

**Table S1:** Composition of the Spice Mix

<b>Ingredient</b>	<b>Percentage</b>
Salt	25.00%
Garlic Powder	8.72%
Coriander Powder	4.36%
MSG	1.74%
Red Chili Powder	8.74%
Citric Acid	1.74%
Milk Powder (SMP)	5.81%
Oregano	2.62%
Cumin Powder	5.36%
Black Pepper	10.39%
Green Cardamom	0.87%
Black Cardamom	0.58%
Cloves	0.58%
Sugar	7.50%
Ginger	2.91%
Onion Powder	8.72%
Anise	0.87%
Nutmeg	0.87%
Turmeric	2.62%

**Table S2.** Individual desirability function constraints and optimization goals

<b>Name</b>	<b>Goal</b>	<b>Lower Limit</b>	<b>Upper Limit</b>	<b>Lower Weight</b>	<b>Upper Weight</b>	<b>Importance</b>
A	is in range	25.0	35.0	1.0	1.0	3
B	is in range	5.0	15.0	1.0	1.0	3
Taste	Maximize	7.2	8.1	1.0	1.0	3
Flavor	Maximize	7.5	8.4	1.0	1.0	3
Mouthfeel	Maximize	6.6	8.3	1.0	1.0	3
Appearance	Maximize	6.7	7.9	1.0	1.0	3
Overall Acceptability	Maximize	7.0	8.0	1.0	1.0	3

**Table S3.** ANOVA for sensory attributes of experimental runs

<b>Attribute</b>	<b>F-value</b>	<b>p-value</b>
Taste	31.15	< 0.001
Flavor	30.79	< 0.001
Mouthfeel	128.39	< 0.001
Appearance	60.62	< 0.001
Overall Acceptability	181.46	< 0.001

**Table S4.** Mean sensory scores ( $\pm$  standard deviation) of different samples with Tukey's Honestly Significant Difference (HSD) test.

<b>Sample</b>	<b>Taste</b>	<b>Flavor</b>	<b>Mouthfeel</b>	<b>Appearance</b>	<b>Overall Acceptability</b>
S1	7.3 $\pm$ 0.57 <sup>b</sup>	7.7 $\pm$ 0.75 <sup>b</sup>	7.3 $\pm$ 0.57 <sup>b</sup>	7.2 $\pm$ 0.54 <sup>bc</sup>	7.4 $\pm$ 0.61 <sup>b</sup>
S2	7.8 $\pm$ 0.74 <sup>ab</sup>	8.4 $\pm$ 0.58 <sup>a</sup>	8.2 $\pm$ 0.67 <sup>a</sup>	7.6 $\pm$ 0.58 <sup>ab</sup>	8.0 $\pm$ 0.64 <sup>a</sup>
S3	8.1 $\pm$ 0.65 <sup>a</sup>	7.8 $\pm$ 0.63 <sup>b</sup>	8.3 $\pm$ 0.65 <sup>a</sup>	7.9 $\pm$ 0.69 <sup>a</sup>	8.0 $\pm$ 0.65 <sup>a</sup>
S4	7.2 $\pm$ 0.74 <sup>b</sup>	7.5 $\pm$ 0.50 <sup>c</sup>	6.6 $\pm$ 0.51 <sup>c</sup>	6.7 $\pm$ 0.63 <sup>c</sup>	7.0 $\pm$ 0.60 <sup>c</sup>
S5	7.8 $\pm$ 0.66 <sup>ab</sup>	8.2 $\pm$ 0.67 <sup>ab</sup>	8.0 $\pm$ 0.68 <sup>ab</sup>	7.4 $\pm$ 0.62 <sup>b</sup>	7.9 $\pm$ 0.66 <sup>a</sup>

Note: Values are expressed as mean  $\pm$  standard deviation. Different superscript letters (a-c) within the same column indicate significant differences among samples according to Tukey's Honestly Significant Difference (HSD) test at  $p < 0.05$ .

**Table S5.** Cost of production of pearl millet-based porridge premix

<b>Cost Component</b>	<b>Quantity (g)</b>	<b>Unit Cost (INR/1000 g)</b>	<b>Total Cost (INR)</b>
<b>Raw Materials</b>			
Pearl Millet	33.524	40	1.34096
Salt	1.619	30	0.06476
Garlic Powder	0.5647072	1000	0.022588288
Coriander Powder	0.2823536	400	0.011294144
MSG	0.1126824	590	0.004507296
Red Chili Powder	0.5660024	600	0.022640096
Citric Acid	0.1126824	4800	0.004507296
Milk Powder (SMP)	0.3762556	500	0.015050224
Oregano	0.1696712	340	0.006786848
Cumin Powder	0.3471136	850	0.013884544
Black Pepper	0.6728564	1200	0.026914256
Green Cardamom	0.0563412	2500	0.002253648
Black Cardamom	0.0375608	2500	0.001502432
Cloves	0.0375608	1800	0.001502432
Sugar	0.4857	50	0.019428
Ginger Powder	0.1884516	300	0.007538064
Onion Powder	0.5647072	1000	0.022588288
Anise	0.0563412	1000	0.002253648
Nutmeg	0.0563412	500	0.002253648
Turmeric	0.1696712	300	0.006786848
<b>Total Cost of Raw Material</b>			<b>1.6</b>
Overhead charges (including labour & fuel, machinery depreciation)	20%		0.32
Total Production Cost			1.92
Profit	15%		0.288
Pre-GST Price			2.208
GST	5%		0.1104
<b>Sale price/pouch (40 g)</b>			<b>2.32</b>

**Table S6.** Spearman's Rank-Order Correlation Coefficients Among Study Variables  
 \*p < 0.05, \*\*p < 0.01 (2-tailed Spearman's rho)

<b>Variables</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>1. Age</b>	1	-.054	-.127*	-.834**	-.126*	.108*	.011
<b>2. Gender</b>		1	.448**	.061	.004	-.055	-.003
<b>3. Occupation</b>			1	.117*	.056	-.082	-.018
<b>4. Preparation Experience</b>				1	.165**	-.125*	-.003
<b>5. Instruction Clarity</b>					1	-.134**	-.024
<b>6. Overall Liking</b>						1	.032
<b>7. Purchase Intention</b>							1

**Table S7:** Consumer responses regarding the preparation and perception of savory porridge

Variable	Category	Preparation experience for savory porridge					Preparation instructions		
		Very Easy	Easy	Neutral	Difficult	Very Difficult	Yes	Somewhat	No
Age	21–30 yrs	0	97	0	0	0	70	23	4
Age	31–40 yrs	48	34	42	0	0	68	49	7
Age	41–50 yrs	125	0	0	0	0	93	32	0
Age	51–60 yrs	64	0	0	0	0	54	9	1
Gender	Female	201	104	36	0	0	237	95	9
Gender	Male	36	27	6	0	0	48	18	3
Occupation	Homemaker	134	53	21	0	0	150	53	5
Occupation	Nurse	3	13	1	0	0	13	3	1
Occupation	IT								
Occupation	Professional	18	13	2	0	0	20	12	1
Occupation	Engineer	19	13	1	0	0	23	10	0
Occupation	Govt Officer	21	10	3	0	0	21	13	0
Occupation	Teacher	17	13	5	0	0	24	9	2
Occupation	Shopkeeper	22	4	6	0	0	22	8	2
Occupation	Entrepreneur	3	9	2	0	0	10	3	1
Occupation	Doctor	0	3	1	0	0	2	2	0

**Table S8:** Consumer responses regarding the overall liking, and purchase intention

Variable	Category	Overall Liking					Purchase Intention				
		Like Very Much	Like	Neutral	Dislike	Dislike Very Much	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Age	21–30 yrs	63	28	6	0	0	26	11	37	23	0
Age	31–40 yrs	72	36	16	0	0	33	10	44	37	0
Age	41–50 yrs	53	31	41	0	0	33	11	44	37	0
Age	51–60 yrs	28	16	20	0	0	19	9	20	16	0
Gender	Female	174	93	74	0	0	94	36	118	93	0
Gender	Male	42	18	9	0	0	17	5	27	20	0
Occupation	Homemaker	96	65	47	0	0	56	25	72	55	0
Occupation	Nurse	14	1	2	0	0	3	0	7	7	0
Occupation	IT										
Occupation	Professional	22	7	4	0	0	11	2	11	9	0
Occupation	Engineer	19	3	11	0	0	10	4	16	3	0
Occupation	Govt										
Occupation	Officer	18	10	6	0	0	9	2	7	16	0
Occupation	Teacher	21	9	5	0	0	6	3	16	10	0
Occupation	Shopkeeper	15	11	6	0	0	10	3	12	7	0
Occupation	Entreprene										
Occupation	ur	8	4	2	0	0	5	2	2	5	0
Occupation	Doctor	3	1	0	0	0	1	0	2	1	0

## House Use Test Questionnaire

### Section 1: Participant Information

Participant ID: \_\_\_\_\_

Age: \_\_\_\_\_

Gender:  Male  Female  Other

Occupation: \_\_\_\_\_

### Section 2: Evaluation of Product Characteristics

#### A. Preparation Experience

1. How easy was it to prepare savory porridge from the instant pearl millet premix?

Very Easy  Easy  Neutral  Difficult  Very Difficult

2. Were the preparation instructions clear and easy to follow?

Yes  Somewhat  No

#### B. Product Acceptance

How would you rate your overall liking of the product?

Dislike Very Much  Dislike  Neutral  Like  Like Very Much

#### C. Purchase Intent

I would purchase this product if available in the market at the price range of 10 to 15 INR:

Strongly Disagree  Disagree  Neutral  Agree  Strongly Agree