SPUD VS. SPUD

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A new page of potato lawsuits has been developing in the potato-producing areas of the State of Washington over the last few years. Most people in the potato industry are aware of the lawsuits which have arisen over ring rot. A natural or unnatural extension of these cases has been the recent number of lawsuits alleging reduction in yields due to bacterial blackleg. At first it might appear that other than the difference of the disease organism, the ring rot and blackleg cases are very similar but that is not true for reasons which will become more apparent shortly.

Recently I participated in a blackleg trial in Pasco, Washington, which took five weeks to try. That trial took place in front of a jury in April and May of 1980. By necessity, the account will be abbreviated. I will then analyze the effect that this suit and other similar suits have had and may have on the potato industry.

I. ALDERSON, ET AL. VS. THREE "D" SALES, ET AL., FRANKLIN COUNTY SUPERIOR COURT CASE NO. 23018.

A. PLAINTIFFS WERE JACK AND BOB ALDERSON, brothers, who owned or leased approximately 1,400 acres outside of Pasco in 1977. Of this acreage, they had approximately 865 acres in potatoes; of those, 800 acres were in Norgolds. They owned a packing shed in Pasco called Perfection Produce. Operating through Perfection Produce, they purchased seed from the defendants and in turn sold it to their farm business. The farm grew the seed and Perfection packed out and sold the Norgolds on the fresh market.

B. THE DEFENDANTS were Three "D" Sales, Inc., Bill Offutt, Inc., and Holder & Boyd, all distributors, Arctic Farms, Henri Miller, Stanley Sundberg and L. C. Thompson were the North Dakota seed growers. Also named was the North Dakota State Seed Commission.

C. PLAINTIFFS CLAIMED that the seed contained levels of blackleg in greater amounts than provided by seed certification standards and that as a result, their yields and pack-outs were only 14 ton per acre with a high percent of culls versus the 18-20 ton per acre with a low percent of culls that they contend they should have had. As such, they were asking for in excess of $1.4 million in damages.

D. THE DISTRIBUTORS were sued on the basis of breach of warranty, express and implied, because they sold the seed. The distributors defended on the basis that the seed was not defective and thus there was no breach of warranty. Further, all warranties were disclaimed via written confirmation of sales and custom and usage. Finally, plaintiff's remedies were limited to recovery of the price of the seed only.

E. THE NORTH DAKOTA SEED GROWERS were sued on the theory of breach of express and implied warranties and negligence in the method of growing their crops. More specifically, negligence in their roguing procedures and in not detecting blackleg which the plaintiff's expert maintained must have visibly existed in their fields in greater amounts than the 1% tolerance levels. The growers defended on the basis that the seed was not diseased; that they were not negligent in their growing practices; and that the problem in the plaintiff's fields resulted from their improper growing procedures and from verticillium wilt, a soil-born fungus.

F. THE STATE OF NORTH DAKOTA was a defendant because the State Seed Commission, which certifies the seed potato, is a State agency. Plaintiff contended that the Seed

Commission was negligent in the method and procedure used in inspecting the seed and in the actual inspections themselves. Also, that by inspecting and issuing a blue tag, the seed certification agency gave certain warranties to the ultimate users. The State defended on the basis that the seed was not diseased, that the State certification procedure was not subject to Court review, that the State did not give any warranties in granting the blue tag, and that the cause of the plaintiff's loss, if any, was as a result of the plaintiff's growing procedures and an outbreak of verticillium wilt.

G. THE TRIAL was held in State Court in Pasco, Washington, before the Honorable Judge Day and a jury of twelve men and women. It took exactly five weeks to try and set the record as the longest jury trial in Franklin County.

(1) TESTIMONY FOR THE PLAINTIFF went as follows: The seed was purchased by an agent of Perfection Produce during the year 1976 for use in 1977. Prior to this, Perfection and the Aldersons had used blue tag seed from North Dakota, as well as seed from other places. They had also had some problems with what they termed blackleg prior to 1977 and thus wanted to purchase seed from a number of different growers in order to compare results. All seed was purchased through distributors. In February of 1977, the seed started to arrive at Perfection Produce. The warehouse was cleaned and sterilized, the seed stored by lots, cut at Perfection Produce and hauled by trucks to the Alderson fields which were all within three to ten miles of the warehouse. Allegedly, the cutter was sharpened before the season and cleaned and disinfected before and after each lot. The seed was planted in about seven different locations between February 22 and April 5. The Aldersons alleged they knew which seed went to which fields and where the line was when more than one seed was in a particular field.

Emergence took place in the earliest planted fields in about six weeks and the stand was considered good. The fields grew as expected through April and May. Towards the end of May, the Aldersons had Sencor flown on as a preventive measure. Shortly after the application of Sencor and around the 1st of June, the Aldersons noted that their fields just stopped growing and took a dark off-green cast. It was at that point they called in numerous consultants to ascertain what was going on and began applying nitrogen and other nutrients, thinking that perhaps the problem lay in their fertility program.

The fields, however, continued to deteriorate, some much worse than others. Aldersons had notified Purego from whom they obtained the Sencor that perhaps there was a problem with the Sencor. Purego retained Stu Turner, a well-known troubleshooter to view the fields. Mr. Turner saw the Alderson fields twice, once about the third week in June, the second time about the third week in July.

Mr. Turner testified that the fields were affected by a seed-borne disease commonly called blackleg, that about 20% of the plants in the better fields were affected, and that in the fields that were worse, about 80% were affected. Mr. Turner made his diagnosis of blackleg based upon his visual observation of the fields, plants and tubers.

There were other specialists from the State Extension Service who also viewed the fields and some tuber sampling was done by Dr. Gene Easton out of Prosser. They were unable to come to any diagnosis as to what was causing the overall problem in the fields. They were not in a position, however, to state that the total problem was due to seed-borne blackleg.

At harvest plaintiff's main problem was undersized potatoes, in that a substantial portion of this crop had quit growing prior to maturity. They were, however, able to yield approximately 14 ton per acre but had a very small percentage of number 1's and a very large percentage of culls. It was their position that in the past all their fields yielded equally somewhere between 18 and 20 ton per acre with a high percentage of number 1's and a low percentage of culls. Further, they testified that for the three or four years prior to 1977, they had little problem with their fields. Plaintiff's expert, Mr. Turner, testified that due to the amount of blackleg he saw in the plaintiff's fields, there had to be more than 1% visual blackleg

in the fields of the North Dakota Seed Growers. Further, he testified that the North Dakota Seed Growers were negligent in growing the seed potatoes in that they did not carry the rogued plants out of their fields but instead buried them in the rows. Finally, that both the State of North Dakota inspectors and the seed growers must have been negligent in not being able to see the blackleg in the North Dakota field.

There was a major question as to the certification of one of the defendant grower's fields. One of Thompson's fields had a alkali problem and due to the dry conditions which existed in North Dakota in 1976, that field had a poor appearance. The inspector concluded, however, that this was due to the environmental factors and not to any disease process.

(2) THE DEFENSE CASE consisted of the following: First, the seed growers testified that for the most part they used first or second generation stem-cut seed out of Beach, North Dakota. In some cases they used their own seed which had been recertified for seed use. This practice, incidentally, was criticized by Mr. Turner. Next, the growers testified as to their cultural practices and the means they used to sanitize their equipment, fields and storage facilities. Finally, they testified as to the various inspections that their fields underwent by both the growers and the State Seed Inspectors. It was the growers' position that there was less than 1% of blackleg in their fields at the time of harvest.

There was testimony on the part of Robert Dunnigan of Three "D" Sales that when he was notified of the alleged blackleg claim, he visited the plaintiff's fields and likewise visited other fields in Oregon, Washington and Colorado where he had supplied Norgold seed. Dunnigan testified that the problem in the Alderson fields was not due to blackleg and that the other growers who had used Henri Miller or Arctic Farms seed in 1977 had good results.

Dunnigan also testified that he had conversations with one of the Aldersons prior to the sale of his seed in 1976. At that point the Aldersons were complaining of a problem which they alleged was blackleg and wanted to know if his seed would do any better. Dunnigan disputed that the problem was blackleg and told the Aldersons that he could in no way guarantee that they would have any better results with his seed than the other seeds they had been using because he didn't feel the problem was the seed.

The State of North Dakota brought out the head of its seed certification program to testify as to the steps and procedures employed in inspecting fields in North Dakota and in certifying the seed. They also brought out the inspector who inspected L. C. Thompson's field to testify as to the condition of the field in 1977.

It was at this time the defense put on its experts. The defense led off with Dr. Ray Krause, a private consultant out of Colusa, California, who has a Ph. D. in plant pathology. Dr. Krause had studied all of the records pertaining to the plaintiff's growing practices. He had studied the testimony of the plaintiffs and their expert, Mr. Turner, and was familiar with the scientific work of the major pathologist who study blackleg and verticillium. Dr. Krause was of the opinion that plaintiff's problem was due to a combination of factors; one was their cultural practices in that they had planted potatoes back to back and in some cases, for four years running; secondly, that there were unusual environmental factors in 1977; third, that in his opinion the Sencor application had in some way predisposed or weakened the plaintiff's potato plants so that they were more susceptible to other disease organisms and finally, that the problem in plaintiff's fields was not due to blackleg, but was due primarily to verticillium wilt which was contained in the soil. Dr. Krause's testimony was based, to a large extent, on the works of Dr. Mary Powelson, a plant pathologist with Oregon State University's Extesnion Service.

Next, Dr. Thornton, a horticulturist connected with the Washington State Extension Service, testified as follows. He was present in the Alderson fields in 1977, where he noted the disease condition but did not feel the problem was blackleg. The reason he did not feel the problem was blackleg was because the typical blackleg symptom, i.e. inky black slimy

stems, was not present in more than the usual amount. Initially, Dr. Thornton was not certain just what the problem was but after reading the results of Dr. Mary Powelson's research in 1977, 1978 and 1979, Dr. Thornton felt that the problem was verticillium wilt. Dr. Thornton had only recently formulated this theory and was subjected to about a day's worth of severe cross-examination in that he testified in a prior proceeding that he had not known what the problem was.

Perhaps the most critical testimony of the trial was presented by Dr. Mary Powelson. Dr. Powelson, through funding by the Oregon Potato Commission, had conducted and is currently conducting, extensive research into the disease processes affecting the yield of potatoes in the Columbia Basin. Much of her work has been in the area of verticillium wilt and more recently in the area of blackleg. Through the use of the latest scientific methods, she has come to some startling revelations concerning both verticillium and blackleg which have a tremendous bearing on lawsuits of this nature.

The work of plant pathology as it pertains to blackleg is relatively recent in origin. Up through the early 60's it was thought that blackleg was a soil-borne problem. Then, a couple of premier researchers by the name of Dr. Art Kellman of the University of Wisconsin and Dr. Monte Harrison of Colorado State, pioneered work which demonstrated that a certain strain of blackleg predominated in the seed and not the soil. If this were true, perhaps then blackleg could be controlled through the development of seed certification programs and the careful growing of seed potatoes. Today it is still felt that early season blackleg is as a result of seed-borne bacteria. However, Dr. Powelson's work indicates that in the Columbia Basin area, there are two types of blackleg bacteria which cause loss, one originating in the seed. The other, however, can be found in the soils in the Columbia Basin. Further, Dr. Powelson has done substantial research on verticillium. In 1977 she found verticillium wilt present in epidemic proportions in the Columbia Basin causing symptoms exactly like those complained of in the Alderson fields.

In preparation for her testimony, soil samples were taken from the Alderson fields in 1979. From these samples Dr. Powelson was able to isolate in almost every field the presence of some verticillium. Likewise, she reviewed the records available on the Alderson's cultural practices, their testimony, the photographs of Mr. Turner and the other evidence we had available. She testified that in her opinion the problem in the Alderson fields was due to the soil and not the seed. The fact that the Aldersons had recropped for as many as four years in a row in some fields was a very significant factor to Dr. Powelson.

The final testimony pertained to the plaintiff's alleged damages. The defendants were able to come up with records which raised substantial question as to the nature and extent of the plaintiff's damages. To begin with, the Aldersons leased two of their fields from the Port of Pasco on a percentage-lease basis. We went to the Port of Pasco, obtained records of prior lease payments and were able to demonstrate that as to one of the fields the Aldersons had only averaged 14 ton per acre for a couple of years prior to 1977. Further, that the packouts were not as favorable as the Aldersons had maintained. Next, we had a CPA go through all of the Aldersons' financial records, tax returns and the like. Based upon these records, our accountant was able to demonstrate that the Aldersons had never had the type of financial success implied in the $1.4 million damage figure. It was felt by the defense attorneys that the testimony regarding damages severely affected the credibility of Aldersons' total case.

(3) THE PLAINTIFFS PUT ON AS REBUTTAL WITNESSES a couple of local growers who testified that the problem in the Alderson fields appeared to be blackleg. Dr. Hoymen, a retired plant breeder and pathologist testified that by looking at pictures there appeared to be blackleg in the Alderson fields and testified that he did not feel the North Dakota seed inspectors knew what blackleg looked like. Stu Turner went back on the stand to state that he didn't feel the problems in the Alderson fields was verticillium wilt.

(4) THE JUDGE HELD AS A MATTER OF LAW that the policies of the State of North Dakota in setting up the seed certification process could not be challenged in Court but that if the State were negligent in following those procedures, that negligence could be considered by the jury. He further held that the attempted disclaimers on the sales invoices were void for lack of negotiations and thus the only thing the jury could consider by way of disclaimers was whether or not the conversation of Mr. Dunnigan with Mr. Alderson amounted to a disclaimer of warranty. On a few of the invoices there were clauses limiting damages to return of seed. The judge felt that these clauses were too vague and therefore unenforceable. He allowed the case to go to the jury on the question of the growers' negligence, the distributors' warranties and the State's warranties and negligence. There were no issues of indemnity between the distributors and growers, although the Judge indicated that if those issues had been presented, he would have found indemnity as against the growers. This would have meant that the North Dakota seed growers and perhaps the State of North Dakota would have ultimately been responsible for any verdict.

(5) THE JURY was out for approximately two hours and came back 12-0 in favor of the defense. They did not feel that the evidence indicated that the seed growers had done anything wrong and thus must have concluded that the seed was not the problem.

(6) BY WAY OF POSTSCRIPT TO THE TRIAL the defendants submitted a motion to the Court asking that the plaintiff be responsible for the actual costs and attorney fees incurred in defending in this action. Inasmuch as the plaintiff had to serve the defendants under the provisions of the Long Arm Statute, it was discretionary with the Court to allow attorney fees and costs for that amount he felt was due to having to litigate the case in Washington versus North Dakota. The total costs and fees incurred by the defendants that remained at the end of the trial was $200,000. Of this the Judge awarded $50,000 against the Aldersons. Incidentally, the insurance company for Holder-Boyd decided to settle its portion of the case for $50,000 during the second day of the trial.

II. DIFFICULTY POSED BY THESE TYPES OF TRIALS.

A. TRYING TO IDENTIFY BLACKLEG AS THE CAUSAL AGENT has been the major problem in the recent cases. Only the "usual" number of plants have had the typical symptoms. The rest have had symptoms which are similar to other diseases. For the most part there has been a total lack of scientific testing to confirm the presence of the blackleg bacteria let alone establish that it was that bacteria which caused the problem. To do a proper scientific test with an adequate sampling can be an expensive and time-consuming procedure. There are only a very few scientists in the Columbia Basin who have the facilities or qualifications to do this.

B. UNLIKE THE CURRENT THINKING WITH RING ROT, the blackleg organism can be found both in the seed and the soil. The technology in this area is changing rapidly, yet much needs to be done in order to better understand the causes and factors which influence blackleg. The time is approaching when, if the grower wants to spend the money, he will be able to tell whether the blackleg he sees in his fields is a result of bacteria contained in the seed or the soil. Until that time arrives, however, it is a mistake to assume that just because a grower has blackleg in his fields, that it is caused from the seed.

C. BLACKLEG BACTERIA CAN AND DOES EXIST IN THE SEED yet may never show in the seed grower's fields. The scientists still cannot state with certainty just what set of environmental factors need to be present in order to have the expression of blackleg.

D. WITHOUT GOING TO SUBSTANTIALLY MORE EXPENSE, there is very little more that the seed growers or certifying agencies can do to eliminate or reduce the amount of blackleg. Hopefully, as technology develops, this will change. However, there is only a limited amount of stem cut seed available to seed growers and even when using stem cut seed there is no assurance that there won't be a blackleg problem.

E. EVEN IF THE SEED GROWERS AND STATE CERTIFYING AGENCIES SPENT SUBSTANTIALLY MORE MONEY, there is no assurance that this would have a dramatic effect on the amount of blackleg the grower sees in his fields. Besides using stem cut seed and the best sanitation procedures available, there is very little more that a seed grower can do to cut down on the amounts of blackleg bacteria. Arguably, he could rogue his fields and carry the diseased plants out, but there is no scientific evidence that that will reduce the amount of blackleg in the seed pieces. In fact, the damage caused to the other growing plants may far outweigh any advantage in removing the diseased plants from the fields. Scientific testing of the tubers may demonstrate the presence of the bacteria in latent form. However, that does not mean that the bacteria will express itself in the growers' fields. It may also greatly reduce the quantity of seed available to the commercial growers and have a substantial effect on the price.

F. THE BLACKLEG BACTERIA CAN BE TRANSMITTED VERY EASILY. Thus, even when using stem cut seed, it's not uncommon to see blackleg creep back into the seed growers' fields as well as commercial growers' fields. The bacteria can be transmitted in aerosols such as rain, mists or fog, or by insects, equipment, human contact, irrigation water, cutting knives and many other ways, most of which are beyond the seed-grower's control.

G. HANDLING, CULTURAL AND ENVIRONMENTAL FACTORS ARE ALL IMPORTANT. If seed isn't properly handled or stored, it can greatly facilitate the spreading of blackleg from one tuber to another. Dull cutting knives or unsanitary conditions can likewise spread the bacteria. Planting dates, soil temperature, planting depths, the amount of nitrogen used, the herbicides and pesticide program, the type of irrigation systems used and the amount of irrigation are all factors that can influence the expression or transmittal of blackleg. Air temperatures, the amount of rainfall and humidity also are important. Thus, it can be seen that almost every aspect of potato growing can have an influence on the expression and transmittal of the disease.

H. BECAUSE BLACKLEG IS SO COMMON and because its presence in a field does not necessarily mean a loss, there have been tolerances made for its presence. Thus, where the State certifying agencies may allow 1% or more in the seed grower's field, it's not uncommon to find 5-10% in the commercial growers' fields. The problem lies in determining what is an unacceptable amount to be expected in the commercial grower's field and how does that amount affect the ultimate yields.

III. EFFECTS ON THE POTATO INDUSTRY. As a result of the current litigation, I see the following trends:

A. AS TO SEED GROWERS:

(1) Because of a combination of factors, including lawsuits of this type and the general economic conditions, there are fewer seed growers than in years past and this trend will continue.

(2) Many seed growers are going to be more selective as to who they will sell to and some will avoid selling to areas where there is a high risk of litigation.

(3) The cost of growing seed is going to increase faster than the cost of other agricultural pursuits. This will be due to increased insurance premiums, increased fees charged by certifying agencies, increased legal expenses, and increased expenses with their growers' associations in an attempt to approach this problem on both a scientific and political level.

(4) Growers will use different types of sales agreements with written disclaimers and clauses limiting damages to return of the price of the seed. There will be more negotiation as to price and warranties.

B. OUT-OF-STATE DISTRIBUTORS.

(1) They will be more selective as to who they sell to and may avoid certain areas where they feel there is a high risk of litigation.

(2) They will be using more carefully drafted sales agreements including disclaimers of warranties, limitations of damages and other clauses.

(3) There may be a little more negotiation on price but for the most part, the price of seed will be higher than in the past, taking into account comparable markets.

(4) The cost of insurance will continue to rise with the consequence that many distributors will not carry insurance and instead, rely upon legal entities such as corporations with little or no assets to protect their personal assets.

C. STATE CERTIFYING AGENCIES.

(1) They will charge more for their services.

(2) There will be changes in certification procedures and standards with a tendency to go from specific percentage tolerances to general tolerances.

(3) There will be change in some sponsoring agencies, thus some states may move out of the business of seed certification, setting up nonprofit agencies to do the same, or methods will be sought to limit certifying agencies' legal responsibilities either by legislation or contract.

(4) Publications by certifying agencies will become more technical and less promotional.

D. SCIENTIFIC COMMUNITY.

(1) More money will be made available for blackleg research.

(2) More time will be devoted by the extension and research people to these types of claims.

E. LOCAL GROWERS.

(1) Will pay more for their seed.

(2) Have less sources available to get certified seed.

(3) Will be asked to sign agreements which have disclaimer of warranties and limitation of damages as a condition to purchase seed.

IV. MY RECOMMENDATIONS ARE:

A. SEED GROWERS.

(1) Consider strongly whether or not you need or want to continue growing seed.

(2) Do you have adequate insurance? Does it cover claims for breach of expressed and implied warranties? If not, don't grow seed unless you can afford to pay $50,000-$75,000 in costs and fees to defend these cases.

(3) Do your seed-growing practices conform to those recommended by the extension services or certifying agencies? If not, why. If there is a discrepancy between your growing procedures and those recommended, you may be held accountable in the event disease problems develop in commercial growers' fields.

(4) Separate yourself from the seed certification agencies. If the seed growers or their associations control or have a major voice in the certification process, this will be an area that will be strongly explored in the event of litigation.

(5) Be careful as to who you sell your seed to or which area of the country you sell your seed. If the person to whom you're selling has any history of agricultural litigation, carefully consider whether or not you want to sell him seed. If anybody inquires as to whether you have insurance or in any other way gives indication that if things don't turn out to their expectation that they may bring suit, avoid selling to them.

(6) When selling seed, do so only by written documents which include disclaimers of warranties and limitation of damage clauses. These documents should be drafted by an attorney experienced in these matters and who is likewise experienced in the areas where you are going to sell seed. Then, when selling seed, whether to a distributor or to a commercial grower, negotiate the terms of your agreement. For example, if a distributor or grower does not want to sign your document, be prepared to offer your seed at a higher price without disclaimers.

B. DISTRIBUTORS.

(1) Be careful to whom you sell and into which areas of the country you sell. Avoid those persons or areas where there is a high potential for litigation.

(2) Sell only by written agreement containing disclaimers of warranties and limitation of damages. Make sure these agreements are drafted by competent attorneys who know this area of law and who are familiar with the areas that you are selling.

(3) Be willing to negotiate your agreement and actively do so, especially as it pertains to disclaimers and limitations of damages.

(4) Carry insurance with adequate limits if you can get it. If you can't, consult your attorney concerning methods of limiting your liability through corporations or other appropriate methods.

(5) Carefully watch your advertising and the representations that you make regarding your product. Remember -- statements you make may be considered as expressed warranties.

C. STATE CERTIFYING AGENCIES.

(1) Examine your certifying procedures and tolerance levels to see whether or not they conform with current scientific thinking.

(2) As far as blackleg, do not make any representations as to tolerance levels.

(3) Separate as much as politically possible the growers from the certifying procedure. Grower-dominated certifying agencies are subject to attack as being industry-dominated.

(4) Be careful in your promotional activities.

(5) Explore ways of limiting exposure and liability through State legislation or regulations. However, be aware that the Courts of other states may find these attempts as being contrary to public policy. The acts of a certifying agency may be considered as proprietary versus governmental which simply means you'll be treated in the same manner as a private corporation.

D. SCIENTIFIC COMMUNITY.

(1) Recognize the difference between the scientific and legal communities. Trials will go on with or without your help. If the truth is to be found, jurors need your views.

(2) Understand the difference between the burden of proof in a courtroom and what is necessary to publish a scientific paper. These are two entirely different things. Although it would be nice if extensive scientific testing could be done prior to rendering an opinion in a courtroom, such is generally not the case. Thus, the system allows you to make an opinion based upon your knowledge and experience as applied to the facts as available for a particular case.

(3) If you are called in to consult on a matter which may result in a claim, carefully document your observations and impressions. Where possible, do testing, take samples, pictures, or anything else which may be of use later on. Remember -- lawsuits generally are tried many years after the actual event.

E. LOCAL GROWERS.

(1) Think carefully before filing claims and do not do so unless you feel you have no choice.

(2) If you are going to file a claim, make sure that you do so only after consulting with competent experts who have been in your fields, taken and made samples, run laboratory tests, and who have otherwise verified the basis for your claim. Be careful of relying only on experts who do the majority of their work handling claims. If and when possible, see if you can have their results verified by those who have nothing personal to gain by you filing a claim.

(3) If you are thinking of filing a claim, get competent legal help as soon as possible in that there are many legal steps which need to be done in order for you to perfect your claim. For instance, in many cases, it's important that you immediately notify the other party that you feel there is basis of a claim so that they may have an opportunity to investigate.

V. CONCLUSION.

In the beginning I mentioned the possible parallel between the ring rot and blackleg cases. It should be clear, however, that that is not the case. Ring rot is generally accepted to be a seed-borne bacteria. Also, it is much less common than blackleg. Recent study, however, indicates that blackleg may be found in the soil as well as the seed. Thus, similarity between the two bacterias ends.

In fact, the blackleg case can be much more complicated. Whereas there is some tolerance for blackleg in a field, there is no tolerance for ring rot. The ring rot bacteria can easily be identified both visually and by test. Blackleg on the other hand, unless it is the traditional inky black stem, can be much more difficult to identify visually and the lab tests are not as common as the ones for ring rot. When you do identify blackleg, you still have the question as to where it originated.

Next, you have the problem that whether you're dealing with blackleg or ring rot, the potential loss to the commercial grower can be quite large. Generally the claim starts in the low six figures and it is not unusual to see claims in excess of a million dollars. Unlike

personal injury cases, juries aren't shy about awarding substantial damages in crop loss cases if they feel liability has been established. Thus, the exposure to the defendant is much greater than in other types of litigation.

What makes the blackleg cases basically unfair is the lack of scientific knowledge that exists in this area. The number of notable researchers in blackleg is very small. The budgets with which they have to work are smaller yet. I would estimate that the amount of money spent in defending this one blackleg case is more than the amount spent on blackleg research in our country in the last five years.

This might be justifiable if it were clear that blackleg was totally a seed-borne problem and further that the only reason that blackleg existed was due to poor growing practices by seed growers. But such is not the case. The seed growers, for the most part, are doing everything within their knowledge to minimize the potential for blackleg. The problem is, however, that the state of the art is not such that allows for the elimination of blackleg. The breeders have not been able to find a potato which would be commercially acceptable to the American public which is resistant to the blackleg bacteria. Stem cut seed has come a long way in cleaning up seed potatoes but we still have problems with recontamination and the unwillingness on the part of the seed grower and commercial growers to pay the price necessary for stem cut programs.

Even with the best stem cut programs, that still isn't going to eliminate the problem of soil-borne blackleg. Yet, with all the complexity surrounding the blackleg bacteria, its origin, method of transmittal, method of prevention, the seed grower is being sued if the commercial grower thinks he has too much blackleg in his field, regardless of whether there is any evidence that the seed grower did any wrong in the growing of that seed piece. Thus, the commercial grower is attempting to hold the seed grower absolutely liable regardless of fault in the event he has more than an acceptable amount of blackleg.

The result of this trend is predictable. First, it can be expected that the seed grower will strongly resist this type of litigation. Secondly, in order to finance the increased insurance premium, the money for the attorneys and experts, and the exposure that he may suffer, the seed grower is going to have to add this cost to the price of his seed. Likewise, the insurance companies are going to pass their costs on to the entire agricultural community. As the costs and the exposure to these lawsuits escalates, the number of seed growers will grow smaller and chances are those that remain will be larger. Meantime, the supply of seed to those areas which have a high risk of litigation will become less and less and the prices will increase. The growers in those areas are going to have to compete with growers in areas where there is less litigation and the risk to the seed grower is less.

As the seed-certifying agencies find themselves under attack and especially if the Courts find that they too have liability, there will be some major changes in the certification procedures. Whether this is good or bad depends on what the certification agencies decide to do. If the agencies decide that the risk is not worth it and go out of existence, the whole area of seed certification as we know it today stands to become extinct. This would be a major step backward for the potato industry. On the other hand, the certification agencies may change their form, rewrite their procedures and tolerances, change their methods of inspection, and the growers may or may not find an improvement in the quality of the seeds. Whether the quality of the seed improves or not, you can be certain that the price will rise because the certifying agencies are going to have to charge more than they are today.

There is inherent risk in agriculture. There is no way to eliminate it at this time. Certainly there are times when a grower's crop has been harmed by somebody else's wrongdoing. In those cases, the Courts are available for redress if that be necessary, but in the blackleg cases that is not the best solution. It is suggested that the potato industry would be much better off if the monies currently spent on prosecuting and defending blackleg cases were spent on research rather than lawyers and consultants.