

KATHMANDU VALLEY 2-WHEEL TRACTOR INNOVATION SYSTEM SURVEY
Report For The Reaping The Benefits: Assessing The Impact And Facilitating The
Uptake Of Resource-Conserving Technologies In The Rice-Wheat Systems Of The
Indo-Gangetic Plain

April 13th 2003

Introduction

One knowledge gap within our project was that the while we are promoting two-wheel tractors and their resource conserving technology (RCTs) attachments (mostly in the terai) we don't know much about the older existing two-wheel tractor systems of Kathmandu and Pokhara. The team felt that all that was needed to capture the two-wheel tractor essential data and fill in the knowledge gaps was a simple checklist of questions and would take only one full day

The team was broken into three groups and each targeting different areas of the valley. Groups targeted small individual or small groups (focus groups) of two-wheel tractor drivers in various neighborhoods (*tole*).

Other actors (users, owners, and day laborers) were also interviewed as the opportunities presented themselves. That though there were geographical pockets of extremely old two-wheel tractors only being used for transportation there were several other pockets (Bhaktapur, Satdobato, Chabil all here in Kathmandu Valley) where two-wheel tractors were still being used for tilling.

Owners and drivers all report that there is substantially more money to be earned in tillage as compared to transport. This agrees nicely with what we know of four-wheel tractor use in the terai area of Nepal.

A. TECHNICAL

1. Uses

• **Transport Purpose:**

	<i>Percentage (%)</i>
Agriculture	10 (Satdobato)
Milk, produce, animals, fertilizer, manure	20% (Bhaktapur)
	0

Construction

Sand cement, rocks, rods, wood,	80-90
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Others Moving house,	10% (Balaju)
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• **Agriculture Purpose:**

	<i>Percentage (%)</i>
Purpose	Season Wheat, rice, pot (Baliju)
Rotovator tillage	(one dri/owner in Syambhu plows seasonally)

Others	
Thresher	2% (Satdobato)

Pump	(one farmer Bhaktapur)
MB	(one farmer Bhaktapur)
Cagewheel	(Bhaktapur reported)

2. Availability of Spare parts (blades, etc.)

Imported parts from where?

- Sarwari house, Balaju (3 stores), Bhaktapur (many), Teku,
- Blades chinese, all engine and transmission
- Japanese PTs using parts from all other companies incl. Indian
- Many PTs using Indian diesel filters
- Spares reported to be cheaper since re-importation began but could be duplicate??
- For Chinese PTs no problem for availability
- Locally made blades (Bhaktapur) (locally made a bit more expensive but lasts longer time and goes deeper

3. Maintenance –, tire puncture, diesel, trailer parts

- Who does?
 - Drivers 100% incl. oil change (Teku, Bhakta)
- Who pays?
 - Drivers 100% (Teku but see “Systems” below)
 - Owners 100% (Bhakta)
 - Drivers do under 500-1000 and owners above 500 –1000 (Balaju)
- Oil change costs 700NC
 - System one: Drivers who get on contract pay for everything (daily and monthly) 200-250 per day. 4500 – 7000 monthly
 - System Two: Drivers who get salary pay very small things or nothing and owner pays for big things
 - System Three: 1/3 share to driver and 2/3 share to owner who pays for all costs(approx. 1/3) (Teku)
 - Mobile changes 9 months (Bhakta)

4. Repair: overhaul, fuel pump, others.

- Where: Gangahalm, Bafal, Teku, Chabil, Jorpathi, Satdobato, Bhaktapur, Banasthali, Tankeswari,
- Who does? Workshops/mechanics
- Who pays? Owners
- Overhaul reported every 2.5 years (Bhaktapur)

Age, Costs, and makes:

- Nearly everyone is using Chinese PTs except in the Teku group sites.
- Many sets were very old 15-18 years old (with one CHT reported made in 1976)
- The second had costs of PT **with good number plate** can be 35,000 (Japanese due to very high maintenance costs and lack of spares)), to 120000 – 160000 Chinese (for rotovator and trailer). New PTs (only) are now 87,000 from NTLtd. In Kathmandu without trailer. Nearly all trailers are made in Bhaktapur by Bakta Lal Narkarmi for 40,000 – 50,000.
- In Kathmandu ring road there are many PTs without number plates and owners using them for plowing in own fields
- Many of the Jap power tillers are 7-8 HP.

5. Attachments

- Trailer – Made where/ by whom? Bhaktapur by Bakta Lal Narkarmi for 40,000 – 50,000
- Thresher – Bhaktapur
- Others – MB, pump and cagewheel was found in Bhaktapur (probably imported)

B. SOCIAL/ECONOMIC

1. Relationship between owner-driver

- System One: Drivers who get on contract pay for everything (daily 200-250 per day)
- System Two: Drivers who get salary pay very small things or nothing and owner pays for big things. Salary 2500NC and gets 50 NC per day expenses. If no business no 50 NC.
- System Three: 1/3 share to driver and 2/3 share to owner who pays for all costs(approx. 1/3) (Teku)
- System Four: Owner is a hardware/construction/grocer who uses PT in their business but is also for hire outside the business. Driver paid in monthly wage (4000 +)
- System Five: Ag Based- 200 per day to owner normal transportation. When plowing owner would get 80 and driver gets 20 percent of earnings. This is hourly based income. Promotes the driver to do hard work and to work all night.
- System Six: Driver pays owner 3500 – 6000 monthly and driver pays everything.

2. Hiring of Services

Transportation:

- Construction:
 - Based on distance and weight.
 - 100 NC per trip 3-5 kilometers and not much care if weight is not much

Agriculture:

- With some produce same as construction. For milk, 4000 rupees per month, to PT driver for collection milk every day morning from village to main market.

Tillage:

- 180 NC per ropani
- 100-175 NC per hour in dry fields
- 220 NC per hour for puddling

3. Owner/Driver Relationship with –

- HMG
- Transport officer
- Police: There is a set “*road tax*” (<100) for PT entering Kathmandu in off hours
 - Bigger vehicles cannot do this.
 - Red plate PTs are meant for personal use only and then must pay “*road tax*” to pass police check points if they are carrying goods other than their own.
 - Black plates: Are free to pass normal checkpoints but have to pay official taxes and renewal fees (40/year for tax and 2000+ for renewal and some 200 NC for “*facilitation fee*”

4. PT Owners Samittees

- Teku- Gets PT out of police problems. Drivers can get some health/accident money. 100 NC per month fee. It started out as PT only but now it is being taken over by the bigger trucks (Tata Mobile pickup truck).

5. Are young people drawn to driving? – Name, age, caste, class of owner and driver.

- Yes and many drivers are from outside.
- Some report that driving is very difficult and it is hard to find people from Kathmandu to work so hard (Teku).

6. Ownership?

- Owners in Bhaktapur are mostly local farmers
- Some owners in Teku were shopkeepers (hardware suppliers), owner/drivers.
- Drivers saving money and buying their own secondhand 2WT..
- Buyers of second hand PTs bought from someone who earned enough money from PT and sold the PT to start another business.
- One owner reported that he was a driver for seven years and then got a loan from finance company for own PT
- Total return on investment for PTs are within 2 years.
- Owners tend to be Newari and Bahaman (Balaju)
- Owner say that drivers definitely cheat to some extent (1000 – 1500). Owner say the driver is working hard so they do not take issue.
- Owners say drivers wages are going up/getting better.
- Some owners own multiple (3-6) PTs
- Women ownership: 1 woman PT owner (Teku)
- One woman owns two PTs (Balaju)

7. Drivers (prestige issues, etc.)

- Most from outside Kdu. Most started as laborers and worked their way into PT driver seat. Many larger truck drivers are former PT drivers. Two PT owners told that they started as laborers. (Teku, Satdobato)
- Most drivers in Bhaktapur are local, young. Many come from owner/farmer joint family. Driver is happy with occupation : they can support their family and save a little.
- Drivers admit that they cheat the owner but only a little.
- Drivers say their wages are not getting better
- Drivers report taking food money from income before paying to owner.
- Drivers are higher educated up to IA (Bhakta)

8. Spillover affects –

Are PT drivers health good or bad as compared to truck drivers? Why?

- Majority answer no in Bhaktapur. Plowing is more difficult. But majority of drivers are from Bhaktipur (see next para).
- Most of the drivers said that it is very difficult work, and that local Kathmanduites refuse to do this work.

9. Any instance of group ownership/management? (family, friends, etc.)

- Bhaktapur: 3-4 persons have in the past purchased together but is not common.
- Teku: No
- Balaju: Reported two friends shared owned for two years. Then one bought out the other.

10. General social, economic effect of on a neighborhood from PT.

- Users: Women's drudgery is being reduced due to transportation of manure, getting produce/animals out to market (Bhakt)
- Giving employment for drivers, laborers, workshop mechanics, dealers (Bhakta)
- Cheaper and accessible service to users.
- Established in Kdu a strong maintenance and repair system for PTs!!!!
- No negative comments ???

11. Ask users why they like the PT?

- Shopkeepers say it is very good for business
- Cheaper transport: PT= 200 for given distance and 300+ for other transport
- Cost of tillage is reduced

12. Why are PTs not being replaced by Pick-up trucks and mini Tatas?

- Narrow roads,
- PUs and mini Tata more expensive,
- PT less initial investment, less operating/maintenance costs,
- PT can enter Kathmandu business hours and .

13. How many daily laborers are there in this "PT neighborhoods"? Where are they from?

- Teku 100
- Balku 50-60

14. What is the owners source of finance to buy PT and attachments?

- Some getting finance at 15% rate

- Many are self-financing
- Some family loan

15. Has drivers' income from PT increased or decreased or same? Why?

- Drivers say it decreased
- Some say no change
- Owners say it increased

16. What is the drivers salary?

4500 - 7000

17. How does it compare to the daily labor?

- 80 –120 per day and can go up to 200 (for loading cement, etc)
- Drivers say that daily labor can make more than driver but has to work hard

What are you going to do differently after this survey?

Ganesh:

- **Encouragement to the PT suppliers at lower rates**
- **Promote the entrepreneurial**
- **Loan promotion for poorer farmers**

Tripathi:

- **Rates of return very high here in Kdu due to “transport” and ag. Trailer is very beneficial here in Kdu, but not so available in Bwa. Need to promote more in Bwa.**

Shanti:

- **Need to get information into Kdu innovation system about alternative uses for agriculture.**