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Discussion section topics, notes, and attendants from Tuesday morning breakfast, June 22, 1982

“Will the recent publicity concerning Tordon affect present labeling for leafy spurge?”

Harold Alley – Leader, Gene Arnold, Jack Evans, Alex Martin – Secretary, and Cal Messersmith.

During our breakfast discussion I was the secretary for the group discussing “Publicity concerning Tordon and its effect on present labeling.” Our group arrived at two main points in this discussion:

1. Adverse publicity will have a negative effect on future Tordon registrations. Damage has already been done by adverse publicity even if the allegations later turn out to be unfounded.
2. Adverse publicity is likely to influence policy on Tordon used by public agencies. Public opinion and political pressure readily influence public agency policies. Adverse publicity may result in curtailed use of Tordon by public agencies.

“How can we study the control mechanisms of leafy spurge root bud induction?”

Mike Chessen – Secretary, David Davis, Mike Foley – Leader, Ed Schweitzer, and Tom Whitson.

A major topic of discussion was the use of cell culture techniques in leafy spurge research. Methods currently being used and developed at the Radiation and Metabolism Lab at Fargo, ND were discussed. Biotype identification and selection must be considered in cell culture work as well as in experiments carried out in the greenhouse and growth chambers. Methods of culturing whole plant material under controlled conditions was discussed.

The use of herbicides to reduce lipid or wax production, reduced winterhardiness and released buds prior to unfavorable conditions such as winter was explored. Some work in these areas is currently being done.

Physiologists were interested in determining if environmental, physical, or other factors cause the patchy pattern of leafy spurge distribution. Is allelopathy, soil microflora, or microenvironment important in leafy spurge distribution? It was resolved that there is much work to be done.

“Is leafy spurge a good candidate for biological control?”

Lloyd Andres, Bob Carlson, Joseph Julian, Bob Nowierski – Leader, Robert Pemberton, Norman Rees, Jim Story, Sherry Turner – Secretary.

Will genetic diversity and the tendency to hybridize predispose leafy spurge to biological control failure? It would depend on the biocontrol organism's specificity. Use of a generically specific organism may attack a wide range of spurge ecotypes. Strains of rusts may produce differences in virulence on various host ecotypes which may result in control of one ecotype and not another. A potential pathogen for biological control would have to be aggressive on many ecotypes or several strains could be used to attack different ecotypes.

More knowledge of the genetics of leafy spurge is needed. Insects or pathogens could be used to classify ecotypes. This may be more accurate than using morphologic characteristics. To do this all experimental procedures would have to be standardized. Observation of spurge fauna may also indicate ecotype differences and be of taxonomic importance.

Maps of ecotype distributions would be helpful. This would indicate where the diploid and tetraploid populations occur. When more knowledge about ecotypes is known distribution maps may be able to indicate where certain biological control agents would be most beneficial. An example would be if a seed feeding insect was ready for release, the map may be able to tell you where the ecotypes producing the greatest number of seeds occurred. In this case releasing a seed feeder on a low-seed producing ecotype would be avoided.

Information is lacking about the susceptibility of released biological control insects to predators or parasites. These interactions occur in Europe and could be used as an example.

A conflict of interest may occur. Are the economic values of oils, waxes and hydrocarbons from leafy spurge high enough to forego biological control? Yellowstar thistle in California was used for honey production but was also a weed. The detrimental effects were more economically damaging than the beneficial aspects, therefore, biological control was implemented. A conflict of interest is hard to deal with until economic damage can be more accurately measured. Aesthetic values are important. Aesthetics may change from one generation to the next since aesthetics are learned. Substitution of another plant for the weed may be an answer. Damage to native plants should be avoided when using biological control.

The need for more input on what tests should be conducted when screening for biocontrol agents was mentioned. Do laboratory tests really indicate what will happen in the field. Insect starvation tests indicate results may vary between the field and the lab tests.

Can collecting, rearing and redistributing methods be improved? A workshop may be helpful for people involved in biocontrol research. A protocol for enhancing establishment should be written. Because of a lack of information, small releases should be made and observed closely. One way to obtain more information would be to work with the organism in Europe.

“Could leafy spurge ever be classified as a beneficial plant?”

E. H. Cronin, Kris Havstad – Leader, Bruce Maxwell – Secretary, and Stan Wiatr.

The discussion began on the use of leafy spurge as a source of oils and possibly hydrocarbons that would serve as a substitute for petroleum products. This brought up the subject of producing leafy spurge as a crop, which included the agronomic aspects of suitable growing sites, methods and timing of harvest, and control of weeds. A suggestion was made to try seeding spurge and managing it as an annual.

Kris Havstad talked about his project of using sheep to control leafy spurge by summer grazing. Leafy spurge is a moderate value forage plant for sheep. The question of why leafy spurge is intolerable to cattle was presented. Kris discussed several reasons. There are chemicals in leafy spurge that act as an irritant to cattle and not sheep. The microflora populations in the stomach of sheep have the ability to adjust and are capable of fluctuations where other ruminants are not as adaptable.

“What is the role of the chemical industry in the leafy spurge problem?”

Ken McMartin, D. England, Keith Price, Galen Schroeder, and Jeff Tichota.

Our group agreed that to maximize herbicide effectiveness, those treating leafy spurge should use a program with proven results. An effective program would include using recommended rates and retreatment to control seedlings and escapes.

New herbicides would probably not be developed specifically for leafy spurge due to limited acreage and cost. If new chemicals are developed, they will probably be as costly as current compounds.

Keith Price commented that spurge control in Canada is not a priority in many areas due to limited infestations and grower concern. He speculated that it would be much better to combat the weed now before it becomes more widely established.

We agreed that cost to control leafy spurge is prohibitive to some ranchers, yet the weed must be controlled before it spreads even farther. Often growers will put off application because they are waiting for a “magic bullet” either chemical or biological that will be low cost and effective. Press releases often extoll the virtue of a promising new tool but often fail to inform the rancher that the research is preliminary and probably years from commercial application.

Government assistance may be necessary to help share costs so that more acres can be treated. Our group felt that many landowners with leafy spurge recognize the problem but many are reluctant to commit to a control program.

We concluded our greatest contribution may be in educating those landowners with leafy spurge, that it is in their best interest to control this pest.

“What should the Extension Service be doing to create awareness of leafy spurge among producers?”

Don Anderson, Mike Jackson – Secretary, and Oliver Russ.

A discussion on how the Extension Service can assist in making producers aware of the leafy spurge problem was held after breakfast, the second day of the symposium. It was suggested that the news media should be informed of all activities regarding leafy spurge control. Radio broadcasts and TV programs can help keep the public aware of the serious problem. More TV stations are getting interested in filming activities during field days and scheduled tours. The important thing is to keep the news media informed of all meetings, tours, field days and research studies being held to give them an opportunity to participate.

Chemical distributors throughout the Northern Region are supporting leafy spurge control activities and are encouraging their dealers to also participate. A lunch or dinner sponsored by them has certainly helped to get landowners to attend educational programs conducted on leafy spurge.

The problem many states are having is to get producers to educational programs that need the information to apply better management practices for better leafy spurge control. Some landowners do not seem to be concerned about the leafy spurge infestation on their ranch or farm. It was suggested that maybe signs should be placed on lands infested with leafy spurge. This would possibly encourage the landowner to do a better job of keeping the infestation under control.

A cost share program is being conducted by some counties having leafy spurge problems. They are offering recommended herbicides to producers at a reduced cost or are making payments to producers cooperating in a control program. Others are offering the herbicide to producers at no cost if they apply it to road right-of-way infestations, adjacent to their land.

A program to inform the landowner of when to treat leafy spurge, indicating stage of growth for maximum control may also help. A reminder as to when leafy spurge should be treated, and what herbicides are available to the producer, could encourage more co-operators.

Incentive programs are also needed to encourage more producers to participate in a control program. Awards and recognition programs are always helpful. Emphasis could be placed on a different weed species each year. It was felt that if emphasis is placed on one weed too long, producers would lose interest. It was suggested that recognition be given to individuals doing a good job in controlling weed infestations. A program naming a weed fighter of the year would give recognition to a landowner making every effort to keep this weed problems under control. Such a program is being considered in Montana. A county weed fighter of the year will be considered for area recognition and thus be eligible for state competition. A state weed fighter of the year would make landowners with serious weed problems aware that a weed management program can be accomplished and is beneficial to the producer.

“What should the State and Federal government agencies be doing about the spurge problem?”

Ardell Bjugstad, Ken Blan, George Hittle – Leader, O. Wendell Holmes – Secretary, Larry Holzworth, Russ Lorenz, John Fahlgren, Fred Batson, and Barbra Mullen.

1. Funds:

Private organizations spraying spurge through mill levys but Federal and State lands not treated due to lack of funds or environmental regulations (no spraying in areas described as riparian or riparian zones – woody draws).

Hittle briefly described Wyoming's program on leafy spurge management where state and federal lands are treated, however, they are looking at a 20% reduction. They are looking for other avenues of funding with weed control getting priority through alternative funding – permit fees, mineral to provide maintenance money, additional dollar tacked on to hunting license.

2. Carlson-Foly Act:

Never been funded, monies come through range improvement funds, etc.

Gives state authority to work with Federal agencies to secure funds as through add-ons to license (user fees).

3. Enforcement of State laws reduced due to economic limitations of land managers.

4. Environmental regulations are demanding but can be worked around, such as riparian zones can and must be treated but done so with special techniques.

5. State-Federal regulations – These whether state or federal must be recognized by other party to reduce repeated conflicts. North Dakota has unique problem with wetlands program which prohibits chemical control – this is not State law but a management policy.

Most of this is emotional issue and not based on fact. Need to describe and discuss tolerance limits of fish, etc., to certain chemicals.

Need to continue to hold meetings at negotiate management policies to promote understanding between groups, i.e., weed control committees and wildlife groups.

State need weed coordinators such as Wyoming, seems other states just can't get this through their legislators, this would also promote understanding between groups.

People unclear as to avenues of transferring ideas and concerns. Where does GPC-14 fit in as to the promise of such avenues.

Lorenz described leafy spurge task groups, etc., for the development of leafy spurge program. Much effort came through state weed coordinator or similar

thereof. Lawsuit (individual) considerable concern with various county weed committee which encourages low key efforts and help your friends system.

6. GPC-14 Committee could be a contact for concerned individuals but not sure who's on the committee. People attend due to interest, concern and knowledge that public relations needed.

Best idea was Kelly Miller's efforts where grass-roots people went to the source of the problem – Eurasia – where plant is not a serious problem due to natural controls.