
Workshop Report: Best Management Practices for Communication of Weed Biological Control

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Introduction

As we move into the 21st century, biocontrol as a science faces an evolving social landscape. Previously, biocontrol was regulated very little if at all. Biocontrol was lumped with introductions of other organisms, typically vertebrates (mongoose, cane toads, weasels, stoats, etc.) that were not well thought out and often times the work of individuals or small groups without government oversight or regulation. This is no longer the case. Biocontrol as a science is more stringently regulated. Coupled with the digital media increasing the flow of information and awareness, the landscape has changed in which biocontrol practitioners must operate. Environmental awareness within societies, government mistrust, distrust of scientists, and scientists themselves further confound the process of taking a scientific project from the lab to the field. Effective communication strategies are necessary to move the science of weed biocontrol forward. Scientists from 5 continents presented their strategies to engage the public and various stakeholders. A few common themes emerged in the course of the discussion: target audience appropriate messaging with appropriate messengers to deliver the message; pragmatic re-branding of weed targets and even the science of biocontrol to improve shareholder acceptance; early and frequent engagement of shareholders; training of messengers to more ensure more effective communication skills by scientists to shareholder groups or other messengers; and careful use of language to move away from militaristic or aggressive language that can be off-putting to shareholders. This information can be distilled into the following recommendations for an effective communication plan.

The Target

The first step in an effective communication plan is to identify the right target species for control. “Right” can depend on many factors including, but not limited to, the likelihood of success, shareholder buy in and acceptance (which could also translate into short or long-term funding of the project), the availability (or lack thereof) of other control methodologies, and the long-term potential for damage by the target. The target selection process should include some form of shareholder engagement. Shareholder engagement during the planning phases leads to cooperation based on mutual interest. This is the ideal situation from which to work on. Communication early and often is key to long-term project success and if possible should be considered before a project is even launched.

Communication Team and Strategy

Once a target is selected, an inter-disciplinary team should conduct an evaluation of the biological and socio-political issues surrounding the target and, once an agent(s) is selected, the agent itself. The team should include not only scientists, but also outreach and communication specialists to develop a cohesive communications strategy. The strategy should be viewed in part as marketing: the team is selling to shareholders what they need, something they do not already have, creating or increasing the awareness that a problem exists, and presenting solutions to the problem. A key element in defining the strategy is management of expectations—defining what “success” means and how that “success” will be measured. The public cannot be left with the perception that biocontrol will be a silver bullet. Instead, the public must leave with the idea that biocontrol is a tool for long-term, self-sustaining form of control against the target pest.

It is critical for scientists, as part of this program, to be media trained and prepared for speaking about their project. Although communication experts and outreach specialists should handle much of the communication, researchers have an essential role in the communication strategy.

Media training helps to mitigate communication issues typical of scientists. When scientists speak to

the public, they need to communicate with different terms than they use with their scientific peers. When non-experts here terms such as “likelihood,” “possibility,” “relatively,” and “remote,” they infer that scientists are not confident in their own work or are unwilling to take definitive stands in support of their work. When speaking to the public scientists need to keep in mind the audience, i.e. what is appropriate in a scientific presentation is not appropriate for public engagement. This means simple and direct communication that relies heavily on images to drive the message home. Photos that compare before and after effects or the success of control projects are highly effective. Graphs and statistics are ineffective. Media training is essential help scientists address these common communication issues.

How scientists engage the public is also key. Media tends to “dull” everything and therefore speaking dramatically and enthusiastically increases the effectiveness in communicating a message. Humor not only entertains the audience but also adds a human side to the project. As a cautionary note, the media is always looking for a story and as a consequence is always looking for ways to put spins on stories. It behooves the scientist to be aware of what is happening around them—or to have a media specialist present that can manage the situation and if necessary mitigate any damage done.

Appropriate messengers must be determined for different target audiences. The adage “don’t shoot the messenger” can, in this context, be re-phrased to “pick the wrong messenger and the messenger will shoot himself.” A messenger needs to be able to speak “the language” of the target audience. The approach of one person for all audiences will not work. A team must be defined as a part of the communication strategy to include high impact messengers that will resonate with different target audiences. The scientist must ensure these messengers understand the issues and see the need for the product. Trust must be built between scientist and messenger. If trust does not exist, the team will collapse and by extension so will the communication strategy.

It may be prudent as a part of the communication strategy to do some “rebranding.” Rebranding could include changing the name of the target. In Hawaii many weeds have been given Hawaiian derived or Hawaiian sounding names such as waiwi or waiawi (*Psidium cattleianum* Sabine), kahili ginger

(*Hedychium gardnerianum* Sheppard) and maile pilau (*Paederia foetida* L.). These names create a socio-acceptance issue for control of the target species — an instinctive reaction can be anticipated because the naturalized weed targeted has become associated with the culture or the environment. Substituting skunk vine for maile pilau, for instance could work to good effect. In Brazil, rubber vine (*Cryptostegia grandiflora* R. Br.) is the target for the first classical weed biocontrol project in the country. It has been rebranded as “Devil’s Claw”. This rebranding is based on both the sociological demographics of Brazil and biological tendencies of rubber vine to grow over things, in this case tombstones. Re-branding should be well thought out as a case study of miconia in Tahiti highlights. Miconia was given the name “the green cancer” which was effective on one level but almost too effective as people became afraid of handling miconia for fear they might catch cancer themselves. The rebranding of biocontrol itself might also be considered. The words “control” and “agents” can strike a sinister tone and past associations with biocontrol, no matter how erroneous, can kill a project before it gets off the ground.

Roadblocks to Communication

There are typical roadblocks to secure shareholder support for weed biocontrol that any communication strategy should be prepared to address. These include: vertebrate introductions as examples of biocontrol, discomfort with the deliberate introduction of an alien species, and what happens when the introduced biocontrol agent eliminates the target species. Many of these communication roadblocks are best addressed not by scientists but by other messengers of the communication team. Furthermore, communication to address these misconceptions and public apprehension should be conducted on a consistent, sustained basis irrespective of the target weed or the proposed biocontrol agent.

Biocontrol has become synonymous with the release of vertebrates such as mongoose, cane toads, weasels and stoats. It does not matter to the public that individuals or special interest groups introduced these organisms with no regulatory oversight by the government—the perception is still

there. In Hawaii, the public school system teaches that the mongoose was released as a biocontrol agent for the control of rodents. The logic of biocontrol is called into question as the target (rats) is nocturnal and the control agent (mongoose) is diurnal. To further compound the issue, the mongoose in Hawaii is a predator of bird eggs and is attributed to impacting native bird populations. In effect, the Hawaiian education system perpetuates the idea that biocontrol is bad. While the story of the mongoose’s impact on Hawaii is true, its introduction was not part of an organized biocontrol program but that of an individual. Countering these misconceptions requires consistent messaging that those “releases” were not part of a biological control program. It should, however, be assumed that attempts to dispel these myths and misconceptions will remain a constant battle with the public.

The concept of the releasing of a species to control another, i.e. releasing an alien species to control an alien/invasive species, presents is a mental sticking point with some shareholder groups. Consistent messaging is needed for such issues and again highlights the need for early engagement with shareholder groups before a project even begins. Addressing this issue should focus on value: what would be lost by the target if action is not taken; the safety and long term sustainability of biocontrol; and the track record of weed biocontrol programs. This discomfort is linked in part with misconceptions of what biocontrol is. There may also be some latent cultural sensitivity on the part of introduction of an alien species as indigenous peoples have been displaced by foreign immigrants and subsequently have been disenfranchised from their own land. If speaking to indigenous peoples, cultural sensitivity over the alien issue is needed and again, appropriate messengers must be utilized as part of the communications strategy.

Probably one of the most difficult questions consistently posed regarding biocontrol can be summed up as: “what happens when X runs out of Y weed you’re trying to control?” Invariably this question is followed up with another equally difficult, if not more difficult question to answer, “will it evolve to attack something else?” It is easy to dismiss these questions as those of an uneducated shareholder base but this is not necessarily the case. The questions and concerns are legitimate and need

to be met. Words like “specificity” or “co-evolution” come to mind to address these questions. It is not as simple as that, the question needs to be answered in the context of the target group asking the question and again, the communication strategy must plan ahead for questions such as this.

The Evolution of Communication

As we are thoroughly ensconced in the 21st Century, communication has completed an evolution of sorts. So called “traditional” methods of communication (print media, television and radio) are giving way to digital media consumption and the dissemination of information through social media outlets. Digital and social media has evolved into a powerful tool that is underutilized by communication teams for the biocontrol of weeds. At times faced by agency restraints, scientists are not necessarily in a position to exploit the use of the public’s evolving media consumption base. Meanwhile, these same digital media outlets allow anyone to have a voice and can be effectively used to mobilize people for or against a particular viewpoint to great extent. In light of this, it behooves the communication team to have a digital or social media strategy to promote the program and to engage the public. A well-executed social media campaign can be extremely effective but thus far has been under utilized.

The Language of Communication Strategies

Language in relation to biocontrol has always taken an aggressive slant. Words such as “Control” “agent”, “defoliator,” all are aggressive and militaristic in nature. It is not unusual to have a phrase such as “a biological control agent to attack the weed reducing it’s capability...” while the statement is accurate, it does not necessarily engender by-in with shareholder groups. Phrasing and metaphors that are in line with healing or restoration are much more effective. A biological control program is not aimed to “attack” a weed but to “restore balance”, “mitigate the effects of,” or “manage the impacts of” a weed. The goal of a program is to “manage” or “conserve” the resources we have, to be “good stewards of the land” or to provide a “legacy” for future generations.

Aggressive language creates a greater divide between scientists and the shareholder. Passive or healing language creates bridges and therefore is a more effective communication model to follow.

Conclusions

The science of biological control of weeds has reached a nexus point of sorts. Faced with in some cases more stringent regulations, budgetary constraints and moving projects from in the lab to in the field, communication is a key element each of these dilemmas. Engagement at every level through effective communication strategies can be a project game changer. The strategy must include a team of individuals working early and often with shareholders, scientists trained to work with the media, messengers appropriate to different shareholder groups, preparing for foreseeable obstacles and barriers to obtaining by-in, utilizing digital and social media while integrating language that bridges gaps between groups.

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