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Controlling spurge using all-terrain vehicles

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I'm going to run through these slides quickly and try to get us back on the schedule. I'll have one of these ATV's out on the stations today and we can answer some questions then.

As you all know, we've all run into situations of trying to control leafy spurge where we've used a truck where a truck was never meant to be. Back about 1969 we thought we needed a vehicle that we can take anywhere to spray weeds and mosquitoes and started looking for the perfect vehicle. We thought an air application vehicle would work but we soon found that there's many places where we had patches of spurge on hillsides and so forth, and there were too many trees and too much brush. We just couldn't use a helicopter. We had to find something else. We started looking at commercially available all-terrain vehicles, and this is one that came out in 1969. This was a 6-wheeled outfit with a chain drive and a motor, and we fabricated a little granular spreader and thought we've got it. We'll run this through the mud and up and down the hills. Unfortunately, we didn't get may spurge plants taken care of, but we sure learned a lot about the inside of that vehicle. We spent a lot of time underneath the hood.

We started looking around to see what else was available. And some of the shows had 4-wheel drive vehicles such as this one. Well, we finally decided we'd try a tractor. We thought we would put our granule spreader on it, and started running it through the mud spraying mosquitoes. We didn't use it too much for weed control then, but we soon found we had the same problem. We were spending more time working on it. If we'd have taken the mechanics up and just have them take care of the mosquitoes we'd have saved money in the long run. We then started looking at the "Cadillacs" of the ATVs. They cost more than we could afford. They cost more than the price of a pickup; I think the same unit's probably about \$30,000 today. We decided we couldn't afford that so we gave up on the ATVs for a while. We thought we did not need an all-terrain vehicle that bad.

You all know the popularity of the ATCs (all-terrain cycle). They are the 3-wheelers. We looked at them and talked to some people, tried them, and gave them a shot. We weren't real excited. Then came the 4-wheeler. We thought well, let's see what we can do with this. So we have purchased one and you can equip these with all kinds of commercially made sprayers and probably 10 companies now building these sprayers, to put little booms and hand guns and so forth on them. And they can be used in a lot of areas where you can't get a pickup truck. This one pictured is equipped with a calculator so you can determine your acreage and keep pretty close track of what you're doing. They're real easy to operate. You can use them on many terrains. You can use them down by the river

in the trees; everybody knows you can't get a pickup between those trees, but you can get one of these to go snaking through the brush or whatever, you can get to the areas. I'm really going to talk about side hills and slopes today. This is a slope we did a little spraying on for a demonstration right out of Great Falls. This is the degree of a slope that you can treat with one of these if you do it right. If you get to a steeper slope, you always have to go downhill. This will probably be the maximum amount of slope you would want to handle with one of these units, equipped as this one is now. You have to go downhill, you cannot go uphill with this. You'll see the boom dragging in this particular instance. You lose traction, run out of power, and possibly injure the operator. So we're going to limit it to this gradual hillside and you can see a few spots of spurge down through here. We're going to take you through an application.

The operator starts off at the top. He is going to treat a few plants scattered here and there. Going downhill is no problem. We thought we would see how it operates on the side hills. We could run back and forth on that side hill real easy. Again, looking down; this is pretty steep slope. You can't really appreciate it from the slide. These 4-wheelers or 3-wheelers you've got to respect them. Use the gas carefully and the brake carefully. Otherwise, they can spring up and get you real quick. They're a great tool, but you've got to respect them. This could easily result, had it not been an experienced operator, a mishap to the operator. You just don't put anybody on it and turn them loose. You can do a lot of hillside work, but I would still recommend trying to run up and down. Don't side hill unless you've used the machine for a long time and know its capabilities because it's just dangerous; you're asking for problems. Again, here you see it comes right up the hill, no problem, until you hit the hole at the top.

An advantage of the 3-wheeler over the 4-wheeler stability. As you can see, it's pretty stable going downhill, it has no problem going down through this wash. The operator does not try to climb up the other side. Being an experienced operator, he simply stops the machine, gets out the handgun, and treats this wash with the handgun. If it takes two or three tanks, it's still a very efficient method of treating these small spots on the hill-sides. Coming out of the wash, if you use too much gas, and don't know what you're doing, you can get into a situation like this. This was staged, this guy's a very good operator and knows exactly how to handle his machine. Just let off from the throttle and you can recover nicely. But again, if you are inexperienced, you've got to respect this machine. You can make added a little weight to correct the problem. It doesn't take much to hold that front-end down. A thick flat rock and some tarp straps makes all the difference in the world. Should you get in a steep area and you're experienced in operating, you can put your weight forward and go right up the hill. But again, you have to be careful, and you have to know what you're doing. You don't do these kind of slopes the first day you acquire a machine.

There are two things that will get you into trouble faster than anything. That's the misuse of the brakes and the throttle on these units. Lock up one or the other brakes and you're in trouble. Take your time, move slowly, and use the brakes properly you'll have no problem. On 4-wheelers, you don't want to throw your legs out. Because your leg gets caught and you come right over the top. All you have to do is sit and let the machine back down the hill; they're really stable. You've got to keep your feet on the pegs or on the machine.

I'll talk a bit about some of the equipment and some of the things this particular unit of ours has. The other one you're looking at belongs to Dow Chemical. We're going to a low profile system. If you're thinking about application of liquid, get a small tank and mount it low. This is a 10-gallon tank and you can see the little electric pump that will be mounted on it. It will sit nice and low to keep the weight low. We've also decided to license our unit so we can use it also for mosquito control in some irrigated areas. We want to be able to run it from place to place. This particularly 4-wheel drive, as you'll notice, has a differential. It drives well on asphalt, the tires don't skid and it's easy to handle. We've put a county plate on it, and we had to put a brake light on it, a rear view mirror, and now we're street legal, so we can run it down the highway from place to place. If you're looking at small subdivision spraying leafy spurge, this will be real handy, too. You can just run down the road and go from one place to the other.

Also, another thing we have talked about is the ballast on the front. We're going to put a tank on the front of ours as well as on the rear, and then use the liquid in the tanks at the same time to keep the weight pretty well balanced.

Here's another use. Carrying granules to walking applicator. You can even use the unit to pull hoses.

The units are easily transported. We use a little tilt-bed trailer, but they'll go in the back of a truck real nice, too. With ours we're going to go to a slide-out ramp system and haul it in a pickup. We've had the tilt bed trailer before, and they just ended up being a lot of maintenance. We were always jack-knifing the trailer and breaking the tongue and so forth. So we're going to stay with a pickup unit with ours.

That's basically all I have to say. We will have that thing set up out there today at another station on the tour and not the machine you saw in the pictures, the red one, but one real similar to that. We'll be glad to let you take a look at it and answer any questions and maybe you might take a spin on it if you're interested. We'll try to answer any questions.