FACT BOX F3 – AL A'TAL FRUIT FARM

Farmer: Hassan Abu-Belal

Size: 900 dunums (90 ha) of which 70ha are cultivated. Established in 1996. Trees now 12 years old.

Location: Just SE of Umm Al-Quttayn in lower ground (800m) between the Azzam volcano (900m; south) and the mountains of Jabal Al 'Arab (1800m; Syria) See also panoramic Photo A7.

Aquifer 400m below ground. One ground well (15cm pipe) pumps 86m^3/hr, 24hrs/day April – Sept then stops. The water table draws down 2m in the 5 months and then returns to the same level. A stage recorder has been installed and the farm is fined if they exceed their quota of water. Costs: 6 fils/m^3 (6000 JD/annum); Electricity costs: 8000 JD/month (cheaper than oil).

Apples (24,000 trees): 4 rows red (Stark); 2 rows green (Goldring) allowing cross pollination. Pruned 15 Jan – 15 May; Flower 15 March – 15 May; Harvested 15 July – 15 November. Misshapen apples ground and used for cooking (vinegar).

Olives (11,000 trees): 4 varieties: Cressida, Napoli, Black, Syrian (local variety). Green varieties go to market first; Black varieties go to oil factory (9 tonnes - Ą 950 kg oil).

Employs 15 workers permanently and 100 – 150 seasonally. 5 are from Egypt; others local. Harvested from 15th Nov. Oil content increases with time.

Market: Central Amman; also store fruit in chilled store for later release to market.

Income:
Black olives: 1.5 JD/kg; packed in 8kg boxes
Green olives: 0.8 JD/kg; packed in 8kg boxes

Pesticides: Mainly applied in autumn when no leaves on trees.
Fertilizers applied when flowers first appear and when apples begin to grow. Applied through separate pipes to the ground water.
Bees important in May for pollination.

TASK F2: CASE STUDY: Al-A'TAL FRUIT FARM

1: Using Fact Box F3 construct a pie diagram to show what happens through the seasons.

2: Using the information on the farm's location draw a north to south sketch profile from the Jabal Al 'Arab to the top of the Azzam volcano to show: the farm; orchards; well; limestone basement rocks, lava flows, likely surface and sub-surface drainage lines. Add an approximate vertical and horizontal scale.

3: You are a seasonal worker on the farm. At what time of year will you be in demand? What might you do for the rest of the year?

4: Prepare a pie chart depicting the year from January through to December. Inside the pie indicate the various activities through the year.

5: Complete, in sequence, the numbered boxes in Figure F2:

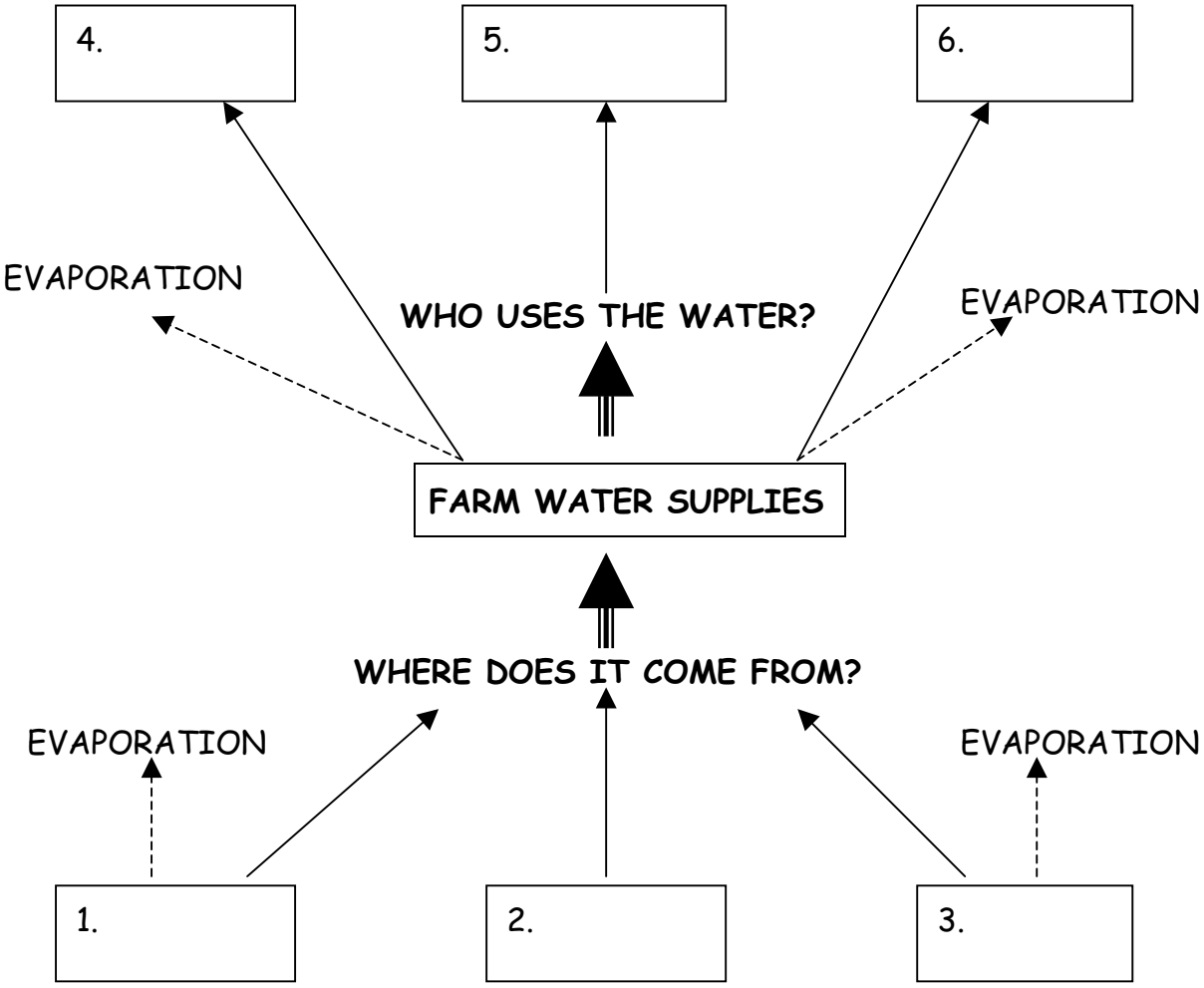

Fig.F2: Water Supply Model

Fig.F3: Apple trees on Al-A'tal Farm fed by drip feed irrigation.

Fig.F4: Sorting olives at Al-A'tal Farm