

Report of the Nepal Krishi Yantric Samandi Jatra

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National Agriculture and Environmental Forum

In August, an idea was floated around to begin a regular series of Krishi Yantric Jatra's that would travel the hills and terai from east to west to search for and observe the current use and spread of known and unknown agro-machinery, agro-energy and resource conservation technologies (RCTs) being promoted by private sector and used by farmers and rural households.

Due to scaled down participation, the scaled down itinerary was Rupandehi 1-4 November, Nwalparasi 5 November, Chitwan 5-6 November, Bara 7- 8 November, Kathmandu 9-10 November, 2009. It included visits to farmers, agro-machinery/agro-energy importers, dealers, hardware stores, and manufacturers.

General Observations

Can the “national agricultural mechanization innovation system” that is producing, importing and supporting Nepal's farmers agricultural mechanization process be characterized as an organized and well informed private sector with backing and counseling from its government? Or is it more at an unorganized informal sector where small, medium and large workshops, importers, agents, even smugglers enter the agro-mechanization business sector when opportunity and information presents itself and leave when it suits them? The answer lies somewhere in-between. There are few instances where formal RD&E projects have attempt to promote certain agro-machinery technologies and others attempted to monitor and guide the mechanization process as a whole. The National Agricultural Mechanization Committee in MOAC occasionally awakes from its deep slumber to attempt this. DOA has recently created the Agricultural Engineering Directorate and it has begun 2-wheel tractor and RCT demonstrations in the far west and east. DOI has promoted pro-poor dicky pumps and drip irrigation (but considers it “Non-Conventional Irrigation”). International projects come and go to promote certain technologies (Winrock-IDE and their dicky pumps and drip irrigation, earlier NARC/CIMMYT/NAEF promoting two-wheel tractors and attachments and currently a new IRRI/CIMMYT project is promoting 4WT RCTs. Sadly, NGOs still as a whole contribute very little. And yet, the private sector does respond. Workshops and small factories are building and selling large numbers of various improved stoves, dicky pumps, and threshers. There are of course the larger business houses who in addition to importing large 4-wheel tractors also are marketing PTO driven rice threshers and combine harvesters. Put this way, it sounds quite promising. On the tour we found evidence for renewed hope for a fair and equitable mechanization process. Yet, there are bottle necks to the spread of all machinery (lack of awareness and credit seem to be the main culprits) and large regions still unaffected in the hills and terai by any new (and old) agro-machinery that are also marked by high levels of poverty and inequality.

New, very large, donor led agriculture development projects are in the offing Nepal. Through them we have a chance to overcome the bottle necks and the regional disparities. The new WB, USAID and ADB projects are extremely interested making all farmers more productive but in their mind and models they mean to only improve and develop the efficiency of the market chains to gain the productivity and commercialization they seek. They are content to allow the private sector to figure out

what technologies Nepalese farmers need to become more efficient and competitive with their larger more productive neighboring farmers.

Besides guiding the private sector, the various agencies, forums, coalitions and projects interested in agricultural mechanization need to provide inspired guidance and even prodding to the WB, USAID and ADB projects. We all know from our wide experiences and travels that Nepal's farmers need not blindly follow a western model for large scale/large horsepower ag mechanization process, Fittingly, in the land of Buddha, a 'middle path' is presenting itself where combines and two-wheel tractor reapers coexist side by side in their rightful niches and where farmers large and small can and do reduce their time spent, input costs, and drudgery of traditional farming through fair and equitable ownership and even more important 'access to services' of new resource conserving technologies. A “Bangladesh meets Punjab” mechanization process. The two types, and many more have always existed in this part of the world because different households, with different resource endowments and facing different markets (e.g. access to credit) behave in different ways. They are also part of a social economic institutions setting that produces these market relationships.

Specific Observations

- **Four-wheel tractors (4WTs)**
 - From all reports the demand for 4WTs is greatly increasing from this season. In Butwal, Bhairahawa and Birganj, new show rooms are well stocked. Some speculate that last years sales of 2000 + tractors could double this year. Reasons given are: 1) continued peace (if not prosperity) in the country with delayed purchases during the civil conflict being made now; 2) industries and transport demand greater than the actual demand from farming; 3) and in Birganj area where demand is very high the very profitable gaja farming enables them to pay cash for 4WTs.
 - Sales are so good that a 4WT merchant related a fear that there could be a backlash from the commercial vehicle sector similar to the one in the Itihari 1.5 years ago where the truck transporters called for a halt in loans/sales of 4WTs thought to be headed for transport only.
 - There are still no importers of the 4WT RCTs like zero till drill, bedplanter or reapers. Farmers who are wanting these are having to travel to Gorakpur and even Punjab to purchase these.
 - Many new 4WT manufacturers/agents have entered into Nepal in the last two years especially the new Euro/USA brands.
 - Despite past perceived marketing failures by importers of Chinese four-wheel tractor, farmers who have bought these smaller HP tractors are beginning to appreciate them. We talked to a driver just north of Bhairahawa of one of Continental Trading's Jinma tractors who said that despite the earlier over heating problems said that despite its small size its robustness in plowing has earned respect of farmers.
- **Two-wheel tractors (2WTs)**
 - Similarly to 4WTs the outlook for 2WTs is very good. Last year's sales estimated at more than 1200 have surpassed the 2002-3 levels of 1000 in a year. Importers see continuing strengthening of the market for two-wheel tractors and expecting sales in the coming year of over 2000 2WTs.
 - In 2002 there were over 10 importers of two wheel tractors but during the conflict many left. Currently there are only three importers, ASB, SK Traders and HG Enterprises but two

- others are re-entering, Habi Auto and Bhajuratna Engg and Sales Pvt. Ltd., both of Birganj.
- The increased demand has caught current importers a bit by surprise as they are hustling to get additional tractors to Nepal.
- The 2WT RCTs seeder and reaper are available in small numbers from the importers but at nearly double the price from 2-3 years ago.
- Lack of demonstrations, credit facilities and higher levels of poverty in the east Rautahat to Saptari and Jhappa and Kapilvastu to Kachenpur in the west (and all the adjoining hill districts) has hampered their spread there. Also problematic are little or no sources of spare parts and trained mechanics in these areas. AED, DOA has some demonstration programs in the far east and west but it is felt by all that this is simply not enough.
- SK Traders and others have warned that a new government / Department of Transportation ruling on mandatory third party insurance unfairly places 2-wheel tractors in the same category as 4-wheel tractors and that small farmers will have to pay 7000 NR fee each year. SK Trading is taking the lead to activate the Agricultural Machinery Merchants Association to approach the government/department to place 2WTs in or near the motorcycle category who pay only 1200 NRs / year.
- ASB has sold 50 pieces of a 'micro' two-wheel tractor from AMEC. The 6.5 HP petrol engine tractor's small tires are slid off the axle shaft and rotovator blades are slid on for tilling and inter-cultivation. The current retail price of the machine is 43,000.00 NRs.
- **Reapers**
 - 2WT reapers as reported by Ashok Chaudhary and Swyambhu Shrestha are growing in demand and numbers Rupandehi, Nawalparasi and Kapilvastu but the high price and availability keeps it from expanding rapidly and has kept potential buyers out. There were over 16 reapers sold by ASB alone this season. We reckon there are over 30 2WT reapers operating in this region and overall 60 pieces for all Nepal. Spare parts for the reapers has become a problem as well. For an overview of how they are being used marketed, see detailed notes below.
 - There is little demand for 2WT reapers in Bara and Parsa Districts but Ganesh Sah reports that every season some 3-4 farmers go to UP and further to buy them. Ashok also reports that there are growing numbers (5-10) in Rupandehi District. Like the combines farmers have to go to India to procure the 4WT reapers.
- **Irrigation**
 - **Drip/Sprinkler** Reportedly there are high levels of use in the hills to the north, but we found there were none available for sale in Butwal – a large city-bazaar that serves many of the hill districts. We found one agro-vet in Butwal who reported that the main place for buying drip irrigation systems is in distant Pokhara. Agro-vets and hardware stores in Bhairahawa and Butwal said that they had seen some local and hill area farmers making their own systems from simply drilling small holes in back pipe and connecting to a source of water. It seems this is a hills only technology that most terai farmers are not in need of. IDE's website states there are over 5000 systems sold.
 - **Treadle pumps** are easily available in the bazaars of Bhairahawa and Butwal and have had some significant impact on small holders commercial vegetable production. This is a real success story for IDE-Winrock.
 - **Chinese light-weight irrigation diesel pump sets**
 - The numbers sold from last year have probably increased by a factor of ten. The older Indian heavy Kiloskar type pumpsets are still in the market but all hardware stores in

Rupandehi, Chitwan and Bara report very high demand for the Chinese. There are three main importers in Nepal, Krishna Iron and Steel, Biratnagar, ASB, Kathmandu and a new entrant Shyam Hardware in Birganj. The original importer, National Trading Ltd. is no longer importing them.

- **RE-BRANDED Chinese diesel pump sets**- Indian importers of Chinese irrigation pump sets have also entered the Nepal market (probably illegally) and from a cursory observations in the bazaars probably have majority share of the Nepal market (3 or 4:1 ?) . One in particular is Usha which is found in all bazaars. The paint scheme is green instead of the Chinese red and blue but the engine is 100% Chinese made. Some come with what look like Indian made pumps and others with Chinese made pumps.
 - Perhaps the main reason for their increased sales this year is that prices since last year have been reduced even further by 25-50%. Five horsepower pumpsets cost around 15,000 NRs and the 3-4 HP pump sets costing 11-13,000 NRs.
 - There is greater variation this year in the makes and models available. In Birganj, one hardware store sold 6 different Chinese irrigation pump sets including one of the more modern DI diesel engines with pull/rope start and Chinese made 6 HP petrol-kerosene model.
 - The more expensive aluminum self priming pumps are still available and interestingly their price has come down close to the cast iron, non-priming pump sets. Hardware wallahs reported last year there was a higher demand for aluminum self priming but now farmers see the issues of durability and higher spare parts costs have pushed them to the cast iron models.
 - Chinese electrical pump sets are also in high demand. Two years ago NT Ltd. Reported they sold 300-400 every season from Birganj and smaller numbers elsewhere. They also surmised that 40% of them were going to India.
- **Combine harvesters**
 - In Kapilvastu, Rupandehi and Nawalparasi the demand is still high for 4WT combines but the operators owners are more choosy and have become less willing to go into the smaller plots. There is also less willingness to cut a single farmers fields if they are below a total of 1 hectare. The Butwal partnership of Hari Kandel and Bandari have bought their third combine from Punjab. Mr. Yadov of Bhairahawa still is operating his two combines. There are Indian combines still coming across the border as well.
 - Several of Continental Trading's Jinma tractors with combine harvester attachment are reportedly working well in Rupandehi and Kapilvastu. The owners have seemingly overcome the earlier overheating problems.
 - In Chitwan and Birganj areas the demand for combines is slower as we and others feel that farmers there are not as familiar with them due to the lack of contact with India (Chitwan) and that there are very few or no combine harvesters in Bihar (due to their Maoists situation there). Mr. Ganesh Sah reports that Mr. Ansari of Parsa has bought one combine and that Ramesh Sah of Bara is considering buying one for this season.
 - **4WT Zero till seeders**
 - Still no suppliers of 4WT zero till seeders but there are also only a few interested farmers willing to buy. Bara / Parsa has the only real demand where perhaps 5-10 seeders have been sold via projects and other farmers are entering into India to buy for themselves. NARC projects scientists and staff that have promoted zero till in the past decade state that in the last few years farmers are not getting the yields in zero till as before, for reasons not well

understood. There is also considerable use of them in reduced till situations. International project staff report this is due to the failure of not adopting the conservation agriculture strategy of not only zero till, but also improved rotations, and cover crops. There is a new IIRI backed project CISSA that is promoting these 4WT zero till drills along with their partners NARC, DOA, LIBIRD and FORWARD. Additionally, Ganesh Sah reports the use of these seed drills in over 25 hectares of direct seeded rice in non-puddled conditions in Bara and Parsa Districts this past seasons using these seed drills.

- **2-Wheel Tractor reduced till seeders**

- Sales of these 2BG6A seeders have dropped due to: 1) nearly the doubling of price in the last 2 years (fewer importers-higher prices); and 2) reduced efforts by national and international projects have basically quit promoting them. AED in NARC and DOA are the only ones promoting them now.
- There was an announcement of a similar but newer model reduced till / strip till power tiller seeder that comes with a fertilizer box/meters and a rear wheel and seat for riding, something that our farmers have complained about for long time. NAEF is hoping to get at least one of these imported and market tested here in Nepal in the coming year. See Addendum 1 for more information on this seeder.

- **Rice Threshers**

- There are basically two centers of success of rice threshers in Nepal. One is in the far eastern three terai districts of Jhapa/ Morang/ Sunsari that are based on small horsepower pump set engine powered rice threshers locally fabricated (in Sunsari and Morang) and imported from far east Bihar districts. They cost up to 35,000.00 NRs. A second center is in Bara Parsa eastern Chitwan and scattering into some of the districts to the east, using large HP tractor PTO driven costing between 150,000- 200,000.00 NC all imported from UP and beyond. Both systems were a result of cross border dissemination and have had no formal project support. The far eastern system has perhaps 50% or more of the farmers participating and Bara Parsa system has much less. NAEF feels there is tremendous scope to aid in the spread of these two systems to other areas of Nepal.

- **Rice Husk Stoves**

- NAEF began promoting RHS in 2002-03 in Rupandehi. They spread very slowly in the beginning but after peace broke out in 2007 and along with the help of kerosene and gas shortages and soaring prices, RHS sales began to spread rapidly. Three factories in Rupandehi alone are making nearly 200 pieces a day. Add to this perhaps 30-40 local village workshops and blacksmiths have pushed the number in use to over 50,000. And in this year alone we estimate there will be over 30,000 more added that we know of. There may be other factories and many other blacksmiths producing as well. Costs of these stoves range from 350 -900 NRs placing them in the reach of even Nepal's poorest.

- **Jatropha-Biodiesel**

- Local varieties are still slowly spreading via commercial nurseries and farmer to farmer. AEPC has started a new program of support focusing on training for Jatropha nurseries and growers. SNV has plans for a project to support large scale production. Winrock has joined Mr. Yadov's efforts in eastern terai. All are still in the very early stages and all seemingly go forward not understanding the recent large scale failures of Jatropha production in India and Africa stemming from poor yielding jungle varieties currently being planted.
- NAEF recently began a testing and public awareness campaign in Kathmandu and Bhairahawa using animal fat in two-wheel tractors. Unlike jatropha the fat is commercially

available due demand from Nepal's soap industries. Our participants in Kathmandu seem very interested in the use of this cheaper form of biodiesel but the terai participants are a bit more reluctant as they do not culturally appreciate the source of the fat (water buffalo).

- **Hand Cranked Winnowing Fans**
 - Still an important harvest / post harvest machine, the hand cranked winnowing machine is still widely used in Nepal. Most are locally made in small foundry/factories and their cost has gone from 1800.00 5-7 years ago to 3200.00 NRs today. They are available in many hardware stores in the **Terai**.
- **Prime Movers** – ASB relates that there is a great increase in demand for 12-34 HP diesel engines for use in milling and other small industries. They have sold over two-hundred in this category. A similar increase in sales is seen for the smaller HP 4-8 HP engines that they believe are going for powering pumps, generators and rice – wheat threshers. They are currently selling over 300 pieces per month from this category.

Recommendations

- It needs to be made explicitly clear to ongoing and future projects and programs that are promoting agricultural development through commercialization, and agri-business, that the higher levels of productivity and efficiencies they are seeking will not come about through improvement of markets and linkages. Simply, farmers cannot become more efficient, productive, and competitive without agricultural mechanization.
- Due in great part to the APP, projects like ADB's Commercial Agriculture Development Project and World Bank's Agricultural Commercialization Project, and the new USAID Nepal Economic, Agriculture and Trade Activity (NEAT) project speak to the commercialization and intensification of agriculture, to improve the competitiveness of small holder farmers. For this they have large and clear programs for improved market linkages, seeds, fertilizers, irrigation but no agricultural mechanization inputs. They envisage huge leaps in agricultural production and productivity that must imply mechanization, but none have explicit mechanization RCT machinery technology components. Pressure needs to be brought to bare by all on the new USAID, WB and ADB projects to insert promotion of RCTs and agro-machinery in their projects.
- When Nepal's farmers begin to mechanize whether it is a 200 USD small horsepower pumpset and thresher, or a 1300 USD Chinese two-wheel tractor or 6,000 USD Indian four-wheel tractor, their number one financial outlay in the category of external agricultural inputs changes from seed/fertilizer/chemicals to agricultural machinery. There is a need to greatly increase numbers of targeted loans (poverty and technology specific) for RCTs and agro-machinery to recognized the above change in farmer outlays, and that would contribute greatly to leveling the playing field in the agricultural mechanization process for small and poor farmers.
- Encourage further competition within the private RCT supplier sector. We note a general increase in prices in 2WT market since National Trading Ltd. and others left the ag machinery market. This could be done by backstopping the professional trading organizations that would aid in information dissemination and marketing.
- Subsidies- Scott never thought he would ever use the 'S'word....
 - Not necessary for the 2-wheel or 4-wheel tractor or pumpset market as there is sufficient demand
 - Short term subsidies 'might' be useful and necessary for the 2 and 4 wheel tractor RCT attachments like seeders, reapers, and etc for their.
- Support and participation of all who are receiving this is necessary for the success of future

Krishi Yantric Yatras

EXTENDED NOTES

CHINESE LIGHTWIEGHT DIESEL IRRIGATION PUMPSETS

As predicted the Chinese pumpsets are making big inroads into Rupandehi once the prices dropped further. Last year prices were still quite high as compared to what they are in Bangladesh. This year additional importers/sources are there driving down the prices.

3 Nov 09 Bhairahawa area bazaar

In Bhairahawa main bazaar road (just in front of NAEF office) there is a line of 5-6 hardwares within 200 meters of each other selling Chinese pumpsets. What is surprising is that perhaps majority of the Chinese pumpsets are coming from India. Usha or at least a Usha knockoff (nakali) is exporting large amounts of 3-5 horsepower pumps and gensets to Nepal. The main Nepalese supplier is a new importer Shyam in Birganj. Prices

5 Nov 09 Butwal

Found only one hardware offering any pumpsets. His was the Chinese 3 HP from Birganj. As Ashok commented Butwal bazaar is devoted mostly to wholesale HH goods, clothing and shoes for the hills.

6 Nov 09 Narayanghat

The number of hardwares are fewer but they are also offering the Shyam and Usha diesel pumpsets with prices a bit higher than Bhairahawa and

8 Nov 09 Birganj Main Bazaar – Road between Ghantaghar and bus park

Similar to Bhairahawa on the road between Ghantaghar and bus park there are perhaps 5 hardware stores selling Chinese diesel irrigation pumpsets and some gensets. This bazaar had the most diverse offering of Chinese models almost coming via India. One Ankur hardware was offering the following.

- Mr Shyam of Birganj who imports Chinese electrical motors and pumps has begun importing Chinese Diesel pumpsets.
- Bharat CD Model Z170 F 2.8kw/3.5 HP aircooled with 3 inch in/out- 13,000.00 NC
- Xixhuan Model R170 A 3.31 kw / 4.5 HP with 3 inch in/out- 14,000.00 NC
- No name GX200 Petrol/matitel 6.5 HP with 4 inch in/out with aluminum self prime 16,000.00 NC
- NOVA Model SLP 80 BC 4.5 HP with 4 inch in/out- 12,000.00 NC
- Usha Brand 3.5 HP 3 inch in/out- 14,000.00 NC

TWO-WHEEL TRACTORS

3 Nov 09 Bhairahawa

Mr Basanta Kerna a two-wheel tractor sales agent on Sunauli road. He is selling Sifang from ASB/Batas and SK Trading. Has a sizable parts inventory. He is optimistic about the future but worried about price increases slowing sells.

3-9 Nov 09 Bhairahawa

Visiting with Ashok Chaudhary MD NAEF and sales agent for ASB/Batas Dongfeng type 2WTs and spare parts. He also complains of the higher prices of 2WTs these days and contributes it to fewer importers. He has also sold NT Ltd. and Habi Automobiles in the past. Retail prices these days range

from 120 -130,000 NC.

7 Nov 09 Narayanghat

Mr. Sano Girel of Tri Dev Electric and Machinery Hardware. He and his family have been selling Sifeng 2WT and selling spare parts from Khasa/Tatopani border area for the last two years. He has a very well stocked spare parts.

His prices range from 105,000 to 111,000 NC

His older brother has similar store in Itahari. Between them they sell about 100 2WTs a year.

7 Nov 09 Narayanghat

Though the store was closed there is a now a Mitsubishi Shakti (Bangalore) two-wheel tractor show room in Bharatpur. Prices reportedly at around 180,000.00 NC. Their 2WT has no rear seat but has belt shield/guard that is now mandatory for all 2WTs in India. We are told that farmers usually remove these shields within several weeks after purchase as they are ill designed for such use.

9 Nov 09 Birganj

Mr. Diwaker is selling Batas 2WTs. Sales are slow in Birganj.

10 Nov 09 Kathmandu

Mr. Umesh Manandhar, proprietor of Habi Automobiles of Birganj. Habi has placed an order of DFAM brand 2WTs and expects them to arrive within a month. HE also sees good future for 2WTs but feels the government and the banks need to support their adoption with special motorcycle like loans that do not need land certificates.

11 Nov 09

Mr. Krishna Sharma and Mr. Subash Shrestha proprietors of SK Traders Bhaktipur. They are selling Changfa, Sifeng, and two-wheel tractors and mini tillers. They report that sales increased last year to nearly 1000 and they are hoping that they will sell 2,000 this year. Their major sales areas are Chitwan, Dang, Banke, Bardia and Bhairahawa.

They pointed out that there is a blending of DongFeng (DF) and Sifeng (GN) with both sides producing each.

They are very concern about the unfair levying of a 7,500.00 NRs 'third party' insurance for owners of 2WTs. They note it is the same cost for 4WT despite their much smaller size and cost. They feel that a fair price should be much closer to the motorcycle price of 1200.00 NRs. They have called for a meeting of the Ag Machinery Merchants Association next week to discuss how to get this rate fairly adjusted for the two-wheel tractor owners.

12 Nov 09 Kathmandu

Misters Vishal and Vevek Tatar HK Enterprises Kuleswar, Kathmandu. They have been importing CLF Brand 2WTs for over 4 years now with sales mostly in Bhaktapur and beyond. With sales averaging over 150 pieces for the last four years they consider the 2WT market to be getting stronger. Their main business interests are hardware items and gensets mostly from India.

16 Nov 09 Kathmandu

Mr. Swyambhu Shrestha, ASB Enterprises.

He has been selling 2WT and accessories for over 8 years now and perhaps the largest seller of 2WTs in Nepal. He estimates they have sold over 700 pieces of 2WTs in the last year and has very good

feeling that more will be sold in the coming year. Their sales of diesel engines from 4 HP to 34 HP is going very well and sells 300 4-8 HP per month and 200 of the larger HP models. His new AMEC micro 6.5 HP 2WT with removable tires is selling well in the valley with over 50 pieces sold. Basantha Chaudhary formerly of MAECO has sold 16 of his reapers in the last 3 months!

FOUR-WHEEL TRACTORS

5 Nov 09 Bhairhawa

Mr. Ramji Poudel, Annapurna Marketing Bhairahwa, were selling the Trisuli Brand 9.5 HP tractors from U.P. but switched to a competitor of Trisuli Fieldmarshal of Gujrat. Model FM 625 9.5 HP is exactly same with Mahindra Jeep differential and transmission. No locking differential according to Ashok causes wheel slip in the field that is keeping this tractor from doing tillage work and limits it to road transport. They have a sales goal of this season of 33 tractors. Dangadi, their main office has a goal of 100 tractors. There is also sales in Birganj. Though the company offers rotoator, cultivator and even seed drill, the Bhairahawa office had none of these implements. They did have an older reaper attachment from the earlier Triusuli company. They had no other interest in promoting it as they feel there is no demand. They were selling the demo/used reaper for 30,000 NC a 1/3 the price they had given for it. After speaking with some of their mechanics we reckon that between the old Trisuli Brand which started selling 3 years ago and this new Fieldmarshal brand there are perhaps 50 of them in Rupandehi and surrounding districts. Nearly 100% of them used for transport work only.

6 Nov 09 Butwal

Mr. Bhakti Bdr. KC proprietor of Indo Farm Tractors in Butwal. He was originally with the DFO in Rupandehi and then after retirement joined Continental Trading and manage sales of 2WTs, 28 HP Jinma 4WTs and combine harvesters that fit on top of the Jinma Tractor . The 2WTs had some success but 4WT had design problem with battery blocking the radiator and causing overheating. But he has heard that those who bought the tractors and combines and who complained bitterly about them are still operating them and earning income, including the combines. He soon left and started his own company Guarishankar Automobiles Pltd. He is very up beat about 4WT sales increasing from this year due to peace and stability. Also considering importing of 2WTs as he is the sole agent for DFAM for Nepal.

7 Nov 09 Narayanghat

The above Mitsubishi Shakti (Bangalore) show room in Bharatpur also is offering 18 HP 4WT. Prices reportedly at around 350,000.00 NC.

8 Nov 09 Birganj

LP Sahani and Laxman Chaurasia at TAFE Massey Ferguson in Birganj. They say that last years 4WT sales were around 2400 but expect this years sales to go as high as 5,000 due to peace, delayed purchasing and very high value cropping around Birganj area. They should sell at least 1000 pieces themselves. Also considering getting back into the 2WT market. They also are currently selling Chinese Usha pumpsets. Also PTO driven wheat threshers 160,000 – 190,000. Best selling MF models are 1035 DI J (more modern looking 1035) and 241 DI (40 HP).

COMBINE HARVESTERS

16 Nov 09 Kathmandu

Mr. Swyambhu Shrestha, ASB Enterprises.

ASB/Batas is also the importer of 5 two-wheel tractor rice combine harvesters which they are having

difficulty selling. Again, Mr. Diwaker in Birganj has successfully demonstrated this machine this season on 2-3 bigha. AS this is such a new technology for all involved there is probably need for some for demonstration and testing of the machine by someone in NARC to see if there are any real problems with the machine.

9 Nov 09 Birganj

Mr. Diwaker is attempting to sell a Batas 2WT combine. He has demonstrated it in about 5 different villages in almost 2 hectares but no interest. Price is 420,000.00 NC

OTHER

8-9 Nov 09 Birganj

Visit with Ganesh Sah at Agricultural Implements Research Center

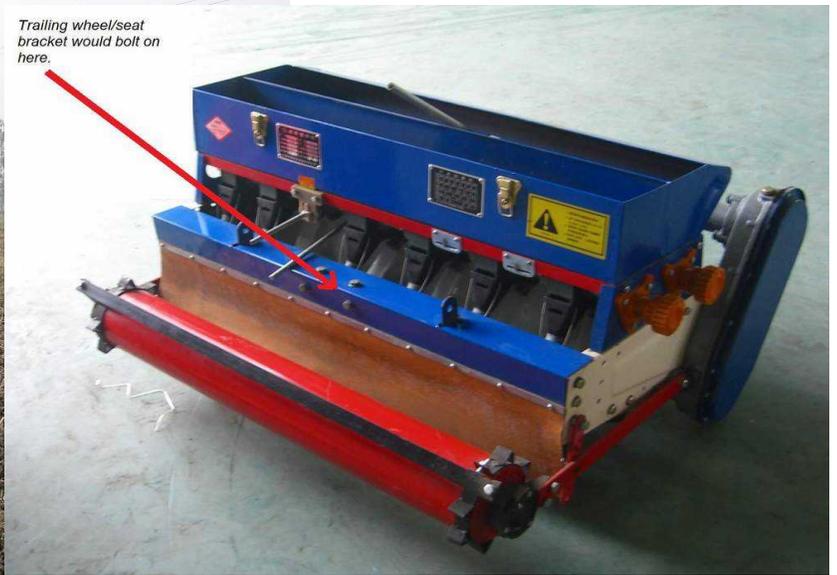
- There is still big problem with fake / nakali Indian fertilizer despite India and Nepal bands on imports into Nepal
- Increased interest by area farmers to buy combines. As combines are not used in Bihar much they have not 'spread' across the border here on the eastern side of NEPal much.
- This past season his farmers had 25 ha non-puddled direct seeded rice in Bara Parsa.
- Satfuruwa (six disc animal drawn plow) reduced till in rice and wheat is going very strong
- Sales of large PTO driven rice threshers (2 tons / hour??) are doing very well in Bara / Parsa. He has not seen any small HP rice threshers. Prices start around 160,000.00 NC.

NEW 2WT - POWER TILLER REDUCED TILL / STRIP TILL SEEDERS

In September just prior to the tour two Chinese manufacturers have announced the introduction of 2 new models of 2WT reduced till /strip till seeders. They are variations of the earlier 2BG6A model reduced till seed drill that has been promoted with very limited success in Nepal and elsewhere for the last 20 years. The two new drills differ in that they have added fertilizer meters and boxes and frames have been made more robust to accommodate the rotovator's rear wheel for riding the seed drill on the roads and/or operating in the fields. The first model on the left below, 2BFM)DC) 6 is configured specifically for strip till. It was purportedly developed by a Canadian funded project near Chengdu. The second one below right is Yang Yang brand 2BG-5 (100) from Danyang Liangyou Machinery Co., Ltd. In Zhenjiang City, Jiangsu Province.



2BFM(DC)-6 seeder
Jinyangnong, Deyang, Sichuan Province



Yang Yang brand 2BG-5 (100)
Danyang Liangyou Machinery Co., Ltd.
Zhenjiang City, Jiangsu Province,

RICE HUSK STOVES

4 Nov 09

We visited the first RHS factory (outside the smaller blacksmith sector) in Balwari owned by Mr. Devkota. He has shifted his factory his home just to the south but still making up to 15 pieces per day with 3 mechanics and 2-3 day laborers employed. Their RHS is a fairly heavy but cheap as they use second hand sheet metal from drums. 20 plus drums were sitting just in front of the factory ready for. Approximately 4-5 stoves can be made from single drum. Production could be higher but their number one problem is the availability of old drums. Devkota also has a tractor repair workshop and spare parts located in Balwari just north of Bhairahawa.

4 Nov 09

Visit to Metal Nepal RHS factory in Galamandi, Bhairahawa. and met with one of the three proprietors Mr. Who is partnership with BK of Sony Enterprises, Bhairahawa and Sidhu Prasad Acharya of Kathmandu. Distributor is Jaibik Urja Nepal

He reports the following

- Nepal Forestry Association is interested to promote these stoves among their members
- Local DFO has ordered some 100 stoves about a year ago
- Mittal Tea Estate bought 200 stoves from their laborers.
- REDD is interested in the stove.
- Use of special oxidize steel for their heat areas of the stove
- Currently employing 30-40 people in the factory
- Their Biomass Academy working to promote awareness and stoves in the rural areas (marketing)
 - Stoves can save household family of 6 using:
 - firewood (bought at 6 NRs / kg) up to 12,000 per year.

- Kerosene (30 litres a month) up to 27,000.00 per year
- Gas up to 36,000 rupees per year
- They felt there was equally great potential in eastern Gangetic plains India. Thus they have started up a partnership in Gorakpur, India and begun manufacturing in their 60-70 / day. Distributor is Javik Urja Bikas Sansta UP 9455239367 . Factory is Bharti Jaivik Urja Pratistan Rajiv Sang- 090581100838

JATROPHA

5 Nov 09 Driver Tol

Visit to Gupta Nursery in The senior Gupta reports that sales of his seedlings is on going from theirs and their friend Karki's nursery in Manigram. Much of the seedlings now going up to the hills. Production in Rupandehi is still small but some of the larger growers have contracted their harvest to someone in Palpa.

They are not aware of the reported poor harvests in India and still project very high yields for the buyers of their seedlings. Asked which variety they have they could only say they have been selling hybrid they got from India some years ago they refer to as Curcacus. As they only replant each season from seed from their own stock it is assumed any hybrid traits are now gone.

5 Nov 09 Manigram Nursery-

On visit to their nursery we found about two separate 200 square meter plots with 6 month old / hip-shoulder high seedlings to be sold in about another 6 months. Older 2.5 year old trees planted on their fence line had bloomed but about 50% had no seed. Others had very good seed production. Local variety was 3 NRs per seedling and 6 NRs for the hybrid.

CONFUSION OVER SIFENG AND SHIFANG 2-WHEEL TRACTORS

Sifeng name was associated with 'GN' type Sifeng 2-wheel tractor which differed from the DF Dongfeng type in that the GN had a different model transmission and PTO, wheels could not be adjusted in-out on the axle shafts, the rotovator had two speed high - low with a shift lever, and the seat attached not to the rotovator but the the handlebar's center housing above it.

Those were the simple days where a DF was a DF and a GN was a GN.

Now the DF and the Sifeng companies in China, of which there are many many, are making both DF and GN. Plus there are Sifeng and Shifang companies that confuse things even more.

ASB, Batas imports-two different Shifeng

Shifeng Zhejiang China- (Jinyun Xinxin Tractor Plant) makes a GN 151 power tiller with an 11.5 kw 15 HP S1100N with radiator

Mr. Krishna Sharma is importing Sifeng Zhejiang Sifeng Group Corporation China (Zhejiang Province Yongkang Tractor Factory China) makes a DF 121 Walking Tractor with the a 9.9kw 13 HP S195G engine with boiler / hopper cooler

PEOPLE / OFFICES CONTACTED ON OUR TOUR

Rupandehi 1-4 November, 2009

- Devkota's Rice Husk Stove Factory, Balwari
- Metal Nepal RHS factory, Bhairahawa
- Bhairahawa Bazaar's many hardware stores
- Shrestha Industries, Bhairahawa
- Pravin Gupta 2-wheel tractor Sifeng Dealer, ABS-Batas, Bhairahawa
- Gupta Nursery, Driver Tole and Manigram
- Ramjee Paudel, Annapurna Auto Trading – Fieldmarshal 4-wheel tractor agent, Bhairahawa
- Mr. Bhakta Bdr. KC Proprietor Indo-Farm Tractors, Butwal
- Mr. Bhatta, NWRP, Bhairahawa

Butwal

- Mr. Bhakta Bdr. KC Indo Farm Tractor 071-438094

Nawalparasi 5 November, 2009

Paras Nath Chaudhary- Reaper owner

Chitwan 6 November, 2009

- Mr. Sano Girel, Tri Dev Electric and Machinery importer of Sifeng 2-wheel tractors, Narayanghat
- Mr. ??? Chinese engine/2-wheel tractor spare parts dealer, Narayanghat
- Mitsubishi Shakti Bharatpur 2 and 4 wheel tractors
- PTO driven rice thresher repair workshop, Tadi Bazar

Bara 7- 8 November, 2009

- Mr. Ganesh Sah, Ag Implements Research Center, Ranighat Birganj
- LP Sahini and Laxman Chaurasia TAFE Massey Ferguson Birganj
- Mr. Diwaker Batas sales agent and two-wheel tractor trailer manufacturer, Birganj 9806867025
- RARS, Parwanipur
- Ankur Hardware 051-524718

Kathmandu 9-11 November, 2009

- Mr. Umesh Manandhar, Habi Automobiles, 98550 20200
- Mr. Krishna Sharma, Subash Shrestha SK Traders, Bhaktapur 01, 6912385, Fax 6914649
- Mr. Swyambhu Shrestha, ABS Kathmandu 9851 05414
- Vishal and Vivek Tater, HG Enterprises 01, 4600674, Kuluswar, Kathmandu