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Future directions of leafy spurge in the Great Plains

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My comments are directed to an evaluation of general research directions needed to generate an effective Leafy spurge control research program in the Great Plains Region and some ideas on the role of GPC-14 as a vehicle to help coordinate the efforts of state, federal and private organizations involved in the work. Because of the great economic significance of Leafy spurge in several states of the Northern Great Plains, significant research resources will need to be committed to find satisfactory solutions to control of this persistent pest. An estimated 2.3 million acres of land are infested with Leafy spurge in the Central states, and that number grows each year as the pest spreads.

Areas of research emphasis

There are three areas of research concentration needed to wage war on spurge. First and possibly most important is a strong research effort into the basic physiology of the plant. This is a difficult and complex task because of the large number of genetic variants of the plant. Numerous basic questions regarding the morphology, the anatomy and the physiology of the plant remain unanswered. Plant scientists have referred to spurge as the “ideal” weed because it is a prolific seed producer, and it easily regenerates from shoots or root fragments. Because the plant tends to defy conventional weed control systems, it is important to understand the biological processes of the plant in order to devise an effective control procedure.

The other two needed research areas are control of the spurge plant through biological and/or chemical control systems. It is known that spurge was introduced into North America from Europe. It is perplexing that our ancestors did not bring along the natural enemies of spurge when they brought the seed. We believe that natural enemies (insects and disease) have effectively controlled the spurge plant in Europe to the extent that it is of little economic significance. It seems logical that we should pursue biological control mechanisms to the extent possible if we are to gain some measure of control in North America. Along with biological control, we need to continue research on chemical control to develop more effective systems of control. There is considerable agreement that a coordinated effort of biological and chemical control will be needed to achieve long run solutions to the problem.

The role of GPC-14

It is important that we strive to make the research efforts in North America complementary, and that we work hard not to reinvent the wheel in several research programs. GPC-14 was identified as the vehicle to develop communication among scientists working on Leafy spurge control. It is through meetings such as this and the publication of newsletters, annual reports and program proceedings that this communication will get the job done. I am urging the GPC-14 to continue reporting research efforts and defining the progress they have made through annual reporting sessions. As we look to the future, we need to make a sincere effort to establish a good level of scientific communication with our colleagues in Canada and Europe. GPC-14 symposiums should include invited papers on current work in Canada and Europe in future sessions.

I want to commend Dr. Alley and his colleagues for the outstanding program they have assembled for this meeting. I am sure that this will be a productive session and that the beauty of the Sundance area will add positively to our memory of this session.