

Changes in Cropping Pattern in Solapur Villages*

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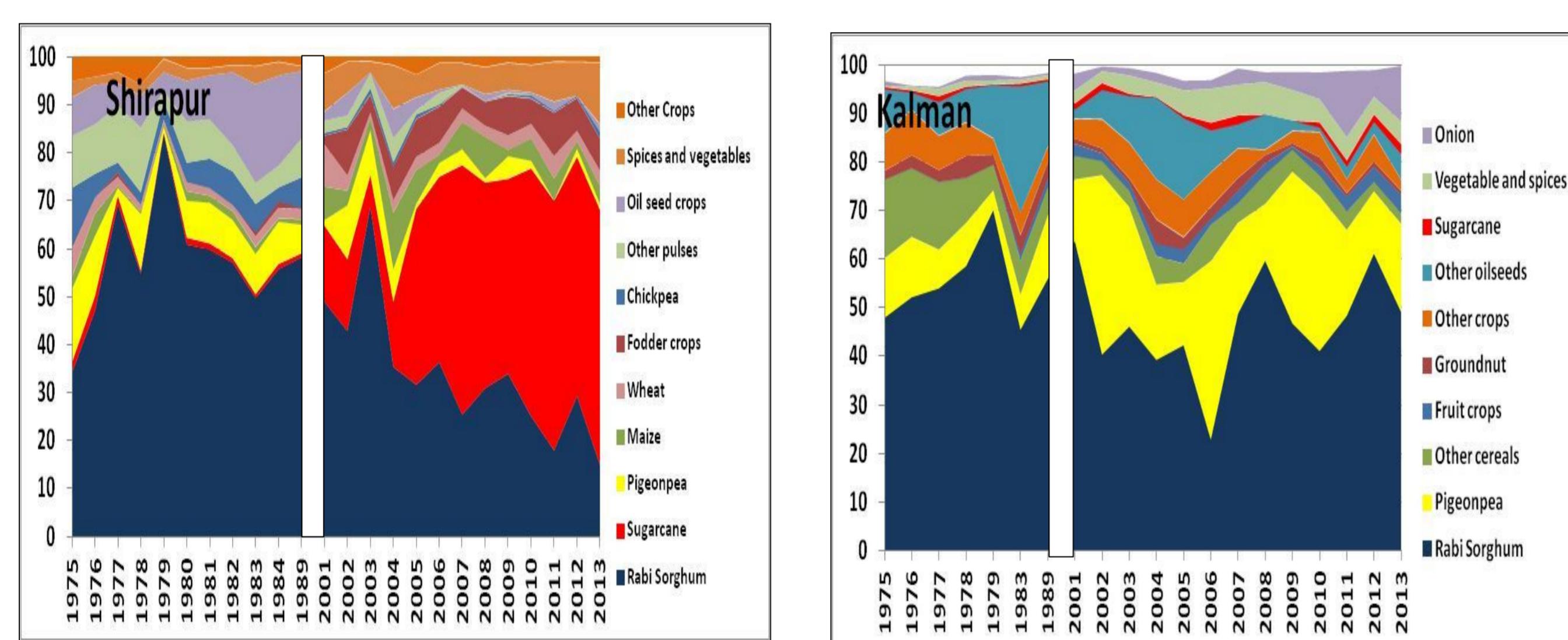
Introduction

This poster analyzes the **changes in cropping pattern** in Solapur villages (Shirapur and Kalman) during the last four decades (1975/76 to 2013/14) and identifies the underlying factors.

Data and Methodology

- Study Villages: Shirapur and Kalman in Solapur district of western part of Maharashtra state.
- VDSA Household Panel Data: 1975-84, 1989, 2001-13
- Profitability was measured as per hectare returns to land, labour and management.

Cropping Pattern



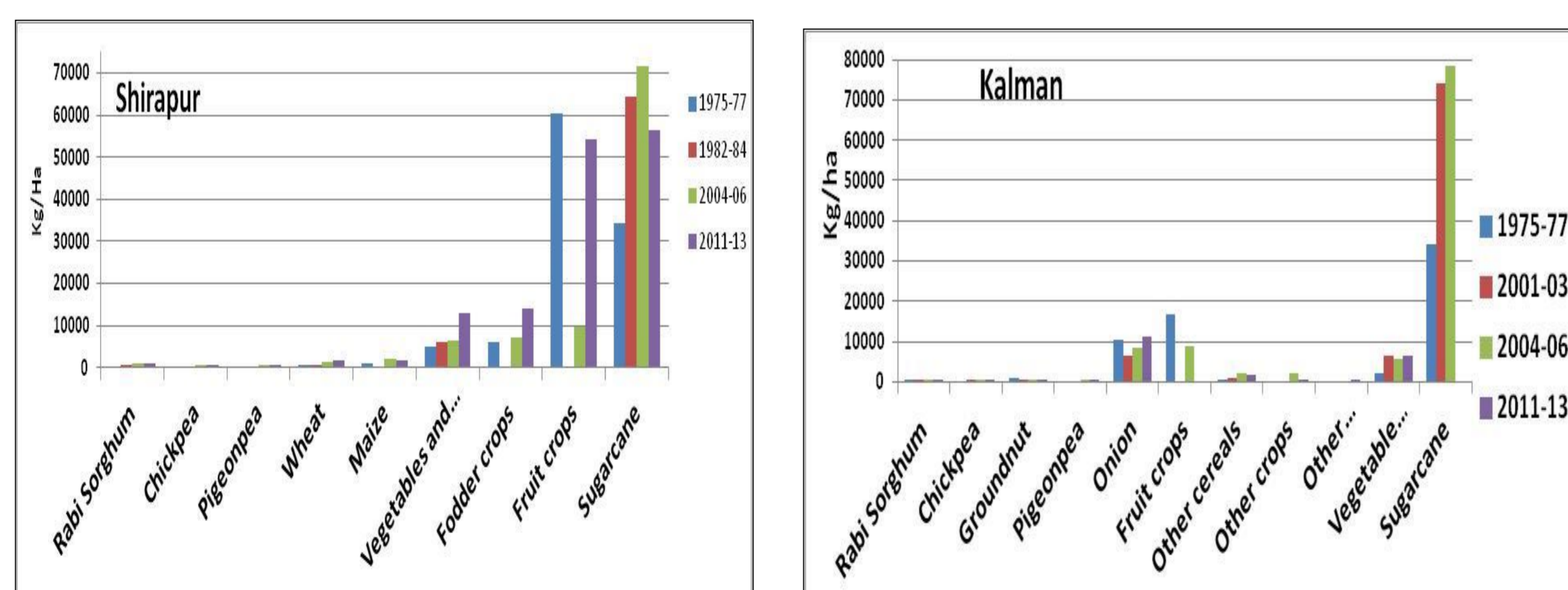
Shirapur

- More than 60% is deep black soil, erratic rainfall, Rabi (post rainy) season was the main season before canal irrigation. After the introduction of irrigation in 1997, sugarcane (requires 12 month to grow) cultivation started rapidly and occupies more than 50 percent of cropped area. Area under pigeonpea (grown in Kharif season) decreased from 15% in the 1970s to 1% in 2013.
- Area under Rabi Sorghum decreased from 34% in the mid-70s to 15% in 2013, Chickpea, grown in Rabi season, declined from 12% to 1%.
- During the same period, area under vegetables increased from 3% to 13% and fodder crops from 1% to 7%, mainly because of increasing numbers of cross breed cows.

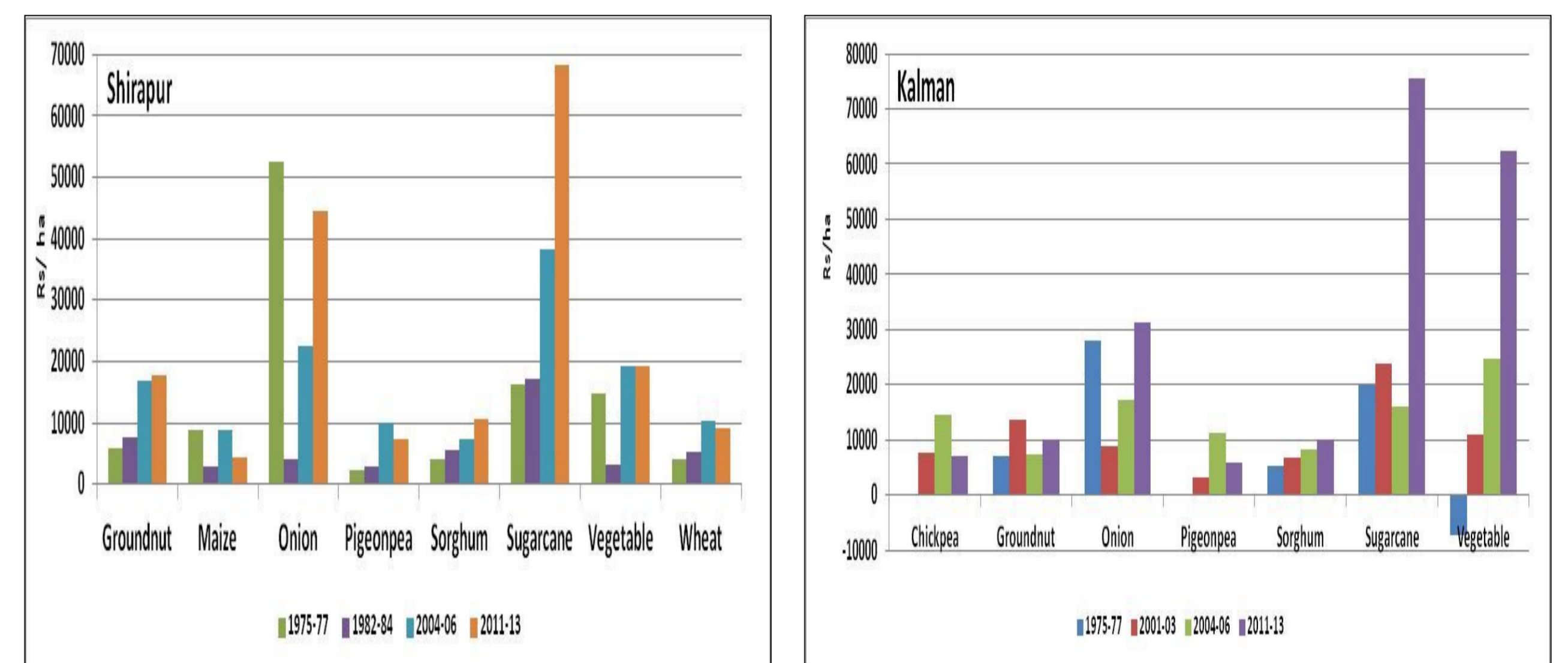
Kalman

- Diverse soil types—shallow black to deep black, rainy-season crops dominate. Farmers sow on the shallow to medium black soils during the rainy season and keep the deep black soils for post rainy-season crops.
- Share of Pigeon pea area increased from 12% in the 1970s to 18% in 2013. Rabi Sorghum area fluctuated but it was around 50% since mid-1970s. Perennial crops (citrus, grapes and sapota) together occupied 1-3% area.

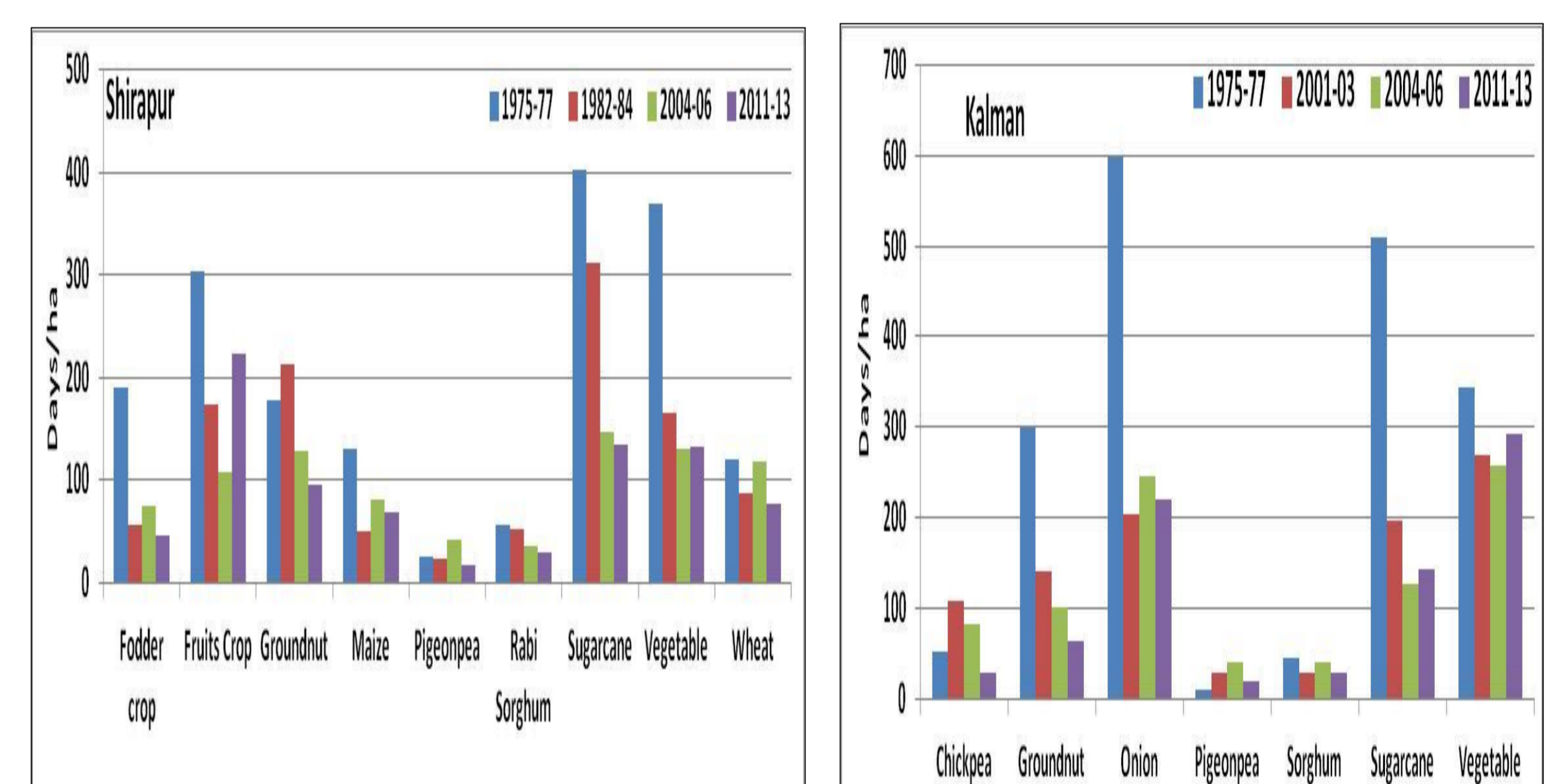
Productivity (Kg/ Ha)



Profitability (Rs/ Ha)



Labour Use (days /Ha)



Drivers of Change

- Provision of canal irrigation in Shirapur since 1997 and establishment of sugar factory in Lokmangal in 2000 (3 Km away from the village) switched the farmers to sugarcane from other crops.

Other important factors:

- **Crop Productivity:** Between mid-1970s and mid-2000s, sugarcane yield has increased by more than double (from 34,419 Kg/ha to 71,709 Kg/ha). However, yield was decreased to 56,216 Kg/ha in 2011-13 because of drought. Yield of fodder crops doubled between mid-1990s to early 2010s. In case of Kalman, yield of onion increased from 10,355 Kg/ha (1975-77) to 11,364 Kg/ha in 2011-13, followed by vegetable crops from 2,370 Kg/ha to 6,330 Kg/ha.
- **Crop Profitability:** Per hectare returns to land, family labor and management in 2013, from cultivation of sugarcane was Rs 68,255, followed by Onion (Rs 44,360) and vegetables crops (Rs 19,202) in Shirapur village. It was Rs 75,405 for sugarcane followed by vegetable (Rs 62,293) and onion (Rs 31,388) in Kalman.
- **Availability of credit:** Financing agencies provide more credit to the Sugarcane farmers.

Conclusion

Irrigation facility, higher profit and access to market played key role in changing cropping pattern among Shirapur and Kalman farmers.