The types of printers considered in this report include the following:

- Black and white laser printers. These are very inexpensive devices in common use with personal or micro computers and are available from a large number of manufacturers. Typically they print at 300 dpi and cost $2,000.00 to $4,000.00. Higher quality output is available for higher prices (e.g. $5,000.00 to $20,000.00 and up). As noted above, higher density output is required to obtain near photographic quality image.

- Black and white and colour ink-jet printers. These are even less expensive than laser printers, ($1,000.00 to $2,000.00) but suffer the same drawbacks that laser printers have. Most are limited to 300 dpi output.

- Colour laser printers. These devices use similar technology as black & white laser printers, but with three colour inks. The costs range from $5,000.00 and up. These devices suffer the same lack of photographic quality for images as black and white units, and in addition, cannot produce machine readable data lines since they are loaded with three non-black inks. A second pass in another printer would be required to print the MRP portion of the label.

- Die Sublimation colour printers. These devices have a wide range in prices from as low as $6,000.00 for a small format unit (approximately passport size) to as high as $70,000.00 for full page high speed units. The printing technique is slightly different than the other devices described here in that it requires a receptor to be pre-printed on the paper. Because of the die sublimation process, the image is closer to a continuous tone colour photograph than those available from the other techniques. Another benefit of this process is the fact that the die is absorbed to some extent by the paper, making removal of the image very difficult. It is noted that a major operating expense of die sublimation is printer ribbons - current costs can be as high as $1.00 per small format page. The images produced by this technique can be protected by covering with a laminate (albeit a different one than currently used). One drawback of this technique is its inability to produce a machine readable data line - a second