Use fastest practical sprayer speed which permits use of large-orifice tips, low pressure and low volume.

d. Restrict acreage treated daily. Do not cover more than 10% of any farm unit per day except when fields are well isolated; this practice will reduce atmospheric contamination near the treated fields and also downwind.

e. Observe wind direction and velocity precautions. Chlorophenoxy herbicides should not be applied within one-half mile of susceptible crops except under the most carefully controlled and supervised conditions. These chemicals should not be applied when the wind velocity at boom height exceeds 8 mph in isolated areas or when wind exceeds 4 mph when sensitive crops are grown less than 2 miles downwind. Application should be avoided during periods of unsettled weather and when variable winds, strong temperature inversions and turbulent weather exist or are anticipated.

AERIAL APPLICATION

Ground equipment is preferable for most of the local sugarcane, pasture and sod area. Aerial spraying of chlorophenoxy herbicide materials greatly increases the risk of spray drift and damage. Aerial application requires constant caution and should be utilized only in well-isolated areas under rigidly controlled conditions. Spraying should be suspended when wind velocity exceeds 5 mph at spray altitude. Aircraft wind-tip vortices “drag” spray aerosols to turn altitudes. Strong temperature inversions and turbulent air movement prevent drift control. Flight patterns should conform to crop conditions and ferry flights should avoid vegetable crop areas.

CONSEQUENCES OF MISUSE

Chlorophenoxy herbicides are valuable, economical tools for control of broadleaf weeds in sugarcane, pastures, sod, rights-of-way and waterways. Careless use causes sensitive plant damage, unfavorable publicity, damage claims, litigation and needless expense. Repeated, indiscriminate use and frequent crop damage could lead to legislation restricting the use of these herbicides. More than 10 states currently have laws pertaining to chlorophenoxy herbicide use. Unfortunately, legislation is not a cure-all nor is it a guarantee preventing damage.

1/ This mimeo details and repeats previous cautions on the use of 2,4-D.
2/ Associate Horticulturist, University of Florida Everglades Experiment Station, Belle Glade, Florida.
3/ Pocket or portable wind gauges are useful. One type is available as a “Pocket Wind Meter” from the F. W. Dwyer Mfg. Co., Michigan City, Indiana.

Strict Liability

By
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No conception can be understood except through history; and of no legal conception in Anglo-American law is this more true than of the notions of Responsibility for tortious Acts. The early law of torts was not concerned primarily with the moral responsibility, or fault of the wrongdoer. It occupied itself chiefly with keeping the peace between individuals, by providing a remedy which would be accepted in lieu of private vengeance. While it is probable that even from the beginning the idea of moral guilt never was entirely absent from the minds of the judges, it was not the most important consideration. Originally the man who hurt another by pure accident, or in self defense, was required to make good the damage inflicted. “In all civil acts,” it was said, “the law doth not so much regard the intent of the actor, as the loss and damage of the party suffering.” There was a general feeling that “he who breaks must pay.”

Until about the close of the nineteenth century, the history of the law of torts was that of a slow, and somewhat unsteady, progress toward the recognition of “fault” or moral responsibility as the basis of the remedy. With a growing moral consciousness in the community, there was a general movement in the direction of identifying legal liability with conduct which would not be expected of a good citizen. This tendency was so marked that efforts were made by noted writers to construct a consistent theory of tort law upon the basic principle that there should be no liability without fault. But “fault,” in this sense, never has become quite synonymous with moral blame. “Fault” is a failure to live up to an ideal conduct to which no one conforms always, and which may be beyond the capacity of the individual. It may consist of sheer ignorance, lack of intelligence or an honest mistake. It may even consist of acts which are normal and usual things in the community.

In this broad sense, “fault” means nothing more than a departure from a standard of conduct required of a man by society for the protection of his neighbors, and if the departure is an innocent one, and the defendant cannot help it, it is none the less a departure and a social wrong. The distinction still remains between the man who deviated from the standard, and the man who has not.

In this sense there is “fault” in much innocent conduct. Tort liability never has been consistent with the ignorance which is bliss or the good intentions with which the road to hell is said to be paved. A trespasser is not excused by the honest reasonable belief that the land is his own, an innocent purchaser of stolen goods is held liable for conversion; the publisher of a libel commits a tort, although he has no means of knowing the defamatory nature of his words. And there are many other situations in which a careful person is held liable for an entirely reasonable mistake. In all this there is nothing new. Socially these defendants are at fault.

But beyond this, the twentieth century has witnessed the overthrow of the doctrine of “no liability without fault,” even in the legal sense of a departure from reasonable standards of conduct; and a general acceptance of the principle that in some cases the defendant may be liable, although he is not only charged with no moral wrongdoing; but has not even departed in any way from a reasonable standard of intent or care.

In areas of unusual conditions or activities, the courts have in effect recognized a new doctrine, that the defendant’s enterprise, while it will be tolerated by law, must pay its way. There is a strong and growing tendency, where there is blame on neither side, to ask in view of social justice, who can best bear the loss and hence to shift the loss by creating liability, where there has been no fault. An entire field of legislation, illustrated by the Workmen’s Compensation Acts, has been based upon this principle.

This new policy frequently has found expression where the defendant’s activity is unusual in the community, and the danger which it threatens to others is unusually great and will be great even though the enterprise is conducted with every possible precaution.

In these situations the courts have tended to lay stress upon the fact that the defendant is acting for his own purposes, and is seeking a benefit or a profit of his own
from such activities, and that he is in a better position to administer the unusual risk by passing it on to the public than is the innocent victim. The problem is dealt with as one of allocating a more or less inevitable loss to be charged against a complex and dangerous civilization, and liability is placed upon the party best able to shoulder it. The defendant is held liable merely because, as a matter of social engineering, the conclusion is that the responsibility should be his. This modern attitude, which is largely a thing of the last four decades, is of course a far cry from the individualistic viewpoint of the common law courts.

The leading case in the doctrine of strict liability for abnormal activities or condition is an English case, Rylands v. Fletcher, decided in 1866. The defendants, mill owners in Lancashire, constructed a reservoir upon their land. The water broke through into the disused and filled-up shaft of an abandoned coal mine, and flooded along connecting passages into the adjoining mine of the plaintiff. An arbitrator found that the defendants themselves were ignorant of the existence of the old coal workings and were free from all personal blame. But the court held the defendants liable stating that: "The person who for his own purposes brings on his land and collects and keeps there anything likely to do mischief if it escapes, must keep it at his peril, and if he does not do so is prima facie answerable for all damages which are the natural consequences of its escape." This principle was later extended by the House of Lords to apply only to a now natural use of the defendants land as distinguished from "any purpose for which it might ordinarily in the course of enjoyment of the land be used." The emphasis was thus shifted to the abuse of the inappropriate character of the defendant's reservoir in coal mining country, rather than the mere tendency of all water to escape.

Some seventy English cases have fully borne out this interpretation. The strict liability has been said many times to be confined to things or activities which are extraordinary or exceptional or abnormal and not to apply to the usual and normal.

The doctrine in Rylands v. Fletcher has been expressly rejected in ten states and been approved in thirty states. As of this time the courts of the State of Florida have not rendered a decision either way.

The conditions and activities to which this rule has been held to apply include, the fumigation of part of a building with cyanide, crop dusting with a dangerous chemical likely to drift (Arkansas). Although there is no indication that Florida has adopted the rule of "Strict Liability" nor have there been any Appellate cases involving negligence in the use of herbicides and insecticides the Florida courts have held that "The use of a dangerous agency requires exercise of care commensurate with the nature and use of such agency and the conditions and circumstances under which it is operated and utilized." Practically speaking, this Florida doctrine for almost all intents and purposes results in the same degree of liability as if the courts of Florida had adopted the rule of strict liability.

Another situation to be considered involves the aerial application of the herbicide. Any physical entry upon the surface of the land is a trespass, whether it be by walking upon it, flooding it with water, casting objects upon it, or piling dirt or attaching wires against a boundary wall. But the interest in exclusive possession is not limited to the surface; it extends above and below. There is a property right in the air space above land, which may be invaded by over-hanging structures, telephone wires by thrusting an arm across the boundary line, or by shooting across the land even though the bullets do not fall upon it.

The upward extent of this property right has been subject to much discussion in recent years since it has been brought into sharp relief by the progress of aviation. Lord Coke once stated that "he who has the soil owns upward into heaven, and by analogy downward to pedinition." No one now advocates that it be applied literally; if it were, and no way found to evade it, it is obvious that no airplane would ever leave the ground. But the exact extent of the landowners rights in the air space above his land has not been legally determined.

There are three theories that different courts have applied in the determination of the airspace above an individuals land.

One is the zone theory, which divides the air space into two zones. With the land owner owning that contained in the lower zone but not that in the upper zone. The determination of the dividing line between the two zones at the limit of the owners "effective possession" or in other words, at so much of the space above him as is essential to the complete use and enjoyment of his land. The major objection to this theory is that the height of each zone must vary according to the facts in each case and therefore the extent of the right is unknown pending adjudication.

The second view limits the owner's right to his actual use of it. This theory denies any ownership of the unused air space and as a result there is no trespass unless there is an interference with the present enjoyment of the property.

And finally there is the position adopted by a majority of the states including Florida. This view recognizes unlimited ownership of upward space, subject to a privilege of flight similar to the public right to use a navigable stream. This use of the air space above an owner's land is deemed a privilege at law and it is coequal with the owner's right to lawful and reasonable use of such airspace.

This privilege to use the air space above the property definitely does not extend to any chemical that would travel through the air and fall upon the property of another. Therefore the individual applying the spray could possibly be deemed a trespasser and would be liable for all damages caused by that chemical.

There are certain conditions under which conduct which would otherwise result in strict liability may be privileged. The most obvious one is that of a sanction given by statutory authority or by well defined law. Within the limitations of the constitution, the legislature may authorize acts which involve a high degree of risk to others, and such authority amounts at least to a declaration that the acts are not anti-social but desirable for the benefit of the community. In the absence of a provision expressly preserving the defendant's liability for any resulting damages, the courts have interpreted the statute as condoning the consequences in advance, and have refused to hold the defendant liable for doing what he was authorized to do. Thus where gas, water, or electric conduits are laid in the street under legislative sanction, there is no liability for damage they do in the absence of negligence. Likewise a contractor, doing work involving blasting for the state has been held not subject to strict liability.

Upon much the same basis, those who are charged with a public duty are not liable, unless they have been negligent in performance.

There is a possibility that the courts of Florida might interpret FLORIDA STATUTE 372.931, the statute that grants the Hyacinth Control Commission its powers, as an act "authorizing acts which involve a high degree of risk
to others" and therefore there would be no liability in the absence of negligence on the part of the applicator of the herbicide.

The principle of strict liability is being extended, both by statute and by modification of the Common Law. This extension will undoubtedly continue as new social viewpoints impose greater responsibilities upon the defendant.

The outstanding statutory application of the principle is of course in the Workmen's Compensation Act which is based upon the theory that the burden of industrial accidents should fall upon the employer, because he is in a better position, by means of prices and insurance, to shift it to the public. A very similar policy is found in such statutes as the Federal Safety Act, which requires railroads engaged in interstate commerce to equip their trains with certain safety devices and makes them responsible without negligence for any deficiency which injures employees.

While the Common Law has not kept pace with these statutory developments, it has shown some tendency to extend strict liability into new fields. Sellers of goods have been held liable in increasing numbers for defects which cause harm to the purchaser, under the guise of "implied warranty" which becomes a term of the contract, and permits recovery without any proof of negligence. A growing minority of jurisdictions have held the manufacturer liable to the ultimate consumer, even in the absence of contract, upon the theory of a warranty "running with the goods." While this extension has occurred thus far chiefly with the sale of food, there is no essential reason for so limiting it, and it may eventually be applied to any article where there is a high risk of injury from any defects.

The last few years have witnessed the renewed and more vigorous advocacy of strict liability on an even broader scale. The development of liability insurance has furnished a potent argument for those who wish to extend it, on the ground that such insurance provides a means by which the inevitable damage caused by an entire industry or field of enterprise may be distributed among its members, and the cost of insurance may be passed on, by rates or prices to the public which is served.

It appears probably, however, that there will be further developments of this kind in the future, whose form and extent cannot be foreseen with any certainty. It is not difficult to predict that the tort law of 2064 will involve, in many additional fields, both compulsory liability insurance and compensation.

**FOOTNOTES**

10. 1866, L. R. 1 Ex. 265.
17. Beaver v. Martin Theaters of Florida, 52 So. 2d 682.

**Conservation of Florida's Natural Resources**

by

CAPTAIN NOAH J. TILGHMAN

Palatka, Florida

FLORIDA, the land of FLOWERS, the land of SUNSHINE, the land of OUTDOOR RECREATION, the land of GROWING GREEN, the land of WATER with LAKES and STREAMS, stocked with fish for sport and fish for food, all of which only God is able to produce for man. These are the good things of life for which we did have for many years to sell people outside Florida. To destroy any of these assets is a great loss for the attraction of tourists, which has always been considered Florida's best industry. The year 1912 I started selling black bass fishing on the St. Johns River to out of state visitors. The associations in this work, I know the requirements to sell Florida outdoors.

Conservation of these assets are very important. Until 1946 the St. Johns River was a beautiful stream, attracted many visitors for its wild flowers, especially blooming water hyacinth along its shore line which supplied food for fish, saving erosion of the river banks by quieting waves in high winds, and an aid to water purification. I am sorry to report we have lost much of these valued assets.

With a few years of War, the U. S. Army Engineers in charge of boat navigation contended drifting hyacinth were detrimental for the operation of Air-Sea-Planes at Jacksonville Air-Base. Fences were built at many points on the river to stop drifting hyacinth down stream, which caused a bad situation for boat navigation, South of Federal Point. The Engineers tried several mechanical machines, that did not prove efficient or practical, so they were ready to abandon this procedure for a chemical spray in 1946, which they said would not harm cattle feeding on them and without injury to fish.

At this time I made a protest against extensive use of pesticides, but agreed a controlled program was necessary. Until 1958 it was a general understanding we had a controlled program, then Congress passed the Act of extermination of all hyacinth. I realized before this we were in trouble, but pressures were so great there seemed little chance of getting relief.

The analysis and recommendations for the control and balance of nature is tricky, and must be handled with caution. A controlled hyacinth program can successfully be carried on with the use of a Mechanical Harvester on the bow of a boat, loading the boat with hyacinth, moving them to shore where they are dumped. This is a simple procedure and a clean operation. In Wisconsin and Minnesota where hyacinth will not grow, under water weeds are taking the streams. Machines are being built to harvest this vegetation and dumping same on the banks. Hyacinth will retard the growth of under-water plants, and easy to harvest floating on top of water.

I have appealed to our Congressional leaders, and our State Government, to stop the use of 2,4-D spraying the St. Johns River. A letter from Col. Robert Marshall, Asst. Director of Civil Works for Atlantic Division, U. S. Army Engineers, Quote: "Hyacinth control activities on the St. Johns River area has been conducted for many years under the Federal Program for aquatic plant control in the State.