



# Food markets in Nalanda, India

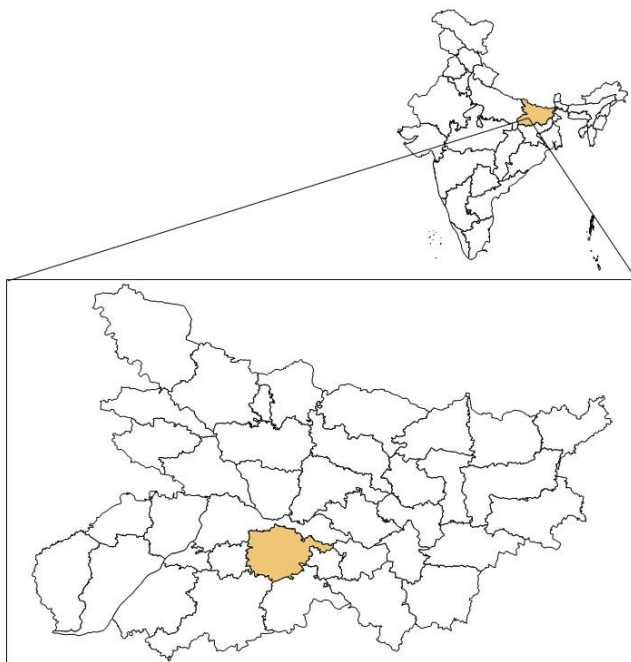
*Market and vendor  
characteristics*

Data Note 37

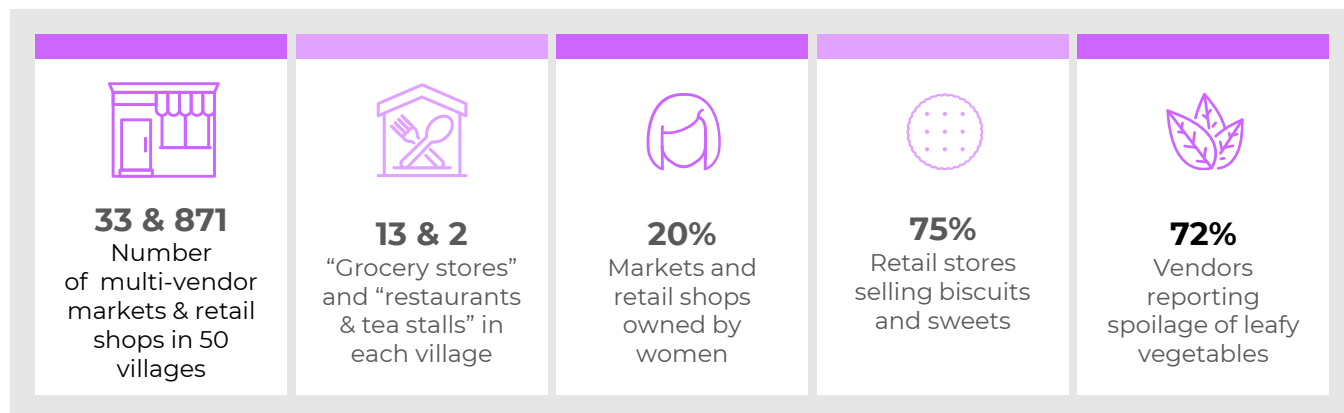
December 2023

**ABOUT THIS BRIEF** | The Transforming Agrifood Systems in South Asia (TAFSSA) district agrifood systems assessment aims to provide a reliable, accessible, and integrated evidence base that links farm production, market access, dietary patterns, climate risk responses, and natural resource management in Bangladesh, India, Nepal, and Pakistan. It is designed to be a multi-year assessment. Using data collected in December 2022– April 2023, this brief describes which food items are available and their prices, characteristics of retail shops, markets, and customers, as well as marketing and promotional activities. It is one of a set of briefs that, together, provide a holistic picture of the food system in the district.

**Figure 1. Map of Nalanda District**



**Figure 2. Highlights from this brief**



## OVERVIEW OF CONTENTS

This brief examines the prevalence of two types of rural food environments that influence the local diet: multi-vendor food markets and village retail shops, henceforth referred to as markets and retail shops, respectively. Markets are known for offering a diverse range of fresh foods, such as fruits, vegetables, fish, and meat, at affordable prices. In contrast, village retail shops tend to offer a limited selection of fresh food and prioritize selling packaged goods and everyday household items.

This brief provides valuable insights into the different types of markets and village retail shops in the district and information on the infrastructure and facilities available. Vendors and retailers were asked about their primary source for food items and the distance they travel to procure these items. The next section describes food availability and food spoilage in markets. The final section shows the prices of sentinel food items, a set of commonly consumed foods, tracked as part of the project, which can be useful in linking household food consumption with the availability of food in the markets. To enhance understanding of what different rural food environments look like, the brief includes photographs of both multi-vendor markets and retail shops.

Details on sampling methods and definitions can be found in the following pages.

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## TYPES OF MULTI-VENDOR MARKETS AND RETAIL SHOPS

Traditional multi-vendor food markets offer a wide range of products to customers. These include fruits, vegetables, and farm products such as livestock, fish, grains, and eggs. Most households prefer to do their weekly grocery shopping at these markets. In contrast, village retail shops operate alone, are open daily, and sell a variety of food items to the local community. Definitions of different categories of food outlets under these two major types are provided below.

### Multi-Vendor Food Markets



#### City market

A multi-vendor urban food market, held daily in a fixed location, where traders and farmers set up shops during the day.



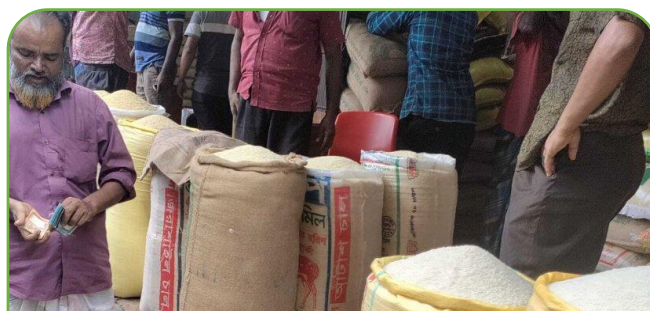
#### Village market

A multi-vendor market held on a specific day of the week, without a permanent infrastructure, where traders set up shops on the market day.



#### Roadside/street market

A group of at least 5 vendors in close proximity selling food products along the street, without any formal organizational setup



#### Wholesale market/haats/ mandis

A market where food products are sold in bulk directly by manufacturers, farmers, or artisans at a fair price, usually in a permanent or semi-permanent structure.

**Figure 3. Number of multi-vendor markets, by type**

N=33 for 50 villages

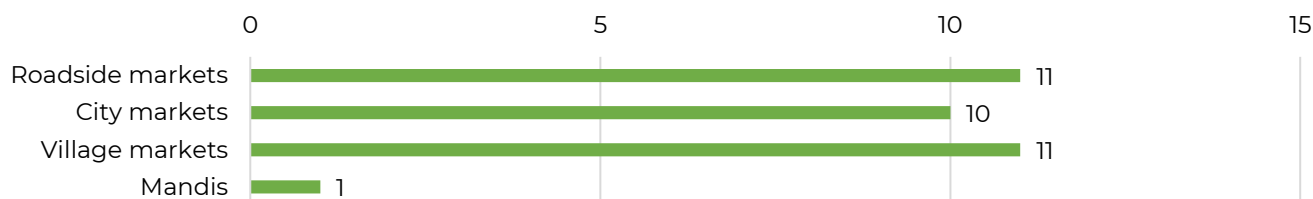


Photo credit: Shailendra Rastogi, Anivar Kumar and Mohammed Mehedi Hasan,



## Village Food Retail Shops (single vendor type)



### Local grocery stores

Fixed structures that sell a variety of food and non-food items, including household staples, packaged and dry foods, and a limited selection of fresh produce.



### Vegetable/fruit shops (greengrocer)

Sell only perishable food items, including fresh fruits, vegetables, roots, and tubers.



### Specialized shops

Sell exclusively meat, fish, or dairy products.



### Restaurants and tea stalls

Sell prepared food items (usually snacks that can be quickly consumed) and tea/coffee.

**Figure 4. Number of retail shops, by type**

N=871 for 50 villages

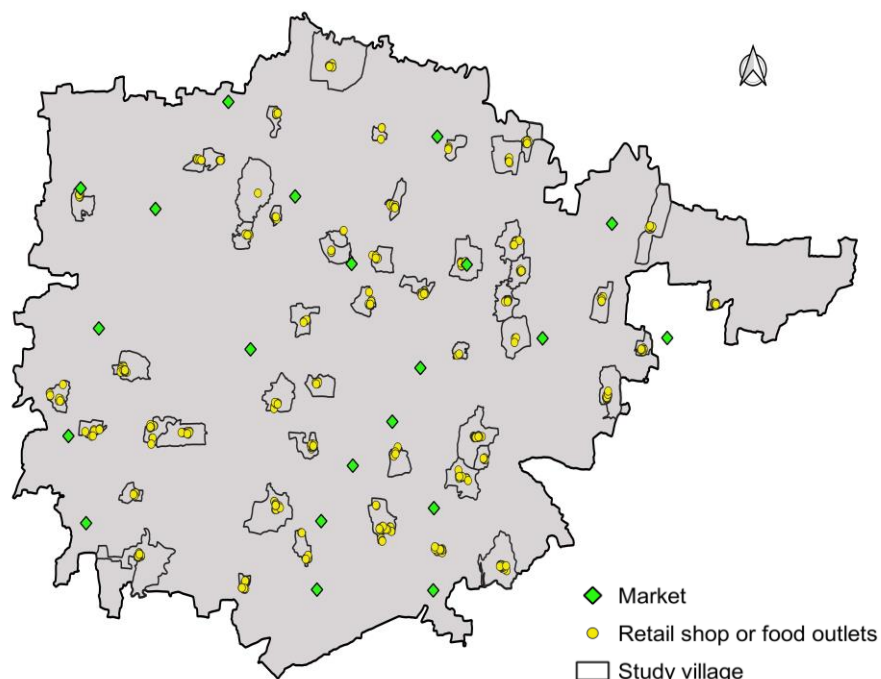


## CHARACTERISTICS OF MARKETS AND RETAIL SHOPS

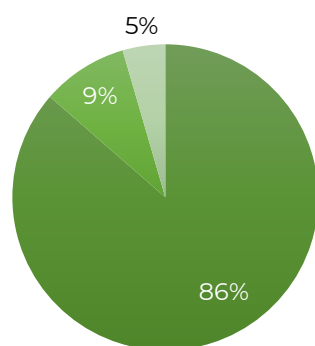
### FINDINGS

- ✓ On average, each village has a single multi-vendor market within 10 km radius.
- ✓ The typical village comprises around 12 grocery stores, 2 restaurants and tea stalls, fewer than 2 specialized shops for meat, milk, or fish, and less than 1 greengrocer for fruits and vegetables.
- ✓ The food landscape is largely informal with 86% of markets lacking a management structure, and 96% of retail shops operating without a license.

**Figure 5. Multi-vendor markets and retail shops surveyed in the district**

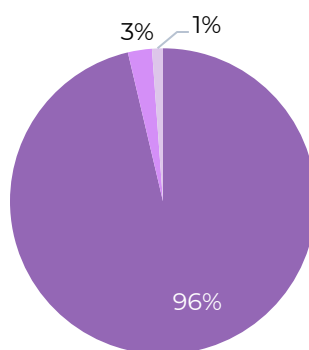


**Figure 6A: Management of the multi-vendor market**



- No management
- Private individual
- Government bodies

**Figure 6B: Registration status of retail shops**



- Not licensed
- Licensed
- Don't want to say

**Figure 7: Gender of vendors and shop owners**



## INFRASTRUCTURE

**Table 1. Infrastructure of multi-vendor markets and retail shops\***

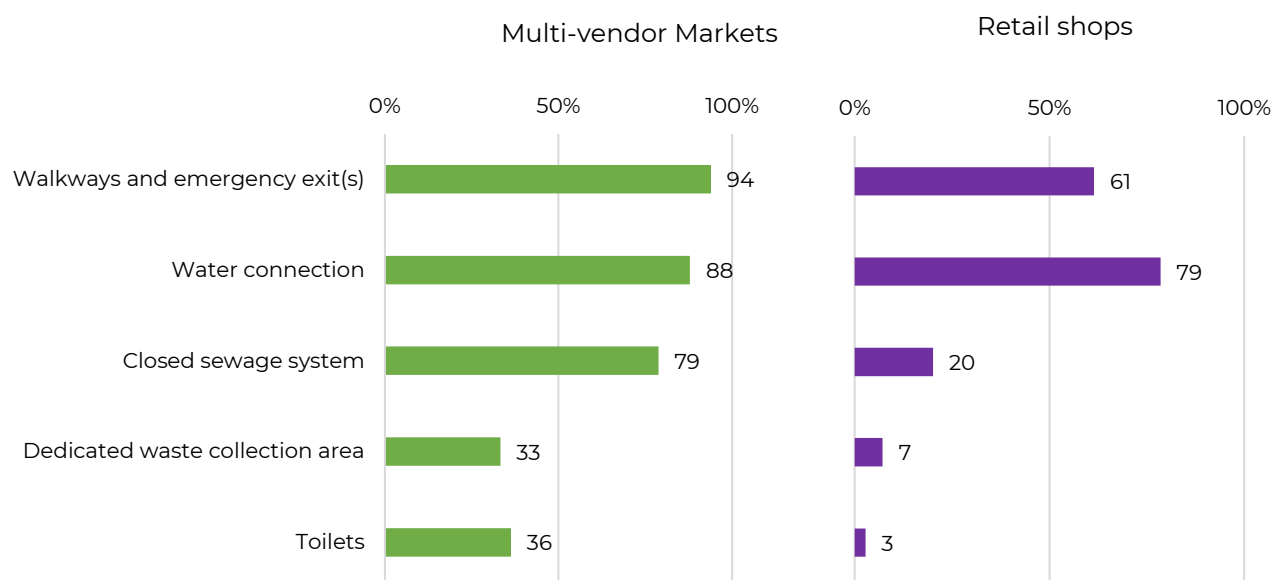
Infrastructure	Multi-vendor markets	Retail shops
<b>Structures</b>		
Open-air/portable unit, %	27.3	11.8
Semi-permanent structure, %	72.7	16.9
Permanent/concrete building structure, %	0.0	71.3
<b>Physical condition</b>		
Good condition <sup>1</sup> , %	0.0	46.4
Some structural damage <sup>2</sup> , %	60.6	38.2
Poor condition <sup>3</sup> , %	39.4	15.5

<sup>1</sup>Good condition - store/building has no structural damage and requires no repairs

<sup>2</sup>Some structural damage - store/building requires minor repairs

<sup>3</sup>Poor condition - store/building has structural damage and needs renovation

**Figure 8. Facilities available in multi-vendor markets and retail shops**

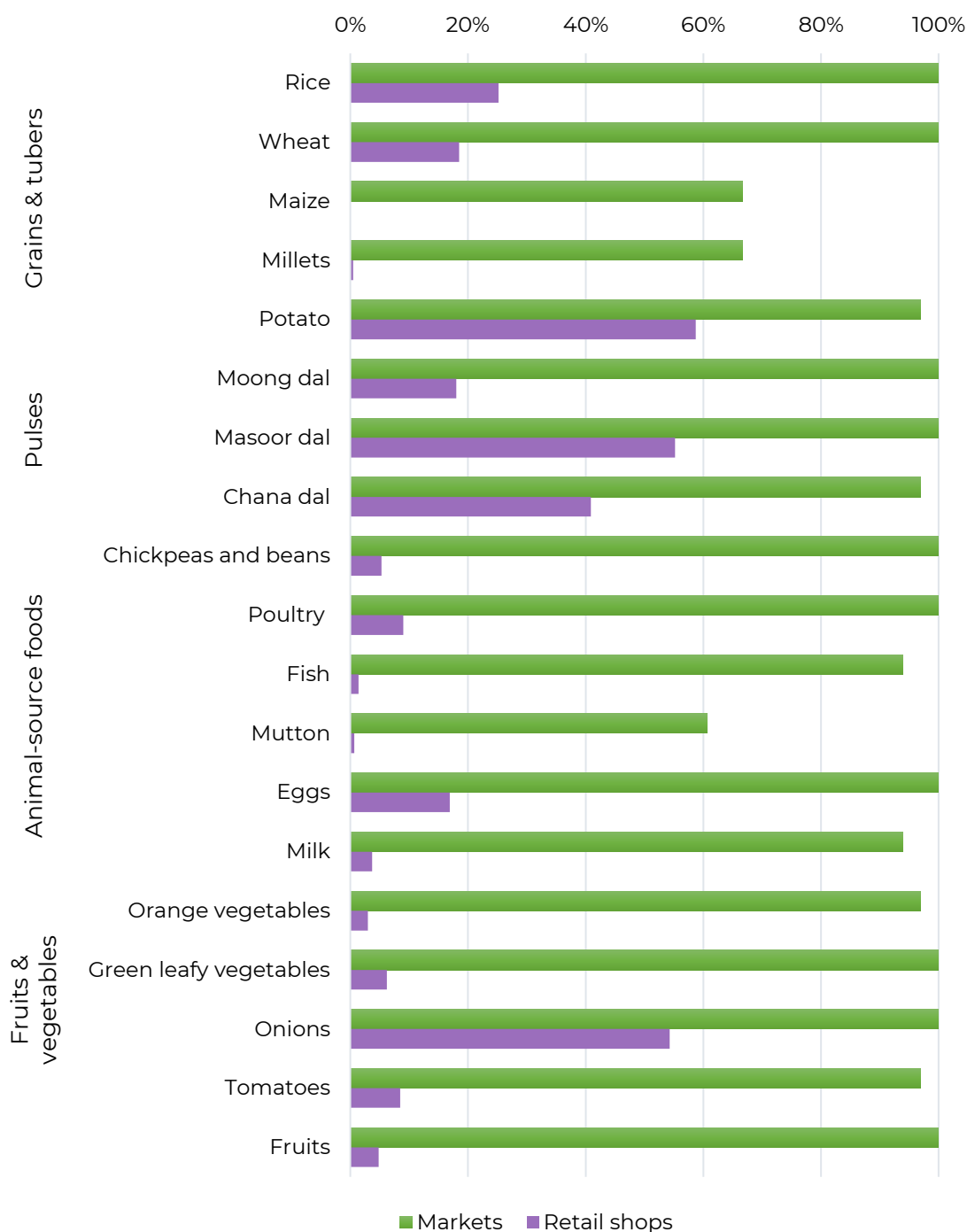


### FINDINGS

- ✓ Most markets operate as open-air or portable units, whereas retail shops are typically housed in permanent structures.
- ✓ A significant portion of markets exhibit some structural damage, in contrast to about half of the retail shops, which are in good physical condition.
- ✓ Markets tend to have better road connectivity and more amenities like water connections, sewage systems, waste collection areas, and toilets compared to retail shops.

## FOOD AVAILABILITY

**Figure 9. Availability of sentinel foods in multi-vendor markets and retail shops**



### FINDINGS

- ✓ Food markets offer more healthy foods than retail shops.
- ✓ Potato is the highest available (58%) item among grains and tubers, masoor dal (55%) among pulses in retail shops.

## SOURCES OF FOOD

**Table 2. Primary source of food items for market vendors and retail shop owners**

Food Category	Multi-vendor markets		Retail Shops	
	Vendors with wholesaler as primary source (%)	Average distance from market to wholesaler (km)	Retailers with wholesaler as primary source (%)	Average distance from retail shop to wholesaler (km)
Cereals	93	13	98	8
Pulses	98	14	98	8
Nuts & seeds	100	19	98	8
Spices & condiments	100	14	96	8
Edible oils	100	16	98	7
Leafy vegetables	75	18	85	15
Other vegetables	94	15	97	8
Roots & tubers	91	14	97	7
Fruits	98	17	95	18
Meat	75	14	70	9
Fish & seafood	97	19	100	13
Eggs	97	3	89	8
Milk & milk products	63	14	76	8
Ultra-processed foods	N/A	N/A	89	7
Soda/soft drinks & packaged juices	N/A	N/A	95	7
Tea/coffee with sugar	N/A	N/A	77	5

Note: N/A = Not applicable. Ultra-processed foods are mostly unavailable in food markets and so are not considered here.

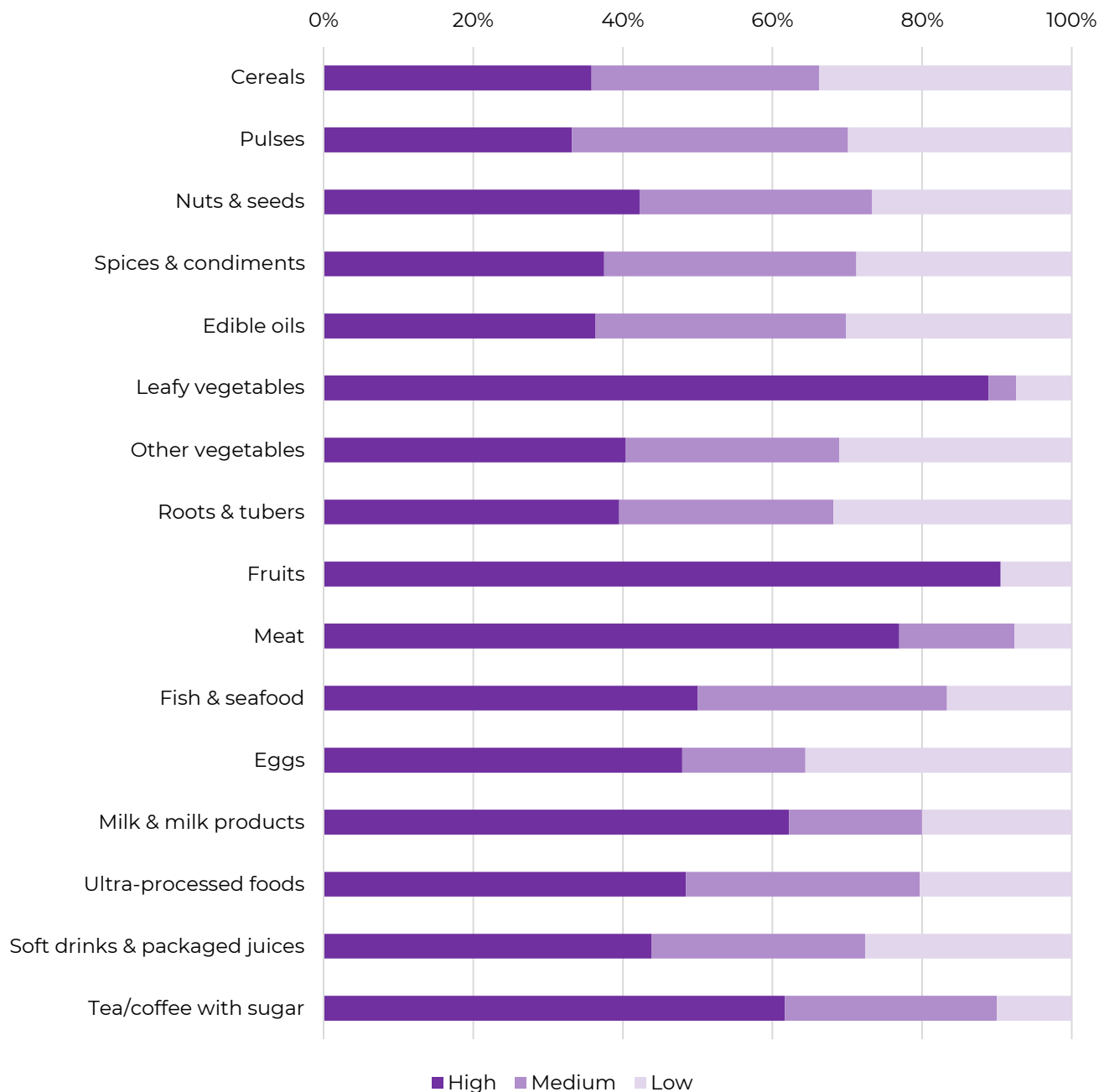
## FINDINGS

- ✓ Food items are mostly sourced from wholesalers (>90 % of market vendors and retailers), except for meat and milk, which are partly sourced from farmers or from one's own production.
- ✓ Other sources for food items include marketing agents, farmers, and one's own production.
- ✓ To procure food items from these various sources, market vendors and retailers commonly utilize public transportation, followed by trucks, vans, and bicycles.



## VISIBILITY OF FOOD ITEMS

**Figure 10. Visibility of food items in retail stores**



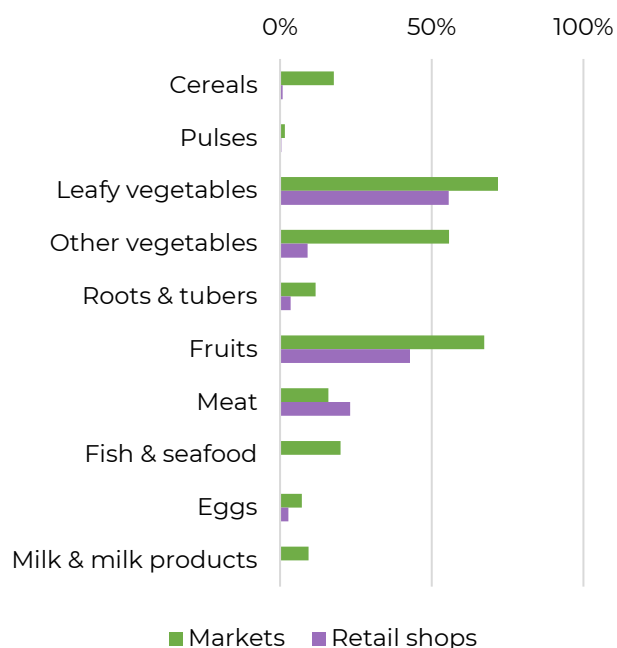
Note: Visibility of food items in retail shops is classified as high, medium and low, based on their placement in retail shops. In this context "placement" refers to where the food items are positioned or displayed within the retail shops. This placement determines how easily customers can see or access these items.

### FINDINGS

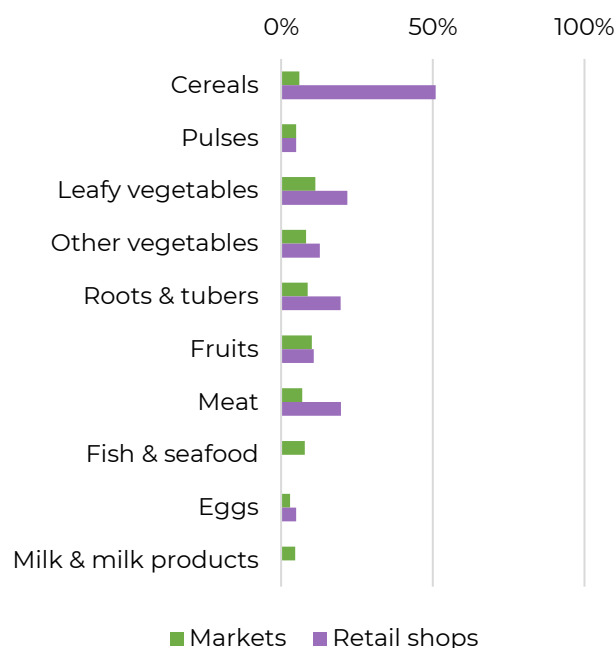
- ✓ Perishable items such as leafy vegetables, fruits, meat, and milk are placed in the shop to have the highest visibility, followed by ultra-processed foods and drinks. Less perishable healthy items have relatively lower visibility.

## FOOD SPOILAGE, QUALITY AND HYGIENE

**Figure 11. Vendors and retailers who faced food spoilage in last 7 days**



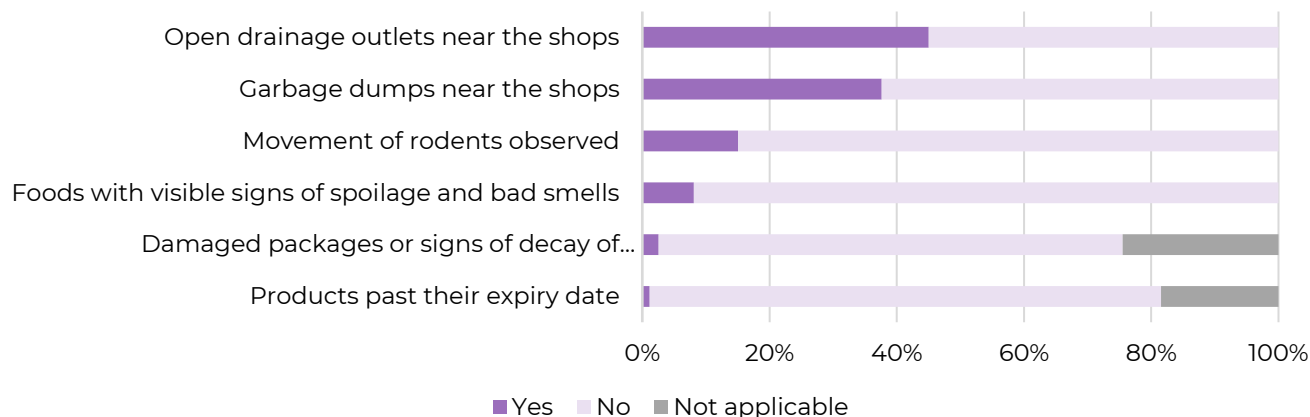
**Figure 12. Quantity of spoilage reported by vendors and retailers who faced food spoilage in last 7 days**



### FINDINGS

- ✓ While more market vendors than retailers report food spoilage, the percentage of spoiled products is higher in retail shops than in markets that have reported spoilage.
- ✓ Green leafy vegetables had the highest spoilage rates, reported by 72% of vendors, followed by fruits, reported by 67% of vendors in markets.
- ✓ 45% of the retail shops have open drainage and 38% have garbage dumps nearby. Rodents were observed in 15% of shops, and 8% of shops have some signs of food spoilage and bad smells. Only 1% of shops carried products past their expiry date.

**Figure 13. Food quality and hygiene in retail stores**



## KEY TAKEAWAYS

1. Retail shops (12 per village, on average) were much more common in the rural food environment than multi-vendor markets (only 1 market within 10 km radius of a village, on average).
2. Markets are mostly unorganised and informal, with 86% of multi-vendor markets having no management structure and 96% of retail shops not licensed.
3. Availability of sentinel foods, particularly healthy foods, is greater in multi-vendor markets (located farther from villages) compared to retail shops (located nearby).
4. 85% of retail shops sell ultra-processed foods at cheap prices.
5. 72% of vendors reported spoilage of green leafy vegetables and, on average, 11% of these vegetables spoiled.
6. About 80% of market vendors and retail shop owners are men.

## KEY QUESTIONS FOR ACTION

1. How can rural food market governance be improved in the Nalanda district?
2. How can the availability of healthy food be improved in rural retail shops?
3. What are the solutions for reducing the spoilage of healthy food in the food market?
4. How can the participation of women in markets as vendors be increased?
5. What are the strategies and messages that the market can take to facilitate healthy food selling?

## CENSUS AND SURVEY METHODOLOGY

### Methodology overview

A census was conducted across 50 villages in the district, selected with a probability proportional to the number of households in each village. The census included all formal and informal markets offering various food products as well as retail food shops of the selected village. In addition, in-depth interviews were carried out with a sample of market vendors, village shop owners, and market managers.

### Data collection and stratification

The census yielded a list of market managers, market vendors, and retail shop owners, along with key attributes such as the type of market they operate in and their level of mobility. This information was used to conduct a detailed market survey using stratified random sampling. The market survey was organized into two primary categories: Multi-vendor markets and Retail Shops.

For the survey phase, samples were selected from each village based on the existence of establishments, as listed in the census and following the below mentioned criteria.

Types	Sampling criteria (per village)	Actual sample (per 50 Villages)
Multi-vendor market	All	33
Local grocery store	Up to 6	286
Restaurants and tea stall	Up to 2	55
Vegetable/ fruit shop	All	30
Specialized shop	All	59

## AUTHORS

**Afrin Zainab Bi**, Assistant Scientist, IRRI

**Ishika Gupta**, Associate Scientist, IRRI

**Darshanaben Mahida**, Assistant Scientist, IRRI

**Sejla Isanovic**, PhD Student, University of South Carolina

**Morgan Boncyk**, PhD Student, University of South Carolina

**A.N.M. Faijul Kabir**, Associate Scientist, IRRI

**Samira Choudhury**, Scientist I, IRRI

**Prakashan Chellattan Veetil**, Senior Scientist I, IRRI

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<https://www.cgiar.org/funders/>

To learn more, contact: [pc.veetil@irri.org](mailto:pc.veetil@irri.org)

To learn more about TAFSSA, contact: [t.krupnik@cgiar.org](mailto:t.krupnik@cgiar.org); [p.menon@cgiar.org](mailto:p.menon@cgiar.org)

## ABOUT TAFSSA

TAFSSA (Transforming Agrifood Systems in South Asia) is a CGIAR Regional Integrated Initiative that supports actions improving equitable access to sustainable healthy diets, that boosts farmers' livelihoods and resilience, and that conserves land, air, and water resources in a climate crisis.

## ABOUT CGIAR

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