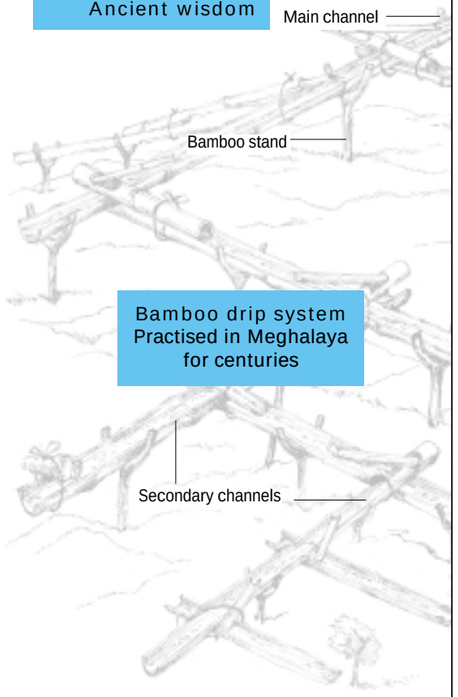
DRIP IRRIGATION The long and short of it

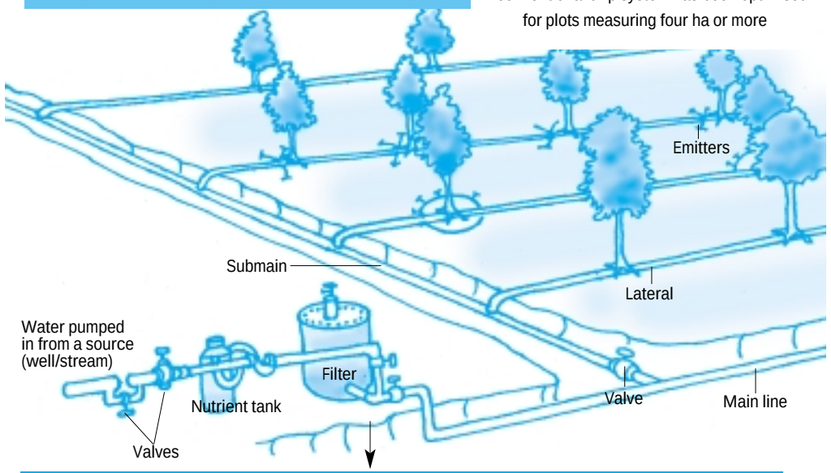
Ancient wisdom



Bamboo drip system Practised in Meghalaya for centuries

The government-promoted technology

A conventional drip system has been optimised for plots measuring four ha or more

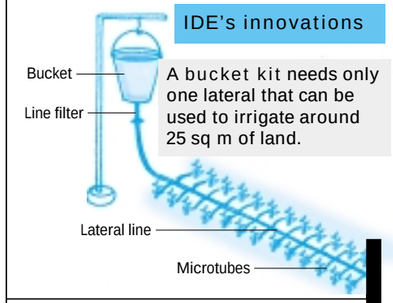


It makes a difference

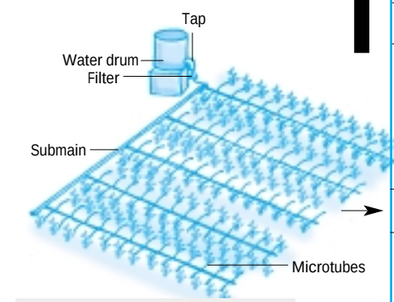
Crop	Cost per hectare (Rs)	Peak water used (litre per day per plant)	Yield (tonne per acre per year)	Pay back period (years)	Cost benefit ratio	Extra income after drip
Sugarcane	46,500	20,000 day/acre	60	1.5	3.00	24,470
Banana	46,500	15-20	30	1	3.08	29,340
Cotton	46,500	8-10	14	1.5	1.77	14,070
Papaya	39,140	15	750kg latex	1.5	3.50	34,270
Grapes	43,000	15-24	20	1	3.64	68,490
Pomegranate	29,340	50-60	9	1	3.50	39,140
Ber	39,340	50-60	9	1	2.50	19,590
Tomato	48,940	20 - 24,000 day/acre	28	1	1.90	14,670

Source: Study by R K Sivanappan, Director, TNAU, Coimbatore

IDE's innovations



A bucket kit needs only one lateral that can be used to irrigate around 25 sq m of land.



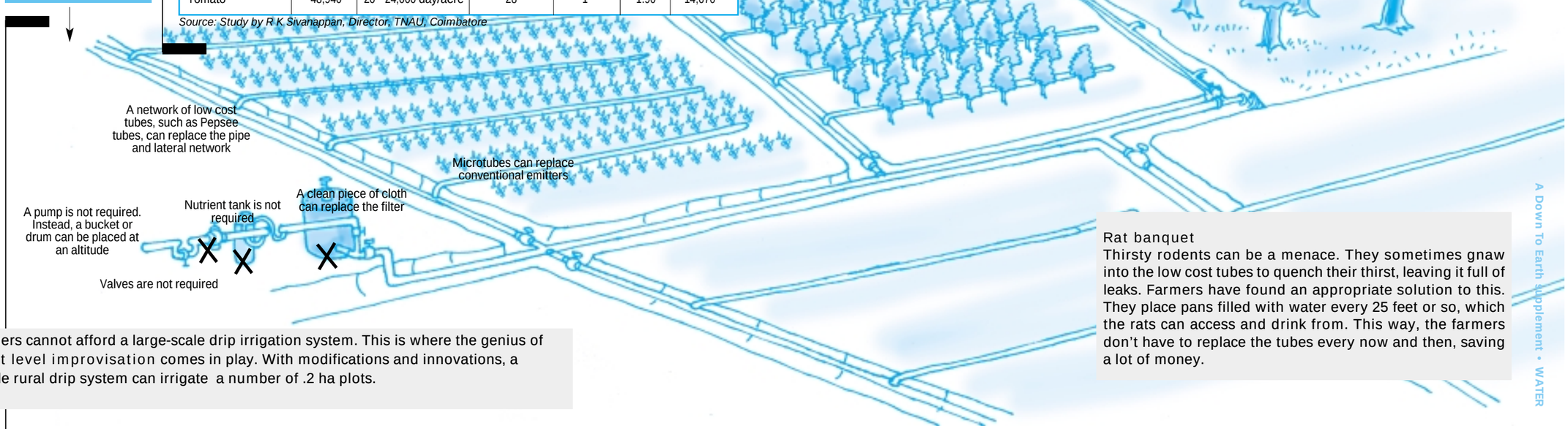
A drum kit, which is a larger version of the bucket kit, can irrigate up to 100 sq m of land.

Cost –Benefit of IDE's drip irrigation kits in one crop production season (in Rs)

	BUCKET KIT Tomato – 30 plants Brinjal – 30 plants Chilli – 20 plants	DRUM KIT (Vegetables) Tomato – 400 plants (Local variety)	DRUM KIT (Horticulture) Papaya – 50 plants (Local variety)
CAPITAL COST			
1. Kit	200	825	775
2. Bucket/drum	75	600	600
3. Fencing	50	100	150
Sub total	325	1525	1525
RECURRING COST			
1. Seed, seedling	10	50	50
2. Fertiliser	50	100	200
3. Pesticide	20	100	200
4. Labour	0	100	200
5. Misc	100	200	200
Sub total	180	550	850
SALE PROCEEDS			
1. Production	60+120+10	600	1000
2. Rate per Kg	5+2+10	4	4
3. Sale value	640	2400	4000
Sub-total	640	2400	4000
GROSS RETURN	460	1850	3150

Source: IDE India

On the spot...



Poor farmers cannot afford a large-scale drip irrigation system. This is where the genius of grassroot level improvisation comes in play. With modifications and innovations, a small-scale rural drip system can irrigate a number of .2 ha plots.

Rat banquet

Thirsty rodents can be a menace. They sometimes gnaw into the low cost tubes to quench their thirst, leaving it full of leaks. Farmers have found an appropriate solution to this. They place pans filled with water every 25 feet or so, which the rats can access and drink from. This way, the farmers don't have to replace the tubes every now and then, saving a lot of money.