

## Figure legends

Table 1 vegetable price from farmer to broker in market

	FCFA	unit	volume	survey place
Tomato	3000	small basket		Ziniare
	3500	middle basket		Ziniare
	5000	large basket		Ziniare
Onion	15000-20000	tomato box	200L	Ziniare
Gumbo	7500-10,000	50kg bag	40L	Ziniare
Egg plant	4000	50kg bag	40L	Ziniare
chili pepper	2500-4000	50 kg bag	40L	Ziniare
sweet pepper	5000-6000	50 kg bag	40L	Ziniare
courgette	3000	50 kg bag	40L	Ziniare
carrot	7000-12500	50 kg bag	40L	Ziniare
cabbage	10000	10 m2		Ouagadougou
	50-100	1 number		Ouagadougou

Table 2 Question survey results about water usage and potential amount of irrigation in three pilot-families.

	Persons	Total water use (L)	Bathing (L)	Laundry (L)	Irrigation potential (L)
DA consession	24	1120	336-672	36	391-707
CE consession	8	160	72	13	85
IE consesion	11	200	165	20	185

Table 3 ET<sub>0</sub> and Pe in Ouagadougou climate

month	ET <sub>0</sub>	Pe
	mm/day	mm/month
Jan	5.9	0
Feb	6.6	0
Mar	7.3	0
Apr	7.5	4.4
May	6.8	33.6
Jun	5.6	62.4
Jul	4.2	120
Aug	4	157.6
Sep	4.4	86.4
Oct	5.3	8.6
Nov	5.4	0
Dec	5.2	0

Table 4 Crop factors of four growth stage in several vegetables.

Crop	Crop factor (Kc)			
	initial stage	development stage	Mid season stage	late season stage
Tomato	0.45	0.75	1.15	0.8
Onion	0.5	0.75	1.05	0.85
Chili pepper	0.35	0.7	1.05	0.9
Cucumber	0.45	0.75	0.9	0.75
Gumbo	-	-	-	-
Cabbage	0.45	0.75	1.05	0.9
Carrot	0.45	0.75	1.05	0.9

Based on a reference of FAO (1986)

**Table 5 Growth period of four growth stage in several vegetables**

Crop	Growing period (days)				
	total	initial stage	development stage	Mid season stage	late season stage
Tomato	135	30	40	40	25
Onion	150	15	25	70	40
Chili pepper	105	10	35	40	20
Cucumber	105	20	30	40	15
Gumbo	-	-	-	-	-
Cabbage	120	20	25	50	30
Carrot	100	20	30	30	20

Based on a reference of FAO (1986)

Table 6 Maximum irrigation requirement during cultivation period in several vegetables

Cultivation start month	Tomato (135 days)	Onion (150 days)	Carrot (90 days)	Cabbage (120 days)	Pepper (120 days)	Cucumber (105 days)
maximum irrigation requirement during cultivation (mm/day/m <sup>2</sup> )						
Jan	7.6	7.7	7.3	7.7	7.7	6.6
Feb	7.5	7.7	7.4	7.7	7.7	6.6
Mar	5.8	7.0	6.2	6.6	6.0	5.6
Apr	4.0	5.3	4.7	5.0	3.8	4.1
May	2.1	3.2	2.7	3.0	1.8	2.5
Jun	4.0	4.2	1.1	1.4	0.2	0.9
Jul	5.2	4.9	4.5	4.9	4.8	3.7
Aug	5.6	5.3	5.0	5.3	5.3	4.5
Sep	5.5	5.7	5.4	5.7	5.7	4.9
Oct	6.1	5.8	5.3	5.8	5.6	4.7
Nov	6.8	6.5	5.9	6.4	6.3	5.3
Dec	7.5	7.2	6.6	7.1	6.9	5.9

Table 7 estimated available cultivation area in pilot-family

	Available cultivation area (m <sup>2</sup> )				
	Tomato (Apr start)	Chili pepper (Apr start)	Onion (Aug start)	Carrot (Jan start)	Cucumber (Jan start)
DA concession	99.0	102.6	73.4	53.4	59.4
CE concession	20.3	21.1	15.1	11.0	12.2
IE concession	47.0	48.7	34.8	25.3	28.2

Table 8 income estimation per 10 m<sup>2</sup> in several vegetable

	target yield		estimated yield		filling rate			wholesale price	income
	t/10a	plant/10a	factor	kg/10 m <sup>2</sup>	g/cm <sup>3</sup>	rate	L/10m <sup>2</sup>	(farmer to broker)	FCFA/10m <sup>2</sup>
Tomato	10		0.8	80	1	60%	112	17,500FCFA/200L	9,800
Onion	6	30,000	0.8	48	1	60%	67	8,750FCFA/40L	14,700
Chili pepper	4		0.8	32	0.8	60%	56	5,500FCFA/40L	7,700
Courgette	6		0.8	48	1	60%	67	9,750FCFA/40L	16,380
Gumbo	2.5		0.8	20	0.8	60%	35	4,000FCFA/40L	3,500
Cabbage		5,000						75FCFA/plant	3,750
Carrot		30,000						10,000FCFA/10 m <sup>2</sup>	10,000



Table 9 maximum income estimation per year in pilot-family

	income estimation FCFA						Maximum income/year	
	Tomato	Chili pepper	Onion	Carrot	Courgette	Gumbo	FCFA	EURO
DA concession	97,005	79,026	107,966	53,425	97,233	34,645	336,849	518
CE concession	19,898	16,211	22,147	10,959	19,945	7,107	69,097	106
IE concession	46,015	37,487	51,215	25,342	46,123	16,434	159,787	246

Fig. 1 scheme of decentralized and resource recycling based sanitation system in rural area, Burkina Faso

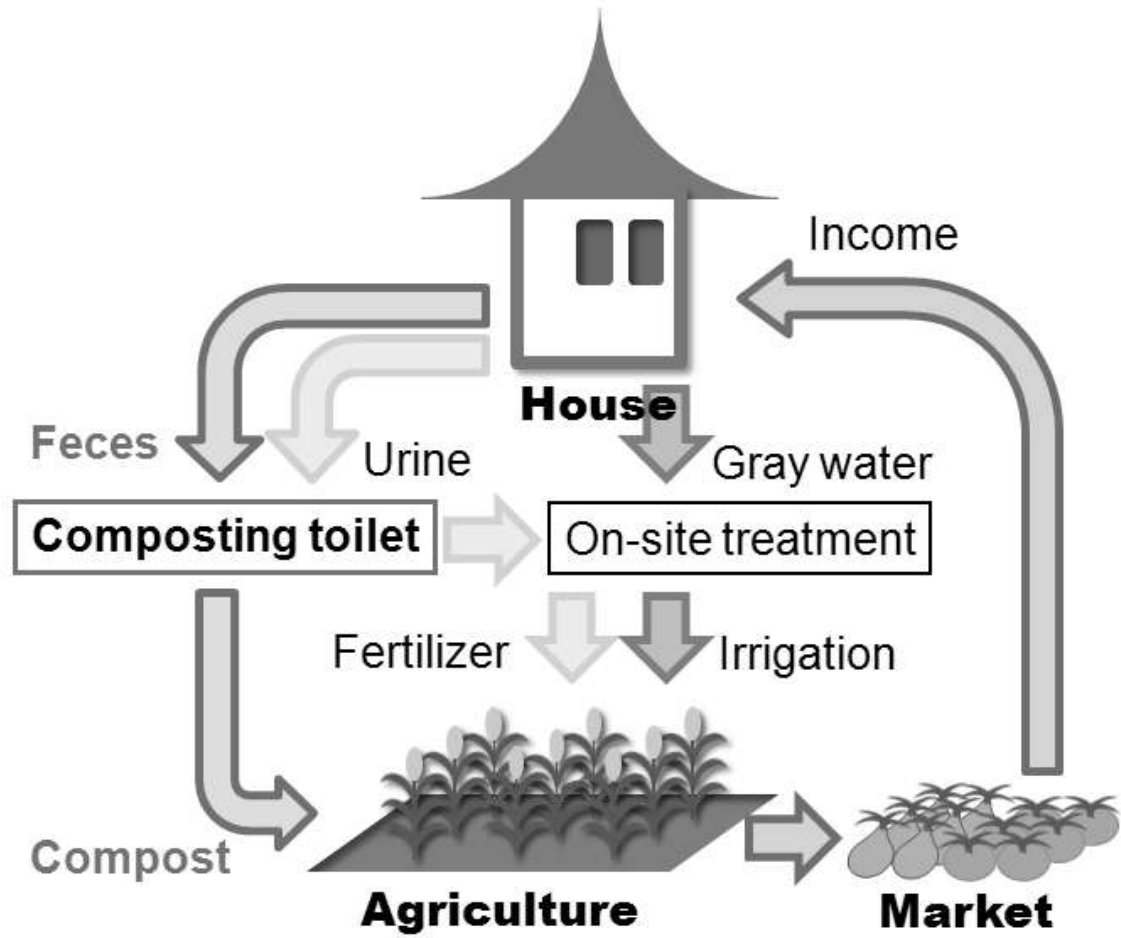


Fig. 2 Composting toilet (A) and slanted soil system for greywater treatment (B)



Fig. 3 vegetable distribution system in rural are, Burkina Faso

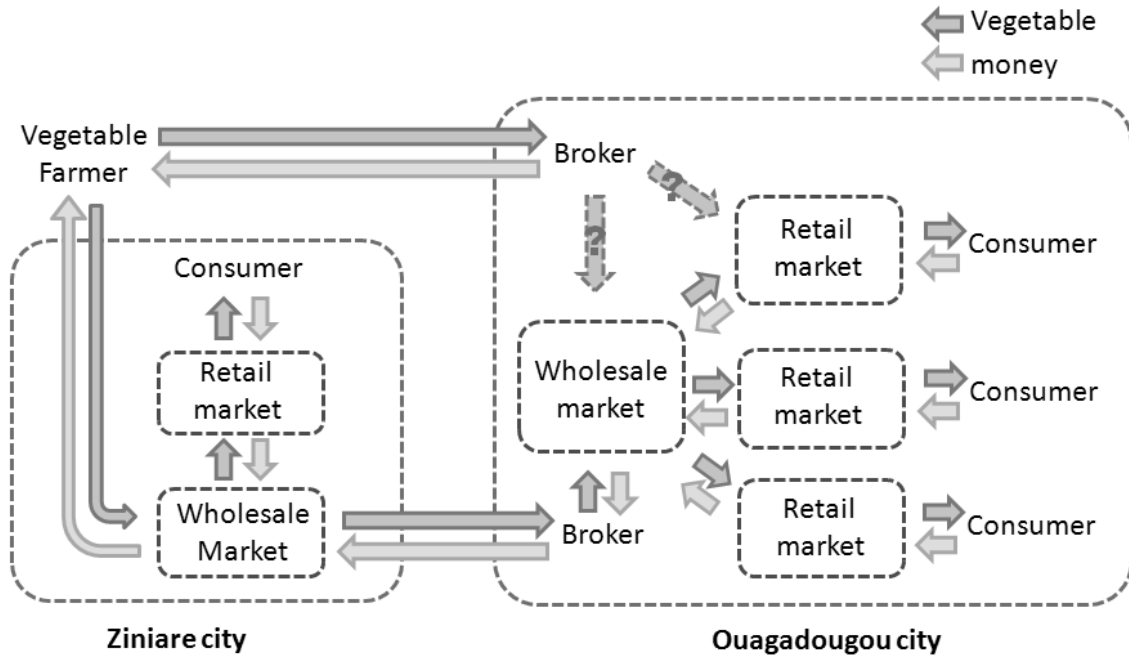


Fig. 4 One model of crop rotation in Ziniare

	1st year												2nd year	3rd year
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar		
Field A	○	△	■	■	○	△	■	■	○	△	■	■	Rotation 2	Rotation 3
	Tomato or chili pepper			Onion			Cucumber, Courgette or Carrot							
Field B			○	■	■								Rotation 3	Rotation 1
	Rotation 2		Sorhgum											
Field C			○	■	■								Rotation 1	Rotation 2
	Rotation 3		Gumbo											