

# How To Use Ultraviolet Rays For Sap Preservation

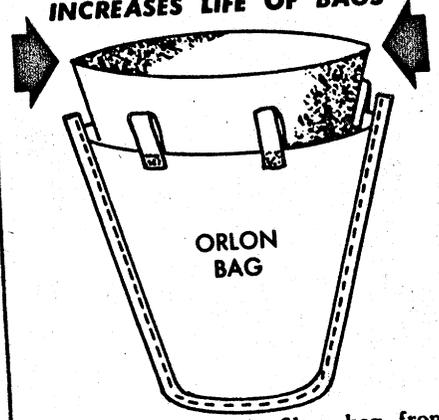
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- Q. Is it desirable to irradiate stored sap with ultraviolet light?
- A. Yes. All sap should be irradiated since it helps keep microbial growth to a low level (prevents fermentation).
- Q. Must all sap be irradiated with ultraviolet light?
- A. No. Only sap which must be held 24 hours or longer. However, as a safety factor, all sap should be irradiated.
- Q. Can spoiled sap be recovered by irradiation with ultraviolet light?
- A. No. Sap which has been degraded by bacterial action cannot be

- recovered by irradiation.
- Q. Will ultraviolet irradiation of sap having a high bacterial count improve the grade of sirup made from such sap?
- A. No. However, irradiation will prevent further damage to the sap.
- Q. Does irradiation of sap cause any damage to the sap?
- A. None.
- Q. Should an empty tank be irradiated by ultraviolet light?
- A. Yes. UV light will control microbial growth on the walls of a tank while it is empty.
- Q. Will UV irradiation substitute for cleaning a tank between uses?
- A. No.
- Q. Does foam on the surface of the sap influence the effectiveness of the UV rays?
- A. Yes. Foam must be avoided. This can be done by bottom filling the tank.
- Q. Can anything be done to increase the germicidal effect of UV light on stored sap?
- A. Yes. Use a slow speed mechanical agitator to gently re-circulate the sap, to renew the sap surface exposed to UV light. Renewal of the sap surface is a must if the stored sap is more than 2 feet deep.
- Q. How many UV lights should be placed in a sap tank?
- A. The number of lamps required for a tank is determined by its size. A good rule of thumb is one lamp for each 4 ft. length of the tank.

- Q. How high above the tank should the lamps be mounted?
- A. Only high enough to permit the illumination of the entire width of the sap surface.
- Q. Should reflectors be used on the lamps?
- A. Yes. Without reflectors more than half of the UV radiation of the lamps is lost.
- Q. Should the lamps be kept lighted throughout the sap harvest season?
- A. Yes - and at least one week prior to the season.
- Q. What is the cost of operation of UV lamps?
- A. A 30 watt UV lamp uses the same amount of current as a 30 watt illuminating lamp bulb.
- Q. What is the life of a UV lamp?
- A. Like any light bulb, one month to several years, generally two or more years. Check your lights occasionally. An unlit or burned-out light kills no organisms.
- Q. Should UV lights be cleaned?
- A. UV lights should be cleaned twice a season, but only when the lamps are turned off. Do not clean UV light tubes with soap or detergent - residual scums will completely absorb the ultraviolet rays.
- Q. Is ultraviolet light dangerous?
- A. Yes. UV light can cause irreparable damage to the eyes. Never look directly at an ultraviolet light or at the reflected light from the sap surface or tank walls.

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