

Plowing_Growing_More_Thoughts_After_A_Pole_Shift_1999.txt

Subject: Plowing, growing, more thoughts
sent: 16 May 99

Right after the PS, under almost continuous rain, plowing in some areas will become adventurous, akin to playing in the mud. Under these conditions it might be better to simply push the seed into the ground a measured depth. If there is a lot of weeds and roots that needs breaking up and turning over then plowing may still be needed. Do we have any farmers on the list that can give some pointers to plowing in mud and raining conditions?

An alternative to growing outdoors for the first few years. Once one has survived the PS with a sturdy but small survival quarters. One could build a cheap steel building or green house to cover the growing area. Could be plastic tarp over a dome built out of steel conduit or wood as Roger has built. Could be a commercial bought steel building built from parts stored and assembled after the PS. An example would be WWW.steelmasterbuildings.com 1-800-527-4044. Current costs are about \$3.21 to \$9.31 per sq. ft. Depending on style and whether it is open or closed at the ends.

The issue remains as how best to protect fertile soil from toxic ash-water until a building can be assembled. Tarp on ground first, then bagged earth in water proof sturdy bags placed on top, then cover with more earth. This constructed or placed so as to have natural wind breaks around it or the whole thing below ground level. Edges of tarp are put as deep in the ground as practical.

This could be one possible way to protect the soil below the tarp and in the bags. Not sure how well it would work. It would be lots of work. I think just a tarp with lots of dirt on it would most probably blow away. A corner of the tarp caught in the wind and the whole thing is gone. A reminder many areas of ground will probably liquefy under the heavy relatively long duration earthquake shaking. This will need to be taken into account when choosing a site.

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Sent: 15 may 99

Ron, this is an inventive use of commonly available items. If I understand you correctly, I see a slight problem with the design - in that once one encounters the path of the cable, a person would need to duck down and possibly let go of the wood bar that is being pushed around for a short space of the turn. After a while in the low light conditions, this cable might get to be tiresome and hard to see. With each person letting go of the bar at one point along the turn, this loads the bearing the spool rides on which adds more friction, and also tends to loosen the post in the ground due to side thrusts.

You may want to consider some alternatives. If one puts the spool at ground level, then one would need to step over the wire one each turn as one pushes it around. So this is still not optimum. One could build a platform to walk on about 3 ft high so that the people pushing are above the wire. Another possibility is to have the wire go through a pipe that one steps over. Another possibility is to have the spool above ones head and the push bars on the bottom side of the spool. In this case, one has to carefully consider the forces involved on the center pole in the wet ground. The base would need to be strongly braced in this case. Still might need to duck down but at least you wouldn't need to let go of the push bar and cause extra load to the others pushing.

Another alternative is to use a rear-end-axle combination taken from an abandoned truck after the PS. The tire would be removed from one wheel rim. The rim would be mounded on one side for the cable to wind up on. Cable would go through the valve stem hole and be tied off or a wire clamp used. The axle on the other side would be prevented from turning either by locking the mechanical break permanently set or by chaining the rim in such a way as to not allow the shaft to turn. The unit could be put in the ground with the axle housing partly below ground level with the pinion shift sticking straight up. A trench would be dug in the ground so the wheel rim could turn. The top of axle housing would be just at ground level, arranged such that one would not trip over it as one walks over it. Wooden posts or logs would be dug and set into

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the ground to hold this unit anchored to the ground to keep it from moving. The cable would end up about 1 to 2 ft off the ground. One would not walk over the cable to turn the pinion shaft.

A piece of the rubber tire would be cut out to fit tightly on the pinion shaft. This would be cut to fit to keep water from running down into and past a possible old pinion gear oil seal. The drive shaft and universal joint would be put back on the pinion shaft so as to stick up in the air perpendicular to the ground. Logs or wood firmly placed in the ground could be used to hold this in place so that the shaft can still turn. Depending on the length of the shaft, the yolk at the other end would be fitted with wood, bolted through the two large holes that previously had a U-joint. This in turn could be bolt to as many cross members as you have labor to push the bars as has been described. The push bars would not be long enough so that it is necessary to walk over the cable. The gear reduction ratio of the rear end would give an advantage and make it easier to push and turn. The wide metal truck tire rim would be stronger and longer lasting than a large wooden spool.

One could use a pulley on a post several feet away from the drum with another pulley-post at the end of each row as you have suggested. This would work at the end of a rectangular field. The post would need to be put in at an angle and braced so as to not be pulled out of the ground with the force involved.

All pulleys would need to be extra large diameter if fallen scrounged electrical transmission wire is used. This wire is not as flexible as fine strand steel wire.

Another variation on this. If one had another old car or truck with 4 good wheels then this could be used as a stable platform with this truck axle cable pulley mounted in the center with it's axle perpendicular to the way the axles on the vehicle. The truck or car would be rolled back and forth at the end of the row to be plowed. The cable would come from the center of gravity of the vehicle. The cable could be used to pull the vehicle back and forth using a post at two corners of the rectangular are needing plowing. A pulley would be

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attached to the vehicle to allow the cable to make a right angle direction change. The cable would pull the unit to the proper row. The cable would then be used to plow the row, then pulled to the next row, and so on. If the car or truck is not heavy enough, then dirt can be used as a ballast.

Subject: Plowing methods Post PS
Sent: 11 May 99

Ron you have a good point. We don't need to plow the ground as fast as today's methods. We can take a week or a month or longer to do what is done in a day now.

Bicycle powered plowing: A plow mounted on three or four wheels. Could use one or two bicycle mechanisms (one or two riders) without the wheels mounted in the front so the weight of the person helps hold down the whole mechanism. Bicycle parts modified to wind the cable onto a drum. Would take some thought to get the correct gear ratio. The angle of attack of the plow with the ground would be adjustable, so that depth the plow penetrates the ground is adjustable. Allows one to pull the plow up to move the unit to a new row. The wheels are free to turn on the axles and roll forward as the cable pulls it.

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    | Plow
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Battery Powered Winch plowing: An electric Winch like used on the front of a Jeep could be mounted up front. Batteries located just behind this. One could sit on as seat above the batteries to add mass to the unit or hold it down. Plow adjustable as described above. An electric motor with adjustable belt tension drive could be mounted on one or two wheels to be used to power the unit to the end of a new row. Drive belts relaxed when cable is pulling the unit.

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    H Electric Winch
    B B B Batteries
    |
    | Plow
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Note: Unless we can come up with a good movable anchor I think one could build two of these units and have them pull toward each other. Move over a row, move to the ends and do it again.

Modified Tractor: A farm tractor could be stripped down, with an electric motor or modified bicycle mechanism used as power. The engine could be taken off or stripped down, the flywheel used, along with the starter gear for the interfacing point for the electric motor or human power. The existing transmission (gear type) would be used in the lowest gear. Beyond this one could use bicycle parts to gear it down more. Batteries could be charged with a portable (or not) windmill over the long nights.

I hope this gives some ideas of what is possible. Would take some more work and more innovation to resolve all the design issues. However, I think the basic

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concepts could be developed to work.
