Cattle ranchers' attitudes to conflicts with jaguars in the Pantanal of Brazil

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Appendix

Survey of jaguar depredation problems and conservation issues in the Pantanal of Mato Grosso (English translation of Portuguese original).

Background

On this ranch you are □ owner □ manager □ employee – what is your job? ______________

Your age □ ≤ 30 □ 31–40 □ 41–50 □ 51–60 □ 61–70 □ 71 +

How long have you lived/worked at this ranch? _____ years

What is the size of this ranch? __________ ha

How many people are employed on this ranch? _________

Approximately how many people are directly dependent for their livelihood on this ranch? ______

Cattle

How many cattle are there on this ranch? _______________

Do you now have more or fewer cattle than 5 years ago?

□ many more □ more □ same □ fewer □ many fewer

Are the cattle guarded in any way? □ yes □ no

If yes, a) How? □ fencing □ dogs □ people/workers □ other, please describe: ______________

b) When are they guarded? □ always □ daytime only □ night-time only □ other pattern ______

Jaguars

Are there jaguars within the boundaries of the ranch? □ yes □ no □ don’t know

Have you seen any jaguars this year?

□ no □ yes, saw jaguar □ yes, saw signs of jaguar

Do you see more of fewer jaguars (or signs of jaguars) now than 5 years ago?

□ more now □ less now □ about the same □ don’t know

Have there been any losses of cattle caused by a jaguar on this ranch? □ yes □ no

If no please go to question 20. If yes please continue.

Approximately how many heads of cattle have you lost to jaguars

a) this year (since 1 Jan 2000)? _______ b) last year (1999)? _______

Do the number of jaguar attacks appear to be more or less than 5 years ago?

□ more □ less □ same □ don’t know

Do any other predators ever attack the cattle?

puma □ sure □ suspected □ possible □ unlikely □ not possible

maned wolf □ sure □ suspected □ possible □ unlikely □ not possible

caiman □ sure □ suspected □ possible □ unlikely □ not possible

anaconda □ sure □ suspected □ possible □ unlikely □ not possible

other _________ □ sure □ suspected □ possible □ unlikely □ not possible

Which animals are taken by jaguars?

strong/healthy animal □ often □ sometimes □ rarely □ never

old or weakened animal □ often □ sometimes □ rarely □ never

pregnant animal □ often □ sometimes □ rarely □ never

young animal □ often □ sometimes □ rarely □ never
Have you noticed any patterns in these attacks in terms of time and season? Attacks happen
a) Time  □ always at night  □ always during the day  □ mostly at night  □ mostly during the day  □ no
pattern  □ other pattern ________________________________
b) Season  □ mostly during the wet season  □ mostly during the dry season  □ all year round  □ other pattern
____________________

What signs tell you that a cow has been killed by a jaguar?
________________________________________________________________________________

Have you had any successes on your ranch in preventing jaguar attacks? If so, how was it done?
________________________________________________________________________________

Do you or others from this ranch hunt any wild species for food or other uses? Please list any and state how often they
are hunted __________________________________________________

Do you think some people in Pantanal/ Mato Grosso still shoot jaguars to stop them taking cattle?
□ yes  □ maybe  □ no  □ don’t know

The ranch
What is the current market price (in Reais) of  one cow ______ one calf ______

What percentage of income is derived from cattle on this ranch? ______

Does this ranch have any other income sources? □ yes  □ no
a) If yes, tick all that apply  □ tourism  □ fishing  □ farming (crops)  □ other ________________________
If you have problems with livestock predation by jaguars on your ranch, can you estimate how much potential income
you lose this way per year? ______ Reais
Which cost is higher  □ losing cattle to jaguars each year  □ investing in ways to protect cattle from jaguars
How much does the loss of cattle to jaguars worry you? □ very much  □ some  □ not much  □ not at all
What other problems affect your annual income from cattle? Please rank, where 1 = most serious
___ flood
___ drought
___ disease (in cattle)
___ theft of cattle
___ jaguars killing cattle

Have you ever received any compensation for cattle taken by jaguars? □ yes  □ no
If yes
how were you compensated? (rate?) ______________
who provided this? ____________________________
did you receive your compensation promptly? ___________

Do you feel a compensation scheme should be introduced? □ yes □ no □ maybe/don’t know
a) If yes or maybe could you suggest a rate that would adequately compensate you for your loss of cattle to jaguars/
other predators ______________

Tourism
Does this ranch earn any money from tourism? □ yes □ no
If no, please go to question 37. If yes, please continue
How is your ranch involved in tourism (tick all that apply)
□ offer accommodation
□ restaurant on the ranch
□ provide guided tours (horse, boat, walk)
Attitudes to jaguars in Brazil

☐ sell souvenirs/artisan products
☐ other _________________________________

Since when has this ranch been involved in tourism? _________

Do tourists want to see jaguars? □ yes □ no □ don’t know

Have you taken tourists to see jaguars? □ yes □ no

a) If yes, how do you find jaguars? __________________________
b) How often are you successful in finding jaguars to show tourists? □ always □ often □ sometimes □ rarely

If your ranch is presently not involved in tourism, do you have any plans to become involved in the future?
□ yes □ no □ maybe/not sure

Conservation

Could you state whether you have observed an increase or decrease in the following animals over the last 5 years?

puma               □ more □ same □ fewer □ don’t know
maned wolf         □ more □ same □ fewer □ don’t know
anteater           □ more □ same □ fewer □ don’t know
armadillo          □ more □ same □ fewer □ don’t know
tapir              □ more □ same □ fewer □ don’t know
marsh deer         □ more □ same □ fewer □ don’t know

Are you aware of any schemes whereby you can gain benefits for being acknowledged as a pro-environment ranch (such as tax reductions or non-monetary prestige awards) □ yes □ no

a) If yes please specify _________________________________

If such a system were introduced and you could gain tax benefits or other rewards, you would be
□ not interested
□ possibly interested, would like to know more about it
□ possibly interested, but sceptical of the benefits
□ very interested

Your views

Please tick the box which most closely matches how you feel about these statements.

Jaguars are a threat to cattle ☐ strongly agree ☐ agree ☐ unsure ☐ disagree ☐ strongly disagree
Jaguars are a threat to humans ☐ strongly agree ☐ agree ☐ unsure ☐ disagree ☐ strongly disagree
At this ranch we cannot tolerate jaguars taking any cattle ☐ strongly agree ☐ agree ☐ unsure ☐ disagree ☐ strongly disagree
Jaguar predation on cattle is a fact of life / an acceptable risk in ranching ☐ strongly agree ☐ agree ☐ unsure ☐ disagree ☐ strongly disagree
I would be happier if there were no jaguars at all ☐ strongly agree ☐ agree ☐ unsure ☐ disagree ☐ strongly disagree
Jaguars deserve protection ☐ strongly agree ☐ agree ☐ unsure ☐ disagree ☐ strongly disagree
A solution to the problem of jaguar preying on cattle needs to be found ☐ strongly agree ☐ agree ☐ unsure ☐ disagree ☐ strongly disagree
With regard to this ranch and my livelihood, things are fine as they are ☐ strongly agree ☐ agree ☐ unsure ☐ disagree ☐ strongly disagree
Jaguar predation on cattle is a problem that the local authorities should address ☐ strongly agree ☐ agree ☐ unsure ☐ disagree ☐ strongly disagree
The jaguar problem is for each ranch to solve on its own ☐ strongly agree ☐ agree ☐ unsure ☐ disagree ☐ strongly disagree
I/we would like to receive help at this ranch in solving the jaguar depredation issue ☐ strongly agree ☐ agree ☐ unsure ☐ disagree ☐ strongly disagree

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<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Unsure</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
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<tbody>
<tr>
<td>I benefit directly from tourism</td>
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<td>Tourism in Pantanal is disruptive to my lifestyle and traditions</td>
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<td>I am worried about the effects of the construction of the Hidrovia</td>
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<td>I am in favour of paving the Transpantaneira</td>
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<td>The Pantanal needs more development</td>
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<td>The nature / wildlife of the Pantanal is a national treasure</td>
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<td>The nature / wildlife of the Pantanal is adequately protected</td>
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<td>I am worried about the future of the Pantanal’s nature / wildlife</td>
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<td>I consider myself aware of conservation problems in the Pantanal</td>
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<td>The Pantanal needs more national parks or nature reserves</td>
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<td>The existing laws are useful in protecting Pantanal wildlife</td>
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<td>I am concerned about overfishing in the Pantanal</td>
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<td>I would like to communicate more with conservation scientists and</td>
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