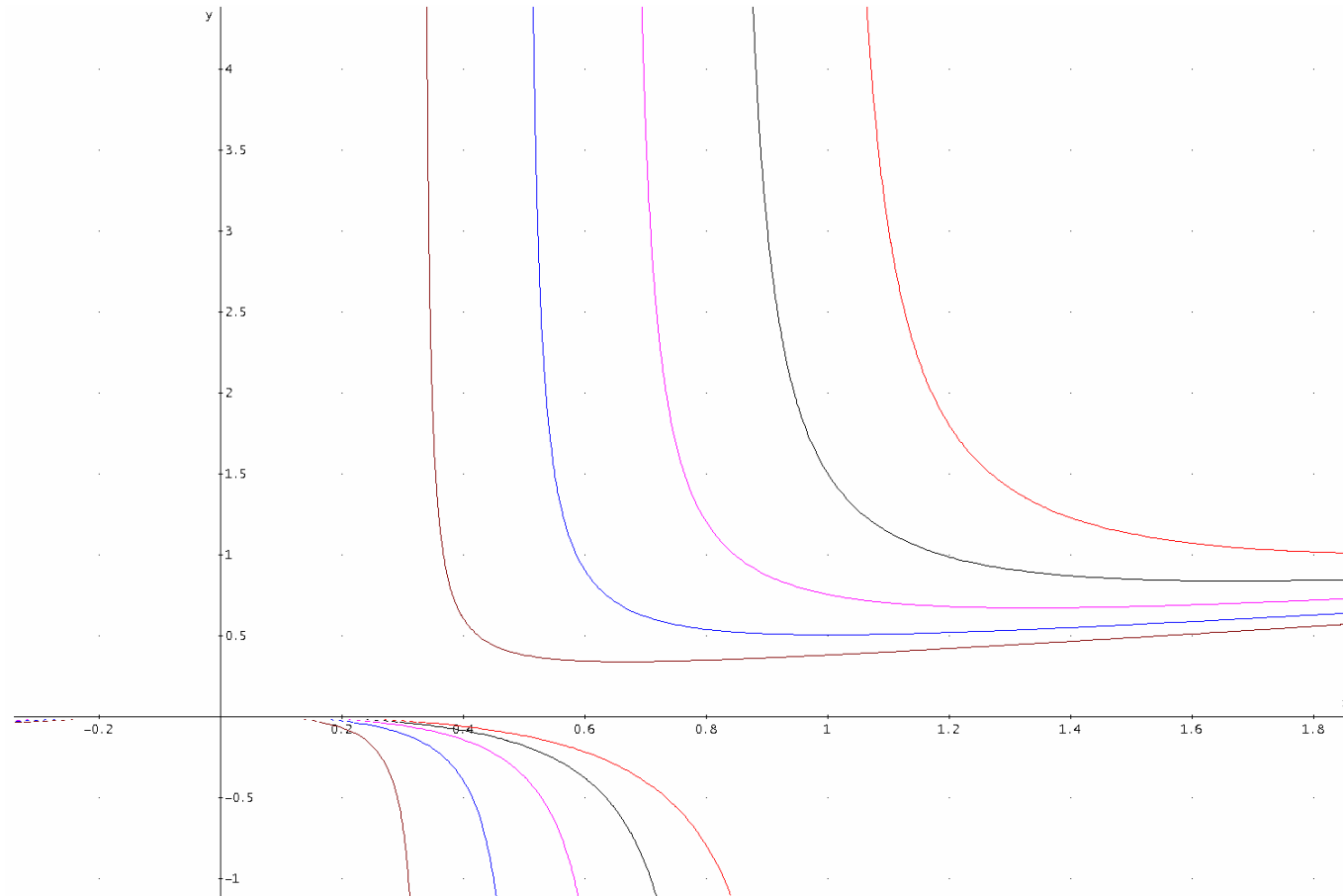


Ekonomisk optimering av plantage

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<http://www.Lohmander.com/Plantage100109.pdf>



Figur 1.

Isokvanter baserade på funktionen $q = 300 \left(x - \frac{x^2}{4y} \right)$, $q = 100, 150, 200, 250, 300$

```

model:
max = nuv;
nuv = p*q - rx*x - ry*y;
q = 300*(x-x^2/(4*y));
q = 100;
p = disk*200;
disk = @exp(-r*t);
r = .03;
t = 80;
rx = 1700;
ry = 1700;
kvot = y/x;
@free(nuv);
end

```

Global optimal solution found.

Objective value:	330.8065
Objective bound:	330.8067
Infeasibilities:	0.1136868E-12
Extended solver steps:	4
Total solver iterations:	1373

Variable	Value	Reduced Cost
NUV	330.8065	0.000000
P	18.14359	0.000000
Q	100.0000	0.000000
RX	1700.000	0.000000
X	0.4824045	0.1940475E-07
RY	1700.000	0.000000
Y	0.3902735	0.000000
DISK	0.9071795E-01	0.000000
R	0.3000000E-01	0.000000
T	80.00000	0.000000
KVOT	0.8090170	0.000000

```

model:
max = nuv;
nuv = p*q - rx*x - ry*y;
q = 300*(x-x^2/(4*y));
q = 200;
p = disk*200;
disk = @exp(-r*t);
r = .03;
t = 80;
rx = 1700;
ry = 1700;
kvot = y/x;
@free(nuv);
end

```

Global optimal solution found.

Objective value:	661.6129
Objective bound:	661.6134
Infeasibilities:	0.2842171E-13
Extended solver steps:	4
Total solver iterations:	1024

Variable	Value	Reduced Cost
NUV	661.6129	0.000000
P	18.14359	0.000000
Q	200.0000	0.000000
RX	1700.000	0.000000
X	0.9648091	0.000000
RY	1700.000	0.000000
Y	0.7805469	0.000000
DISK	0.9071795E-01	0.000000
R	0.3000000E-01	0.000000
T	80.00000	0.000000
KVOT	0.8090170	0.000000

```

model:
max = nuv;
nuv = p*q - rx*x - ry*y;
q = 300*(x-x^2/(4*y));
q = 300;
p = disk*200;
disk = @exp(-r*t);
r = .03;
t = 80;
rx = 1700;
ry = 1700;
kvot = y/x;
@free(nuv);
end

```

Global optimal solution found.

Objective value:	992.4194
Objective bound:	992.4200
Infeasibilities:	0.000000
Extended solver steps:	4
Total solver iterations:	1617

Variable	Value	Reduced Cost
NUV	992.4194	0.000000
P	18.14359	0.000000
Q	300.0000	0.000000
RX	1700.000	0.000000
X	1.447214	0.000000
RY	1700.000	0.000000
Y	1.170820	0.000000
DISK	0.9071795E-01	0.000000
R	0.3000000E-01	0.000000
T	80.00000	0.000000
KVOT	0.8090170	0.000000

```

model:
max = nuv;
nuv = p*q - rx*x - ry*y;
q = 300*(x-x^2/(4*y));
q = 200;
p = disk*200;
disk = @exp(-r*t);
r = .03;
t = 80;
rx = 1700;
ry = 850;
kvot = y/x;
@free(nuv);
end

```

Global optimal solution found.

Objective value:	1362.051
Objective bound:	1362.052
Infeasibilities:	0.1110223E-15
Extended solver steps:	7
Total solver iterations:	1142

Variable	Value	Reduced Cost
NUV	1362.051	0.000000
P	18.14359	0.000000
Q	200.0000	0.000000
RX	1700.000	0.000000
X	0.8888889	0.000000
RY	850.0000	0.000000
Y	0.8888889	0.000000
DISK	0.9071795E-01	0.000000
R	0.3000000E-01	0.000000
T	80.00000	0.000000
KVOT	1.000000	0.000000

```

model:
max = nuv;
nuv = p*q - rx*x - ry*y;
q = 300*(x-x^2/(4*y));
q = 200;
p = disk*200;
disk = @exp(-r*t);
r = .03;
t = 80;
rx = 1700;
ry = 3400;
kvot = y/x;
@free(nuv);
end

```

Global optimal solution found.

Objective value:	-600.9395
Objective bound:	-600.9390
Infeasibilities:	0.5684342E-13
Extended solver steps:	4
Total solver iterations:	1693

Variable	Value	Reduced Cost
NUV	-600.9395	0.000000
P	18.14359	0.000000
Q	200.0000	0.000000
RX	1700.000	0.000000
X	1.051567	0.000000
RY	3400.000	0.000000
Y	0.7182335	-0.1232679E-06
DISK	0.9071795E-01	0.000000
R	0.3000000E-01	0.000000
T	80.00000	0.000000
KVOT	0.6830127	0.000000

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