Farmer Jones owns a citrus grove in central Florida. In anticipation of a bountiful harvest he sold his expected harvest to orange juice processors for future delivery at $100 a crate and a 10 percent down payment which will be deducted from the final sale price. However, before he could pick the oranges his groves were damaged by an unexpected frost. The frost destroyed a significant percentage of his crop and the crops of other farmers in the state. After the freeze, the wholesale price of oranges in Florida climbed to $150 a crate. The spot market price for immediate delivery before the frost was $95 a crate.

It is impossible for Farmer Jones to fulfill all of his commitments with the diminished harvest. He could replace his reduced production by purchasing oranges in the wholesale market at $150 a crate and honoring the agreed upon price of $100 per crate. Instead, he has announced that he can no longer honor his previous contracts. He is willing to sell the processors 80 percent of the previous amount ordered for $120 a crate. At this price per crate, his total revenue would remain about the same as if there had not been a frost.

The orange juice processors spent funds in anticipation of the forthcoming harvest. If the buyers shut down operations, some of these already purchased resources will be wasted (This is included in fixed costs); while others, such as canning supplies, can be used in future production (This is included in variable costs).

Orange juice processors who had contracted with orange growers in Latin America before the frost at $103 crate will significantly benefit from the frost. The frost did not extent to orchards in Latin America; consequently, these growers will be able to honor their commitments. Accordingly, the juice processors with Latin American contracts will continue to receive deliveries at $103, while also selling their orange juice output at the higher post-frost price.

Tropics International (TI), a juice processor, had a contract with Farmer Jones for 1,000 crates. This is the maximum number of crates TI could process within the relevant time period. TI could make up for a shortfall in deliveries from Farmer Jones by purchasing additional oranges at the current market price of $150 a crate. Their fixed costs are $15,000 and their variable costs (not including the cost of oranges) are $2 for each crate of oranges processed. Before the frost TI expected each crate of processed oranges to generate $140 in orange juice revenues. They now will receive $170 per processed crate in juice revenues.
Questions

1. What are perfect expectation damages, opportunity cost damages and reliance damages for Tropics International? Provide an explanation for each and explain how you calculated each of these damages.

2. What are efficient damages and why are they efficient? Given efficient damages, would Farmer Jones breach? Explain why?

3. Should the possibility of overreliance or duress play a role in determining damages?

4. Suppose Farmer Jones was approached by a purchaser who was willing to pay $155 a crate for his oranges. Would it be optimal for him to breach his existing contracts? Would it be efficient from a social welfare perspective?