**PROPANE GUNS & OTHER NOISE-MAKING DEVICES ‑ GUIDELINES FOR USE**

 **(Revised September 2, 2016)**

The following facts and guidelines will assist in making the determination as to whether the use of exploding‑cannon noise making devices is likely to be effective and whether they are being used in conformance with accepted practices.

Birds roost at night. Depending on the distance to/from their roost, the bird activity in an orchard or vineyard may not start for as long as an hour after sunrise. Growers should be monitoring bird activity and making a decision on starting the cannons accordingly. The same thing applies at the end of the day. If the bird roost is some distance away from the area to be protected, the cannons may be able to be turned off as early as an hour before sunset once the birds have left to return to their roost.

The propane gun should face the area to be protected. For most efficient results, the gun should be placed near the edge of the property with the barrel pointing generally towards the center of the property into the crop to be protected. The direction the cannon points should be varied somewhat from day to day.

Birds quickly become accustomed to the noise. In order to be effective, the location of the gun should be changed every day or two. By three days, there is likely to be some acclimatization by the birds and the gun's efficacy will be reduced. In determining the location of the gun, growers should consider roosting or loafing cites on or around the property. For example, if there is a power line that runs through the property, the cannon should be oriented so that it discourages birds from using that power line as a loafing area.

Operate with one shot every five or ten minutes for the first hour, then once every half hour during the day (if the equipment in use will operate at that interval), finally once every five or ten minutes during the last ½ hour.

Additionally, property owners should use shotguns as a means of re-enforcing the effect of the cannons. The shotguns should be fired immediately after a cannon has discharged so that the birds associate the cannon noise with the shotgun. This re-enforcement is particularly critical when the birds first begin to appear in the crop and could be relaxed as the season progresses.

The value of the guns is almost entirely limited to short‑term control. In order to extend the effectiveness of the guns please follow these guidelines:

1. Exploding cannons can annoy residents nearby. They should be used only when there is a need and when other control measures have failed.

2. Skip days and/or mix with other control measures (visual patrolling, shooting, etc.).

3. Cannons must not be operated after sunset or more than ½ hour before sunrise (an exception can be made only if depredating birds are present earlier or later than these times). Neither should they be used when birds are not present in the orchard or vineyard. The use of timers is encouraged to ensure that cannons are not accidentally left on to discharge after dark.

4. The location of each device should be changed frequently and the timing between discharges varied. Again, the more you use it, the quicker the birds adapt to the noise and the less effective the devices will be.