

4. PEP IS PRO-POOR:

a tool for hunger and poverty eradication

- the PEP assures higher yields thanks to irrigation
- it provides higher self-sufficiency and market surplus during critical growth periods
- during lean seasons it provides work and income to marginal farmers and artisans
- PEP fits ideally into family-farming enterprise
- farmers' families improve their food-security

For more information contact W≈3≈W

W≈3≈W is a self-help organization of voluntary professionals. Our know-how and experience is available free of cost to assist poor people in Developing Countries.

Instruction materials are available:

- Prospectus
- Detailed technical plans
- Video for manufacturers
- Video for farm demonstrations

DONATIONS: Swiss Post-Postfinance
Wasser fuer die Dritte Welt
PC 25 - 543543 - 9
IBAN CH51 0900 0000 2554 35439

www.w-3-w.ch

W≈3≈W-Secretariat

Dr. Anton Kohler
Schoenenbuehlweg 30
CH-3414 Oberburg
Switzerland
0041 (0)34 422 68 31
info@w-3-w.ch

W≈3≈W

Water for the
Third World

SMALL-SCALE IRRIGATION with PEP PEDAL-PUMP



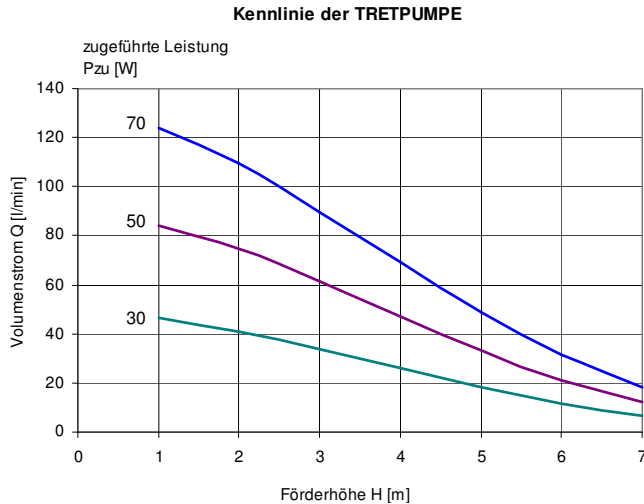
Help for Self-Help in Action

an innovation by Swiss experts from
Water for the Third World
with high water-yields and with pep

manufactured by artisans
in Africa, Asia and Latin-America
for poorest farmer-families

for irrigation of vegetables, cereals etc.
for household and drinking water
for sanitary arrangements
for cattle watering tanks

1. DISCHARGE RATES



The curves in the diagram illustrate the water output in liters per minute at different depths of groundwater. With an energy input of 50 watt drawn from three meters the water yield is approx. 60 liters per minute.

Experience at several farms shows that continuous pumping is possible at normal work speed and without major hardship more than yield-doubling can be achieved. The pedal-pump is a tool of help for self-help in the fight against hunger.

2. IRRIGATION POTENTIAL

The use of the PEP for double-cropping is ideal in areas where the water-table on average lies between 2 to 4 meters and is above 6 meters during more than 10 months of the year. Is the water-availability even better up to three crops are possible. Today there are more than 10'000 PEPs in use.

Under above conditions double-cropping with good to high yields are achieved.

Rice on 0.5 to 0.7 acres

Wheat on 0.9 to 1.3 acres

Tomatoe on 0.7 to 1.1 acres

In situations where the water can be pumped from safe water sources, lakes or rivers to nearby fields the pedal-pump PEP is an ideal means for assured growth of high-yielding variety-crops on larger acreage than given above.

3. PEP IS SUSTAINABLE

• In economic terms

- the PEP is inexpensive (70 - 120 US\$)
- the PEP has a high return on capital invested
- its benefit-cost ratio is high
- the PEP is labour intensive and capital saving

• In social terms

- scarce water resources are equally distributed, according to human-work and not purchasing power for electricity, diesel etc.
- it creates employment and income for the poor
- the PEP is pro-poor

• In ecological terms

- groundwater cannot be overexploited
- more crop per drop is achieved
- its use is CO₂-neutral

• technologically reliable and locally available

- PEP-technology is scientifically tested and has the highest efficiency rate (energy-input / water output) compared to other manual pumps
- the PEP is manufactured by village craftsmen
- the farmer manages and maintains a reliable technology; timeliness and intensity of irrigation are under the farm-family's control
- spare parts are locally available