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LEGAL IMPLICATIONS OF AGRICULTURAL AVIATION*

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A VIATION in agriculture is not new. Although the exact date of its introduction to farming is obscure, its beginning is generally considered to have been during 1919. Since then, it has grown by leaps and bounds until today when we have approximately 15,000 planes operating in agricultural aviation all over the globe from the marshy rice paddies of the East to the undeveloped land of Iran.

To the present day farmer aviation’s value is untold and its uses manifold. It can be used for seeding, spreading defoliants and in frost control. But, by far, the most valuable assistance which agricultural aviation renders is in the application of herbicides and pesticides to crops and forests. It has been estimated that crop losses totalling $5,000,000,000 in 1949 alone were saved by the application of pesticides and herbicides — 25% of which were applied by aircraft.

Dusting by aircraft to control insects has been standard practice in all cotton-growing sections of our country for many years, but dusting to control weeds did not assume its great importance until after World War II when an acid known as 2, 4-D became available as a herbicide. The development of this acid, together with the combination of available surplus aircraft and many experienced pilots, probably accounted for the rapid rise in the use of aircraft for agricultural purposes since the war.

For a better understanding of how 2, 4-D accomplishes its purpose, it might be well to digress for a moment and briefly consider the characteristics of this phenomenal chemical which has proven to be

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*Presented to the Aviation Insurance Law Round Table, Insurance Section, American Bar Association at New York, N. Y., September 17, 1951.


4 A conservative estimate taken in part from an Editorial by Avery S. Hoyt, Chief of Dept. of Entomology and Plant Quarantine, of U.S. Dept. of Agriculture, titled “Need for continued Research for Pesticides” appearing in June, 1951 issue of Agricultural Chemical Magazine, and in part by estimates supplied by various herbicide manufacturers.

such a boon to agriculture in its war on weeds. 2, 4-D is the commonly accepted abbreviation for 2, 4 dichlorophenoxyacetic acid.

It is not a poison in the ordinary sense, but a hormone-like material that causes serious disturbance in plants. Its effects can be highly lethal because by stimulating respiration, digestion of plant foods, and use of reserve material, it kills the plant by weakening it through abnormal use of its reserves. Characteristic symptoms of its lethal activity are bending and twisting of the stem and curling of the leaves.

Broad-leaved plants are highly susceptible to its lethal activity and caution must be used in its application in the vicinity of broad-leaved crops as it has unusual carrying qualities and even in a light wind will drift for many miles. These carrying properties are so predominant in the dust form that application of 2, 4-D dust by aircraft has been prohibited since 1948 by the Civil Aeronautics Authority upon the request of the Department of Agriculture. Nonetheless, because it is cheap, selective, easy to apply and adapted to a wide variety of weed problems, it is one of the most important chemicals in the weed control field today.

The flying farmer of today spraying any one of the modern chemicals is conducting an operation of such potential that improper or careless execution can cause crop losses comparable to climatic disasters. In spite of this, there have been only nine reported cases involving damage to property of third parties as a result of aerial dusting. Significant of the recent growth of the industry and the development of more powerful herbicides, however, is the fact that six of the cases have been reported since 1948—three of which involve the use of 2, 4-D. The paucity of cases is not a good indication of the importance of the legal aspects of agricultural aviation. Since this aspect of agricultural aviation is of greater concern to the practicing attorney, we shall limit our discussion to a consideration of liability for damage to third parties as a result of crop dusting operations.

APPLICATION OF THE, PER SE, "INHERENTLY DANGEROUS" DOCTRINE

The question of liability for third party damage from crop dusting operations first arose in 1933 when the Arizona Supreme Court considered the case of S. A. Gerard Company v. Fricker. In this case, the court established the harsh precedent unfortunately followed in later cases that aerial dusting was, per se, "inherently dangerous" and imposed strict liability on the farmer at whose request the dusting operations had been performed. The facts of the case conform to the

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6 W. A. Harvey and W. W. Robbins "2, 4-D as a Weed Killer." California Agricultural Extension Service circular 133, revised June, 1947, p. 4.
7 ibid, p. 6.
11 Harvey and Robbins "2, 4-D as a Weed Killer," p. 4.
12 42 Ariz. 503; 27 P (2d) 678; 1 Avia. 488.
usual pattern found in most crop dusting cases and involve a defendant farmer who employed an independent contractor, expert in aerial dusting to apply a poisonous pesticide in treatment of his crops. Damage to the plaintiff's adjoining apiary resulted from drift of the poisonous insecticide which had been negligently sprayed in a wind blowing toward the plaintiff's property. Suit was brought against the farmer rather than the contractor. The Trial Court found for the plaintiff and the defendant's main contention on appeal was the fact that the dusting had been performed by an independent contractor and, therefore, the defendant could not be liable for damage. This assignment of error was denied by the court with the holding that the dusting operation was, per se, "inherently dangerous," and consequently the defendant could not delegate its performance to an independent contractor and thereby avoid liability. In arriving at its decision the court said:

"The defendant was within its legal rights in depositing the insecticide on its lettuce field for the purpose of ridding it of worms with which it was infested, and it can do this work itself for (sic) it could contract it, but, because of the very great likelihood of the poisonous dust or spray spreading to adjoining or nearby premises and damaging or destroying valuable property thereon, he could not delegate this work to an independent contractor and thus avoid liability."\(^{13}\)

In arriving at this harsh and precedent setting decision that aerial crop dusting was, per se, "inherently dangerous" and could not be delegated to an independent contractor, the court also said:

"This is especially true where the agency or means employed to do the work, if not confined and carefully guarded, is liable to invade adjacent property or property of others and destroy or damage it."\(^{14}\)

There should be no confusion as to whether the airplane or the dusting operation was the dangerous instrumentality referred to. The courts have consistently held the airplane not to be, per se, a dangerous instrumentality.

**Aerial Crop Dusting Is Not, Per Se, "Inherently Dangerous"**

The Court cited two cases\(^{15}\) in support of the proposition that the operation is "inherently dangerous" and I believe both cases are readily distinguishable from the facts in the Fricker case and, consequently, question the soundness of the court's decision in applying the harsh rule of strict liability to the defendant farmer. We are all familiar with the general rule that an employer is ordinarily not liable for damage caused by the negligence of an independent contractor on the theory that the employer has no control over the operations being per-

\(^{13}\) Ibid p. 484.
\(^{14}\) Ibid. p. 484.
formed by the independent contractor and, therefore, should not be responsible for damage caused by the negligent execution of the work.\textsuperscript{16}

One of the main exceptions to this rule is where the work contracted for is, per se, inherently dangerous. In such case, an employer cannot delegate the work to an independent contractor to avoid liability for damage caused by lack of due care in the performance of the work.\textsuperscript{17}

The essence of the doctrine is that if the work is of such a nature to bring it within this classification, the employer is subject to a positive duty to see that it is carefully performed in all details. He cannot assume that other persons will exercise reasonable care.\textsuperscript{18}

The major difficulty is in determining whether or not a given case falls within the dangerous instrumentality classification. The more accepted test seems to be, not whether a man of ordinary prudence should have anticipated that the injury would have ensued,\textsuperscript{19} but rather whether danger so adheres in the performance of the work that safeguards must be taken.\textsuperscript{20} In other words, injuries to third persons must be expected to arise unless means are adopted by which such injuries may be prevented.\textsuperscript{21} Accordingly, it seems clear that there is a duty on the part of the performer to take positive action to prevent damage which is expected to arise from the operation rather than merely exercise due care in the execution thereof. The operation of aerial dusting clearly should not come within this definition, as only due care, not preventive action is required.

In the Fricker case, the court cited the case of Medley v. Trenton Investment Co.\textsuperscript{22} as well as the case of St. Louis and S.F.R. Co. v. Madden\textsuperscript{23} as authority for its holding that the operation was inherently dangerous. The facts in each of these cases cited by the court clearly bring it within the classification of an inherently dangerous operation. In the Medley case, the independent contractor spread poisonous gas throughout one apartment of a multiple dwelling building with the knowledge that the poisonous gas would escape into other apartments unless doors and windows were shut and sealed to prevent leakage. In the St. Louis case, the railroad was clearing its right of way by burning underbrush, and we are all familiar with the fire hazard and its tendency to spread unless preventive measures are constantly maintained. Therefore, in each case, the means employed were of such nature that safeguards were required to keep them within bounds and prevent damage to others. Both the poisonous gas and the fire were bound to escape and cause damage unless actively controlled by the

\textsuperscript{16} 39 C. J. 1323 (Sec. 1530); Restatement of the Law of Torts, Sec. 409; 57 C. J. S., Sec. 584 and cases there cited.

\textsuperscript{17} 39 C. J. 1351, Restatement of Law of Torts, Sec. 427; 57 C. J. S. Sec. 590 and cases there cited, 23 A. L. R. 1016.

\textsuperscript{18} 23 A. L. R. 1027.

\textsuperscript{19} 39 C. J. 1351, Sec. 1540.

\textsuperscript{20} Ibid; Scales v. Lewellyn, 172 N. C. 494.

\textsuperscript{21} 39 C. J. 1332.

\textsuperscript{22} See Note 15, supra.

\textsuperscript{23} Ibid.
operator. Not so, however, in the Fricker or other crop dusting cases where, if due care is exercised in its execution, injury to others will not result. Preventive measures need not be taken. Consequently, on the facts alone, I do not believe that the cases cited by the court are sound authority for the ruling in the Fricker case.

The reason for the court's decision and the imposition of the harsh rule of strict liability might be found in the fact that there is always fear of the unknown and when the court considered the Fricker case in 1933, aviation was relatively new and, in most cases, treated with distrust. Aerial crop dusters in those days were the barn storming pilots whose vocation was thrilling crowds at fairs and carnivals, who only turned to crop dusting at infrequent intervals. The court might well have given consideration to the dare-devil nature of the aviators in holding the employer to strict liability.

Similar facts gave rise to another third party damage claim in 1940 when the Arkansas Supreme Court in the case of Hammond Ranch Corp. and Homer Ricks v. Dodson and Williams after citing the Fricker case at length, followed its ruling and applied strict liability on the part of the defendant farmer. Later Arkansas cases, however, while still holding aerial crop dusting, per se, inherently dangerous, indicate a slight relaxation on the part of the court in the imposition of strict liability on the part of the defendant farmer and apply the reasonable man test to determine whether the farmer had knowledge of the dangerous potentialities of the poisonous chemical in order to evaluate his liability. As aviation grows and takes its rightful place in industry, the courts are losing their fear and distrust. There is now a marked tendency not to penalize this growing industry with unfair codes of conduct, but to subject it to the same standards of care as required of other means of locomotion.

THE "NUISANCE DOCTRINE" AS APPLIED TO AERIAL CROP DUSTING

Another line of cases decided liability in aerial crop dusting operations on the theory of "nuisance" and have permitted the defendant to avail himself of the regular common law defenses in order to absolve himself of liability. In 1937, four years after the Fricker case, the California Court of Appeals considered the first of a series of three cases arising in California involving liability to third parties for crop dusting operations. In Miles v. A. Arena & Co., et al, neither counsel cited the Fricker case in his brief and the California Court thought it

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24 This fact is further substantiated when we consider the proportionately small number of claims arising from aerial dusting operations. Moreover, the fact that negligence can be proven in each claim would indicate that, if due care had been exercised, damage would not have resulted.
25 199 Ark. 847; 136 S. W. (2d) 484; Avia 870.
27 23 Cal. App. (2d) 680; 73 P (2d) 1260; 1 Avia. 728.
was considering a case of first impression in the country. The court likened the drift of poisonous dust to cases where damage to third parties' property had resulted from drifting smoke, dust, noxious gases, or similar substances originating on the defendant's property. The facts in the Arena case conform to the already familiar pattern of factual situations arising in third party claims for crop dusting damage and involve a defendant farmer who hired an independent contractor to apply poisonous dust to rid his crops of insect infestation. The poisonous dust was sprayed while the wind was blowing toward the plaintiff's property, and it was shown at the trial that the poisonous dust drifted to and damaged the plaintiff's apiary approximately one-half mile away. In finding against the defendant, the court said:

"It must be conceded that, in itself, dusting vegetables to kill pests that prey upon them is a necessary and lawful operation which the owner of the vegetables may perform, either himself or through his servants, or may have performed by an independent contractor. However, he should not do the dusting, or have it done, under circumstances which would indicate to a reasonably prudent person that damage to his neighbor would result."28

Under this theory the farmer is liable to the plaintiff on the basis of private nuisance to adjoining land owners and not because of the inherently dangerous nature of the work as laid down in the Fricker case. Here, the court obtained the same result and permitted recovery against the farmer. However, the farmer could avail himself of the common law defenses and was held to a degree of care commensurate with that exercised by the reasonably prudent man. There can be no question but that the California ruling, followed in later California cases,29 seems more equitable and is a much more reasonable approach to the subject of liability than the imposition of the harsh rule of the Fricker case.

**Manufacturer Absolutely Liable for Damage Caused by Latent Defects**

Another landmark case in the establishment of principles of law affecting agricultural aviation is *Chapman Chemical Company v. Taylor.*30 Here a novel situation was presented to the Arkansas Supreme Court in 1949 involving the latent drift characteristics of 2, 4-D. In the Chapman case the plaintiff brought action against the defendant farmer for damage to his cotton field caused by the drift of 2, 4-D spread by the defendant on its rice field over three-fourths of a mile away. At the trial, the defendant farmer impleaded the chemical company that manufactured the 2, 4-D as a party defendant under the Uniform Contribution Among Tort Feasors Act on the theory that

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the latent drift characteristics of 2, 4-D had not been made known to
the defendant and, consequently, the manufacturer should be liable
for the damage caused by the latent defect in the manufacture of the
chemical. At the trial it was shown that 2, 4-D had carrying qualities
unlike any other chemical and, even in a slight wind, would drift as
much as twenty miles where the ordinary dust would settle within
sixty feet. It was further established that the chemical company manu-
facturing 2, 4-D not only did not have knowledge of these characteristics but had not even conducted tests to determine the carrying qual-
ities of the chemical. The Trial Court returned a verdict in favor of
the defendant farmer and awarded judgment against the impleaded
manufacturer. On appeal, the Appelate Court sustained the findings
of the Trial Court and based its ruling on the doctrine of MacPherson
v. Buick Motor Company,31 which laid down the doctrine that privity
of contract was not necessary between plaintiff and defendant to estab-
lish liability and then imposed absolute liability on the part of the
chemical company on the holding of Spencer v. Madsen,32 stating

"Rather it (liability) rests upon the principles that where the
thing when put to the use for which it is intended by the manufac-
turer, by reason of defects which were known, or could have been
known, by the exercise of reasonable care by the manufacturer is
dangerous to life and limb, the manufacturer is liable to third per-
sons."

Also worthy of note in the Chapman case is that, while the question
of independent contractor did not arise, there was some indication that
the court would not have applied the harsh rule of the Fricker case
when, in discussing the liability of the defendant farmer, the court in-
dicated that his liability was to be decided by his own negligence. Little
by little, the common law defenses are becoming available to the de-
fendant farmer.

31 217 N. Y. 382; 111 N. E. 1,050. This was an action for personal injury
to the plaintiff caused by accident resulting from defective manufacture of a
wheel on an automobile manufactured by the defendant. Among other things, the
defendant denied liability on the theory that the wheel had been manufactured
by an independent contractor and that there was no privity of contract between
the plaintiff and defendant as purchase had been made through an automobile
dealer. The court held that an automobile manufacturer is chargeable with
knowledge that an automobile equipped with weak and defective wheels is a
dangerous machine. Where the manufacturer purchased iron and painted wheels
from a reputable dealer and exercised no care to determine whether they were
defective, except to run the auto for several miles for a test, the manufacturer
is liable for an injury to one who purchased the car from the manufacturer's ven-
de and was injured by the collapse of the wheel because of a defect which might
have been discovered by proper inspection by the manufacturer. Justice Cardozo
said: "If the nature of a thing is such that it is reasonably certain to place life
and limb in peril when negligently made, it is then a thing of danger. Its nature
gives warning of the consequences to be expected. If to the element of danger
there is added knowledge that the thing will be used by persons other than the
purchaser and used without new tests, then irrespective of contract, the manu-
facturer of this thing of danger is under a duty to make it carefully."

32 142 Fed (2d) 820.
THE DOCTRINE OF THE TRESPASSING BEE

Of the nine reported cases, five involved damage to apiaries. In the three early cases it was found that the poisonous dust had drifted from the point of application on the defendant's property over to the plaintiff's apiary and, consequently, negligence in the execution of the operation was established. However, in the case of Lundberg, et al v. Bolon the defendant farmer was held liable by the Trial Court for damage to the plaintiff's apiary caused by the use of poisonous dust on the theory that the defendant had failed to give notice to the plaintiff of his intention to spread poisonous dust on his crops. On appeal the Appellate Court found negligence on the part of the defendant by reason of the fact that the dust had drifted from the point of application over to the plaintiff's adjoining apiary. In overruling the Trial Court's grounds for decision, the Appellate Court held that causal connection had not been established between the lack of notice and the damage to the apiary. The court also indicated, in dictum, that had the bees been trespassers, recovery would have been denied. This dictum has become the ruling in Jeanes v. Holtz, et al and Lenk v. Spezia wherein the California Court of Appeals found for the defendants on the theory that the plaintiff's bees were trespassers on the defendants' crops at the time they came in contact with the poisonous dust and, therefore, recovery was denied. The court held that, without a showing that the dust had drifted to the apiary, there was not sufficient basis upon which to predicate liability to the defendant.

The ruling in the case involving trespassing bees is in accord with the weight of authority and follows the general rule cited in 1 Ruling Case Law, Section 74 (Page 1132) that:

"The owner of unenclosed land is not in general bound to keep his premises safe for the trespassing animals of others and, if in the ordinary use of his property harm befalls them, their owner by permitting them to roam at large is held to have assumed the risk of such injury and so is denied any right of action on that count."

There might be some question that bees can be considered licensees if the defendant had knowledge of their constant invasion of his prop-
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erty and had accepted the benefits of their cross-polination. However, in the case of McGill v. Compton 39 it was held that there could be no recovery for injury to the plaintiff's animal resulting from accident occurring on the defendant's property, even where the animal was a licensee, without showing that the defendant had agreed to protect the animal while it was on his property. If we apply this ruling to the Bee case, it is apparent there would be no recovery unless the defendant farmer had agreed to protect the bees while they were on his property. Without this showing, there would be no recovery.

Our review of the reported cases establishes the fact that recovery can be had from the defendant farmer, either on the basis of the "inherently dangerous" doctrine or on the doctrine of "private nuisance," with a marked tendency of courts in later cases to permit the defendant to avail himself of the common law defenses even where the court applies the "inherently dangerous" doctrine. This departure from the strict rule in the early cases seems to indicate that Agricultural Aviation is "coming of age" and as its benefits to our economy become apparent, the courts adopt a more equitable approach to the question of liability.

CONTROL AND EDUCATION

Just as in other new industries, agricultural aviation suffered "growing pains" and in some localities received a bad reputation from the unconscionable methods employed by some of the operators and from the public's fear of the unknown. It was to be expected that many pilots of narrow vision only able to foresee a limited future for themselves in this industry would be primarily concerned with making a fast profit rather than performing a properly executed operation. The result was an irate farmer for a job poorly done on his own crops and negligent damage to his neighbor's. The more intelligent operators, on the other hand, foreseeing the tremendous possibilities over the years for this young industry conducted their operations in an efficient manner. Their purpose was to leave a satisfied customer in each locality as their best means of advertising.

It was obvious that something had to be done in order to prevent the unscrupulous operator from doing great harm. Although controls are repugnant to most of us, some control was necessary. It could not be supplied by the Civil Aeronautics Authority as their regulations, if constitutional, would apply on a nationwide basis and what would be adequate and effective for one section of the country would not be suitable in another. Moreover, the CAA could only control certain aerial applicators, and it was necessary that ground applicators be subject to the same regulation. The best solution was control by the several states and in the majority of our agricultural states, this is prop-

39 66 Ill. 327; See 49 Am. Dec. 261 note.
erly limited to registration of operators\textsuperscript{40} and the requirement that application be made for permission to use poisonous chemicals. By this method the state insures that the operator will have at his disposal all current information about the chemical for which application to use has been made.

Schools and universities in the agricultural areas, especially those having agricultural departments, are joining in the campaign to educate personnel in the industry.\textsuperscript{41} The CAA and Department of Agriculture, combined with the local state agencies and representatives of the chemical companies, all foresee the need for education rather than regulation and are working toward that end. This spirit of cooperation can be readily seen in the development of the aircraft designated, AG-1. It was built and designed by Texas A\&M in cooperation with the CAA\textsuperscript{42} with the advice and recommendations of most operators in the industry. It is the first aircraft designed and built exclusively for use in agricultural aviation and its demonstration flight on June 27, 1951, at Washington National Airport showed it to be highly satisfactory in performance.\textsuperscript{43}

The development of better planes, combining the speed of aircraft with the agility of the helicopter; the discovery of newer and more powerful chemicals and the cooperative spirit of the farmer, the duster, the manufacturer and various Federal and State agencies give this adolescent industry its greatest assurance. Agricultural aviation's future is secure and the benefits we shall reap from its development are limitless.

\textsuperscript{41}Geo. D. Childress—Control or Education in Aerial Farming—CAA Press Release, Feb. 24, 1949.
\textsuperscript{42}CAA Bulletin #CAA 390, dated Nov. 2, 1949.
\textsuperscript{43}CAA Bulletin #CAA 51-32 dated June 27, 1951.