MARTÍNEZ; VIVAS; QUICAZÁN, 2016)
S. cerevisiae	Portugal	30 °Bx[1] pH 3.7 Pasteurized at 65 °C for 20 min 0.2 g/L NH_4Cl	20 °C 12 days	High ethanol concentration 12% (v/v) with NH_4Cl supplementation.	(MENDES-FERREIRA *et al.*, 2010)
S. cerevisiae	Spain	20 °Bx[1] pH 3.8 10 g/L pollen	25 °C 10 days	Best flavor profile with 10 g/L pollen.	(ROLDÁN *et al.*, 2011)
S. cerevisiae	India	22 °Bx[1] pH 3.5 Pasteurized at 60°C for 15 min 0.1 g/L K_2HPO_4	28° C 15 days	High ethanol concentration 8% (v/v) with K_2HPO_4 supplementation.	(GUPTA; SHARMA, 2009)
T. delbrueckii *S. bayanus* *S. cerevisiae* X5	Spain	23 °Bx[1] pH 3.5 Pasteurized at 60 °C 10min 66 YAN[3] mg/L 2×10^6 cells/mL	25 °C 30 days	Ethanol: 11% (v/v). High fermentation efficiency. Floral aroma. Ethyl acetate.	(SOTTIL *et al.*, 2019)
Lactic acid-producing yeast (LAY) *S. cerevisiae*	United States of America	OG 1.112 pH 4.13 TOSNA[13] FermaidO (Lallemand) 1.85×10^{10} cells	17-20 °C 3 weeks Agitation[9] Degassed twice daily	Ethanol: 5.8% - 14.4% ABV. Sour mead. Citrus, fruity, and tropical aromas.	(PEEPALL *et al.*, 2019)

S. bayanus	Italy	24 °Bx[1] pollen added	25 °C 21 days	Ethanol: 8-12% (v/v). No clear relationship with sensory changes (Monitored by electronic nose and tongue[14]).	(CUENCA *et al.*, 2015)
S. cerevisiae	Colombia	Crystallized honey 24° °Bx[1] pH: 3.8 Pasteurization[10] at 60 °C 10 min Pollen, Yeast Extract, a mix of pollen and Ammonium di-Hydrogen Phosphate of equal parts, and protease-pretreated pollen. All nitrogen sources: 140 mg YAN[3]/L 0,450 g dry yeast in 900 ml	30 °C 20 days Clarified with 2 g/l bentonite	Ethanol: 9-12.7-13.6% (v/v). No significant variation. Sensory analysis: Pollen-ADP and Yeast Extract showed better results.	(HERNÁNDEZ; SERRATO; QUICAZAN, 2015)
S. cerevisiae S. *bayanus* (Lallemand®)	Italy	Multifloral honey 100 mL 24 °Bx[1] Pasteurization at 65 °C for 15 min Pollen 0.4% (w/v)); 0.04% (w/v)) yeast Addition of: *Capsicum annuum* (pepper) *Eugenia caryophyllata* (clove tree) and mix	20 °C 720 h Static[8]	Ethanol 5.8 ± 0.1% (w/v), with *Capsicum annuum.* High esters, low fusel alcohols. *Capsicum annuum* enhances fermentation rate.	(CUENCA *et al.*, 2016)

S. cerevisiae *S. bayanus*	Slovakia	Blossom honey 154.2 mg/L sugars pH 5.69 Pasteurization[10] at 65 °C for 15 min 0.3 g/L Vitamon Combi® 10^6 cells/mL yeast	24 °C 15 days Static[8]	Ethanol 13.60-17.47% (v/v). High acetaldehyde and 1-propanol with *S. bayanus*. Balanced VOC[6] profile with *S. bayanus*.	(BÉNES; FURDÍKOVÁ; ŠMOGROVIČOVÁ, 2015)
S. cerevisiae (Montrachet®) *S. bayanus* (Premier Blanc®) *S. cerevisiae* (Safbrew® T-58)	Brazil	Multifloral hone 225 mL 30 °Bx[1] pH 5.0 Autoclaved at 110°C for 10 min Yeast extract 5 g/L) (Malt extract 5 g/L) (Peptone 10 g/L) (Magnesium chloride 0.05 g/L) (Ammonium sulfate 0.3 g/L) (Ammonium phosphate 0.05 g/L) 10^6 cells/mL yeast	30 °C 264 h	Ethanol 12.7-15.0% (v/v). Higher cell growth and substrate consumption with dark honey. Higher ethanol production with *S. bayanus*.	(ARAÚJO *et al.*, 2020)
S. pastorianus (Fermolager®)	Bosnia	Honeydew honey 190 mL pH 3.85-3.99 Chokeberry juice Pasteurization[10] at 65 °C for 10 min VitaFerm Ultra F3 0.267 g/L) 0.15-0.6 g/L yeast	25 °C 21 days	Ethanol 8.0-10.0% (v/v). Lower pH with higher chokeberry juice content. High antioxidant and antimicrobial properties with chokeberry.	(MILIJAS *et al.*, 2023)

S. cerevisiae JP14	-	Multifloral honey 25 °Bx[1] Pasteurization[10] at 65 °C for 30 min 0.3; 0.7 and 1.0 g/L of di-ammonium phosphate and ammonium sulfate 10^6 cells/mL yeast	20 °C 30 days Sodium metabisulfite 0.015% (w/v)	Increased cell viability and sugar conversion with DAP[2] and AS[16]. Higher ethanol production with 1 g/l DAP[2]. AS[16] higher concentrations didn't show any changes on the alcohol concentration.	(ALMEIDA *et al.*, 2020)
S. cerevisiae *L. plantarum*	Ethiopia	35 °Bx[1] pH 4.0 DAP[2] 300 mg/L 10^7 CFU[4]/mL	30 °C 10 days Static[8]	12.5% ethanol, improved flavor profile (higher lactic acid content, balanced acidity).	(GIRMA *et al.*, 2024)
S. cerevisiae QA23 (ICVD47)	-	Multifloral honey pH 3.7 Pasteurized at 65 °C for 10 min DAP[2] 267 mg/L 10^6 CFU[4]/mL	25°C 120 rpm 120 hours	Ethanol content ±11%, cell leakage observed, yeast strain had more influence on physicochemical characteristics than alginate concentration.	(PEREIRA *et al.*, 2014)
S. boulardii	Brazil	32 °Bx[1] pH 3.6 Pasteurized at 70°C for 15 min Ammonium sulfate 200 mg/L 10^8 CFU[4]/mL	28 °C 7 days	10.8% ethanol, high probiotic potential, enhanced sensory attributes.	(DE SOUZA *et al.*, 2023)
S. cerevisiae P03b	Thailand	Stingless bee honey 90 mL H:W: 37% (w/v) pH 3.54 Pasteurized at 65 °C for 10 min DAP[2] 70 mg/L YAN[3] 10^8 CFU[4]/mL	30 °C 7 days 150 rpm	10.20 % ± 0.26 % ethanol. pH 3.54 ± 0.04. reducing sugar 0.04 mg/mL.	(CHAIJAK; KONGTHONG; MAENPAA, 2024)

T. delbrueckii YH178 *T. delbrueckii* YH179 *T. delbrueckii* YH178+179, *S. cerevisiae* WLP715 *H. vineae* YH72	United States of America	800 mL 1.080 SG[7] pH: 4.62	23.4 °C 4 weeks	Final ABV[5]: 11.5% for YH178, 11.0% for YH179, 11.2% for YH178+179, 11.5% for WLP715, 8.2% for YH72. Sensory: superior aroma for YH178, slightly funky aroma for YH179, balanced, grassy flavor for YH178+179, ethanol heat for WLP715, superior , assertive peach aroma for YH72.	(BARRY *et al.*, 2018)
Lalvin® QA23 (Lallemand®) Lalvin® ICV D47 (Lallemand®)	Portugal	23.2 °Bx[1] pH 3.67 Pasteurization[10] : 65°C for 10 min Nutrients: 267 mg/L DAP[2] 10^5 CFU[4]/mL	25 °C 96-288 h 120 rpm	Ethanol: 10.33-11.13% (v/v), Acetic acid: 0.53-0.67 g/L, SO_2: 13.23-19.2 mg/L. Higher concentration of volatile fatty acids and phenols in DAP[2]-supplemented must.	(PEREIRA *et al.*, 2015a)
S. cerevisiae Oenoferm® (Rouge)	-	Honey from Pine (Flower (Cotton-Mezda Oechsle scale: 95 pH: 4.0-5.0 Ammonium sulphate 0.15 g/L) (Citric acid 4 g/L) (Vitamin B1 0.50 mg/L) 40 g/hL dry yeast	23-25 °C	Best result: 11.38% ethanol in Flower honey.	(AKALIN; BAYRAM; ANLI, 2017)

S. cerevisiae Fermol® Reims Champagne (Pascal Biotech®)	-	Honey Melipona scutellaris; 28.2 °Bx[1] pH: 3.4 Nutrients: Enovit 100 g/hL) (Sulphurous anhydride 6% 8 g/hL) Pasteurization[10] : 65 °C for 10 min	25 °C 13 days Shaken three times a day	Ethanol: 16.04% Dry mead. Best result: 16.04% ethanol in Dry mead.	(CAVALCANTE DA SILVA *et al.*, 2018)
S. bayanus (EC-1118)	Portugal	pH: 3. Nutrients: Sal Enovit 40 g/hL)	12 °C 60 days Gentle mixing once a day	Ethanol: 13.1% in base mead. Various volatile compounds were quantified, including 3-methyl-1-butanol, ethyl acetate, acetaldehyde. Best result: Significant impact of fining agents on volatile composition, especially with tannins increasing some volatile compounds like 1-propanol	(PASCOAL *et al.*, 2019)

S.cerevisiae (biotype M3/5)	Italy	Honeydew honey pH: 4.35	25 °C 5 weeks Agitation[9]	Ethanol: 12.25 % to 13.55 %; pH: 4.35 initial to 3.70 final. Polyphenols: 227 to 256 mg GAE[15]/L. Cannabidiol: 0.26 to 0.49 mg/L. Volatile compounds: Higher concentrations of alcohols, esters and terpenes compared to control. Best result: High polyphenols and CBD in hemp mead.	(ROMANO *et al.*, 2021)
Lalvin QA23 (Lallemand®) Lalvin ICV D47 (Lallemand®)	Portugal	23.2 °Bx[1] pH 3.67 Pasteurization[10] : 65°C for 10 min 267 mg/L DAP[2] 10^5 CFU[4]/mL	25 °C 96-288 h 120 rpm	Ethanol: 10.33-11.13 % (v/v), acetic acid production: 0.53-0.67 g/L, SO_2 production: 13.23-19.2 mg/L. Higher concentration of volatile fatty acids and phenols in DAP[2]-supplemented must.	(PEREIRA *et al.*, 2015b)

Fermentis Saf-ale T58 Levapan® Mangrove Jack's ® M05	Ecuador	°Bx¹: 10 (16 (22 (25 pH: 4.0 1.5 g/L dry yeast	33 °C	Ethanol production rate: 0.18-0.27 g/L.h. Optimal yeast: Fermentis Saf-ale T58. Monod model constants: µmax 0.071 h^{-1}, Ks 410.31 g/L. Gompertz model: Optimal ethanol production rate rpm) = 0.27 g/L.h for 22 °Bx¹.	(GARCÍA *et al.*, 2024)
S. cerevisiae Safbrew T-58 *S. bayanus* Premier Blanc Red Star® *S. bayanus* Premier Cuvée Red Star®	Brazil	250 mL 30 °Bx¹ pH 5.0 Pasteurized at 121 °C for 30 min 1 g/L ammonium sulfate (0.1 g/L magnesium chloride (cowpea extract 0 (5 (30 g/L) 10^6 cells/mL	30 °C 240 h 150 rpm	Ethanol: 15.0% (v/v) Safbrew T-58, 15.5% (v/v) Premier Blanc, 14.1% (v/v) Premier Cuvée. Higher cell growth and ethanol production with 30 g/L cowpea extract.	(ARAÚJO *et al.*, 2020)
Wild yeast strains	-	17.60 °Bx¹ Type A) 16.80 °Bx¹ Type B (lemon) 19.60 °Bx¹ Type C (raisin) 16.10 °Bx¹ Type D (apple)	Natural fermentation¹ ² (exposed to atmosphere	Alcohol content: 4.92% Type A, 1.78% Type B, 6.47% Type C, 1.53% Type D. Type C showed highest alcohol content.	(HARDER *et al.*, 2021)

S. cerevisiae JP14 (IM8)	Brazil	25 °Bx[1] DAP[2] 1 g/L Pasteurization[10] : 65°C for 30 min	20 °C 28 days	Ethanol: 11.467% IM8, 14.233% JP14, 14.400% 1:1 and 9.933% 1:100 co-cultures. Best result: Higher ethanol yield with JP14 and 1:1 co-culture. Volatile compounds: Higher concentrations of ethyl acetate and acetaldehyde with IM8.	(FERLA *et al.*, 2024)
S. cerevisiae Itaiquara (fresh baker's yeast)	Brazil	50 g/L glucose + fructose 30% DAP[2] 35 g/hL) and 70% dry yeast extract 10 g/L dry yeast	22 °C 80-100 h	Ethanol Concentration: 90% efficiency. Glycerol: 5.8 g/L. Acetic acid: 1.3 g/L. Volatile Compounds: Isoamyl alcohol 441.9 mg/L), isobutyl alcohol 7.6 mg/L, phenethyl alcohol 1.4 mg/L.	Ribeiro *et al.* (2020) (RIBEIRO; OLIVO; ELLER, 2020)
S. cerevisiae Montrachet Red Star®	Brazil	30 °Bx[1] pH: 5.0 Pasteurization[10] : 121°C for 15 min 0.3 g/L $NH_4)_2SO_4$ (0.05 g/L $MgCl_2$ 1×10^6 cells/mL	30 °C 284 h	Ethanol Concentration: 14% (v/v). Fermentation efficiency: 55.7% - 62.4%.	Carneiro & Silva *et al.* (2022) (CARNEIRO E SILVA *et al.*, 2022)
S. cerevisiae (commercial wines) *S. bayanus*	Brazil	23 °Bx[1] pH 3.5 Initial YAN[3]: 60–90 g/hL	18 °C 15 days	Glycerol 5.40 - 7.04 g/L. Volatile Compounds: esters and higher alcohols.	Schwarz *et al.* (2020)

S. cerevisiae Lalvin® QA23 Lalvin® ICV D47	Portugal	Multifloral honey 22.87 °Bx[1] pH 3.7 DAP[2] 267 mg/L, Potassium tartrate 5 g/L Pasteurization[10] : 65°C for 10 min	22 °C 96 hours 120 rpm	Ethanol: ~10%. Volatile compounds: Esters isoamyl acetate, ethyl octanoate and ethyl hexanoate, were major odorants. Best result: Optimal aroma profile at lower pitching rates, QA23.	Pereira *et al.* (2013) (SCHWARZ *et al.*, 2020) (PEREIRA *et al.*, 2013)
S. cerevisiae Lalvin® ICV D47	Portugal	Dark Honey 30 °Bx[1] pH: 3.8 Nutrients: Enovit 60 g/hL Pasteurization[10] : 70°C for 30 min	25 °C 96 -72 h 120 rpm	Ethanol: 12.5%. Volatile compounds: Slight increase in volatile acidity, decrease in SO_2 production. Best result: 4% alginate beads showed mechanical stability allowing for multiple reuses.	Sousa-Dias *et al.* (2021) (SOUSA-DIAS *et al.*, 2021)
S. cerevisiae Saf-Instant®	Brazil	17-18 °Bx[1] pH: 3.6 Pollen 1 g/L, 10 g/L, 20 g/L, Brewer's yeast 1 g/L, 10 g/L, 20 g/L 2.5 g/L lyophilized yeast	25 °C 48-96 h	Ethanol Concentration: 8.50% C, in 108h (9.50% P1) in 84 h (9.5% B1) in 72 h. Varied fermentation time and increased biomass production with supplementation . Aldehydes, esters, furfural and methanol within established standards.	Silva *et al.* (2017)

Notes: [1] °Bx – Degrees Brix (measure of soluble solids mainly sugars) in the must; [2] DAP – Diammonium Phosphate (common nitrogen supplement for yeast; [3] YAN – Yeast Assimilable Nitrogen mg/L); [4] CFU– Colony Forming Units (measure of viable cell; [5] ABV – Alcohol by

Volume %); [6] VOC – Volatile Organic Compounds; [7] SG – Specific Gravity (density of the must relative to water; [8] Static – Fermentation conducted without agitation; [9] Agitation – Manual or mechanical stirring during fermentation to improve oxygen transfer and homogenization; [10] Pasteurization – Thermal treatment of the must temperature and time specified) to reduce microbial load; [11] Immobilised cells – Yeast entrapped in a support matrix e.g. (alginate beads) to enhance reuse and stability; [12] Natural fermentation – Spontaneous fermentation without inoculation of selected yeast strains; [13] TOSNA – Tailored Organic Staggered Nutrient Addition a nutrient management strategy (commonly with FermaidO); [14] Electronic nose/tongue – Analytical devices used to assess volatile compounds and sensory attributes; [15] GAE- The amount of polyphenols in the sample corresponds to what would be obtained from the same amount of gallic acid; [16]AS – Ammonium Sulphate.

Table S6 – Comparison of the nutrients present in honey, pollen, and the minimum amounts of these nutrients necessary for effective fermentation. Information retrieved from CARPES, 2009; DIMOU et al., 2014; GUPTA AND SHARMA, 2009; KELLER et al., 2005b, 2005a; MENDES-FERREIRA et al., 2010; PEREIRA et al., 2015a.

Nutrient	Honey (mg/100 g)	Pollen (mg/100 g)	Minimum Fermentation Requirement (mg/L)
Vitamin C (Ascorbic Acid)	2 to 5	20 to 100	10 to 20
Vitamin B2 (Riboflavin)	0.038	0.35 to 0.75	0.1
Vitamin B3 (Niacin)	0.121	4.0 to 14.0	0.5
Vitamin B5 (Pantothenic Acid)	0.068	0.5 to 20	0.5
Vitamin B6 (Pyridoxine)	0.024	0.6 to 1.0	0.1
Vitamin B9 (Folate)	< 0.002	0.03 to 0.2	0.01
Potassium	52	400 to 600	200 to 400
Calcium	6	200 to 400	50 to 100
Magnesium	2	60 to 80	10 to 50
Phosphorus	4	200 to 300	100 to 200
Sodium	4	10 to 20	10 to 50
Iron	0.42	3 to 10	1 to 2
Zinc	0.22	1 to 5	0.1 to 0.5
Copper	0.036	0.1 to 0.5	0.01 to 0.1
Manganese	0.08	0.2 to 1.0	0.1 to 0.5
YAN[1]	50[1]	500-1000	150-300

Table S7 – Summary of yeast isolation and screening studies from honey and honey-derived matrices for alcoholic beverage production: Selection criteria, identified species, and fermentation outcomes.

Sample	Sample origin	Selection parameters	Found species	Strain characteristics	Reference
Honey	Portugal	Ethanol tolerance: 5–15% (v/v) Glucose: 20–30% (w/w) Temperature: 25–35 °C pH: 3.0–5.0	*S. cerevisiae* *S. boulardii*	High ethanol production 10,83% (v/v). High glucose tolerance.	(PEREIRA *et al.*, 2009)
Multifloral honey	Brazil	Ethanol tolerance: 5–15% (v/v) Glucose 20–30% pH: 3,0–5,0	*S. cerevisiae* *S. pombe* *L. thermotolerans*	Ethanol tolerance up to15% (v/v). Robust fermentative capacities.	(SUZART ARAÚJO *et al.*, 2021)
Africanized bee honey; Jandaíra honey blend	Brazil	Physicochemical characteristics Antioxidant activity	*S. cerevisiae* *S. bayanus*	Higher ethanol production with *S. bayanus.* High antioxidant activity in Africanized bee honey.	(DANTAS *et al.*, 2023)
Honey and pollen from stingless bees and *Apis mellifera*	Brazil	Ethanol tolerance: 5–15% (v/v) Glucose: 20–30% pH: 3,0–5,0	*S. cerevisiae* *S. pombe* *L. thermotolerans*	Ethanol tolerance up to15% (v/v). Fermentative robustness.	(SILVA *et al.*, 2020
Honey	Chile	Ethanol tolerance: 5–15% (v/v) Glucose: 20–30% pH: 3,0–5,0	*Z. rouxii* *Candida sp.* *S. pombe* *R. ruineniae* *C. lusitaniae* *M. chrysoperlae*	Ethanol tolerance up to 15% (v/v). Fermentative robustness.	(RODRÍGUEZ MACHADO *et al.*, 2024)
Stingless bee honey	Thailand	Osmotic stress tolerance: 25% Ethanol tolerance: 5–15% (v/v) pH: 3,0–5,0	*S. cerevisiae*	High ethanol production 10,20 ± 0,26% (v/v) Good osmotic stress tolerance.	(CHAIJAK; KONGTHONG; MAENPAA, 2024)
Indigenous beverages coffee (cocoa (sugarcane	Brazil	Ethanol tolerance Osmotic stress	*S. cerevisiae* *S. bayanus*	High production of esters and higher alcohols .	(SCHWARZ *et al.*, 2020)

(silage (and soil)	Flavor compound production	Low nitrogen demand.

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