DEALING WITH THE BEECH COMPONENT IN MAINE FORESTS

NERCOFE
18 MARCH 2019
ORONO, MAINE

M. L. McCORMACK Jr
Thorndike, Maine

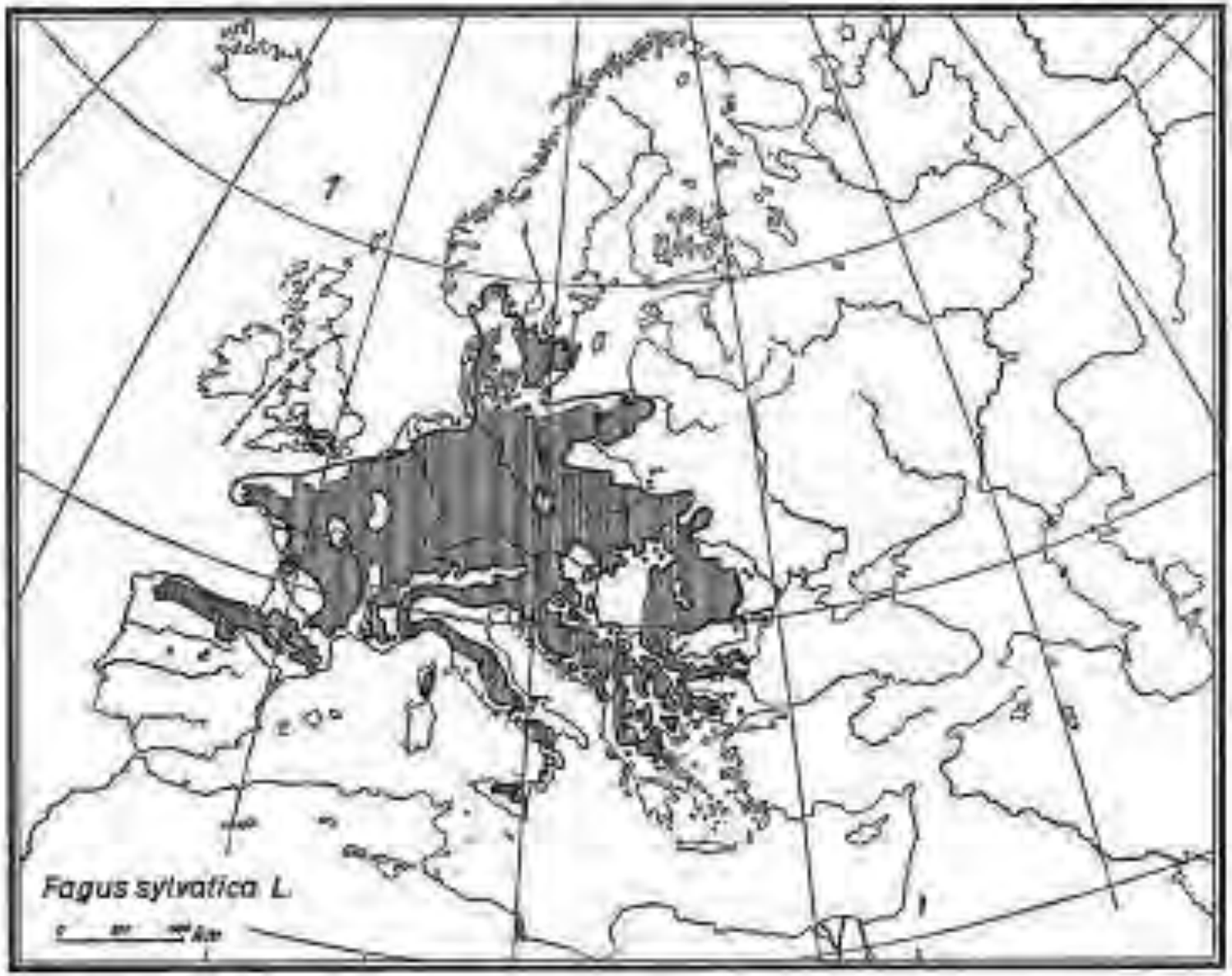
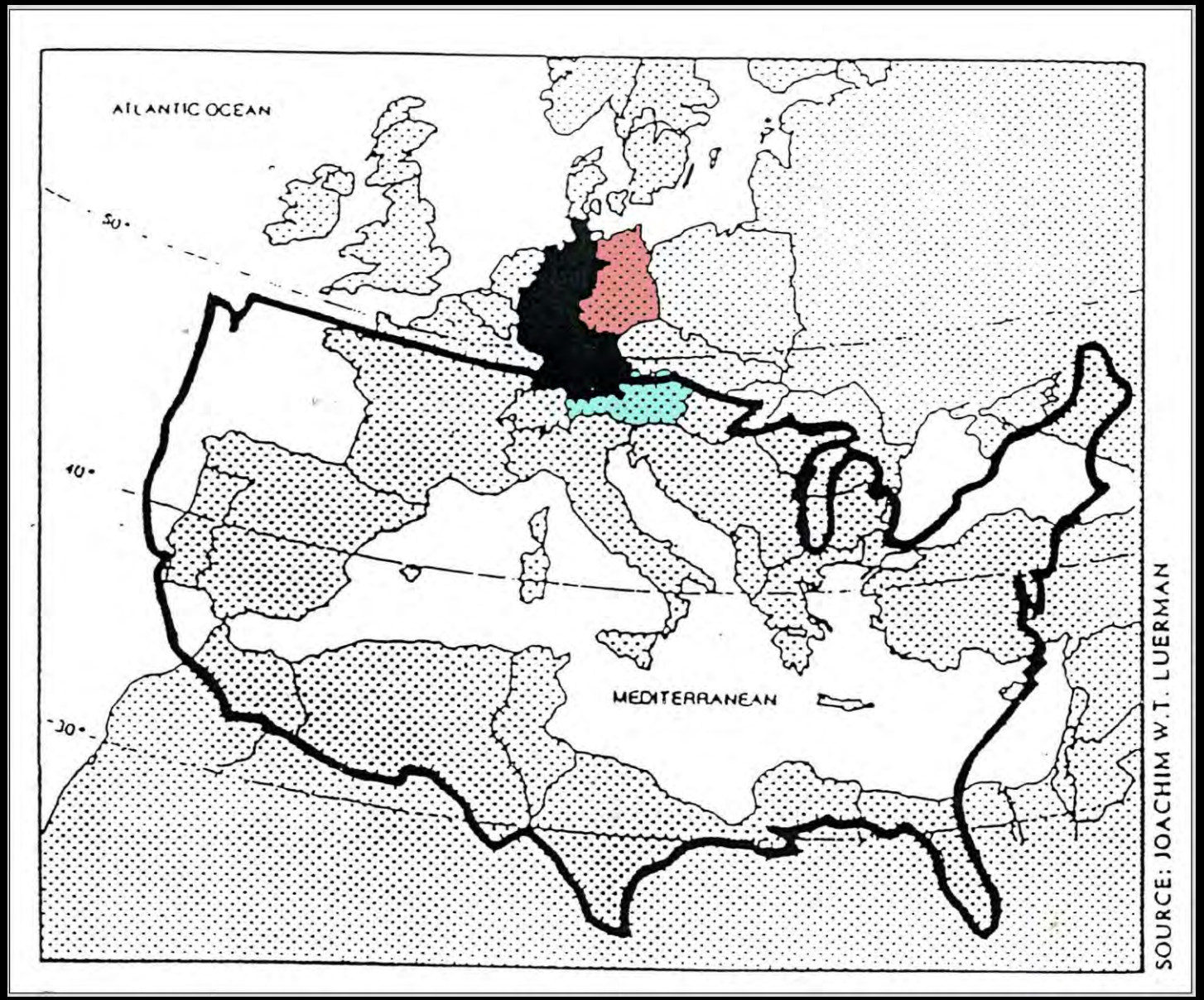
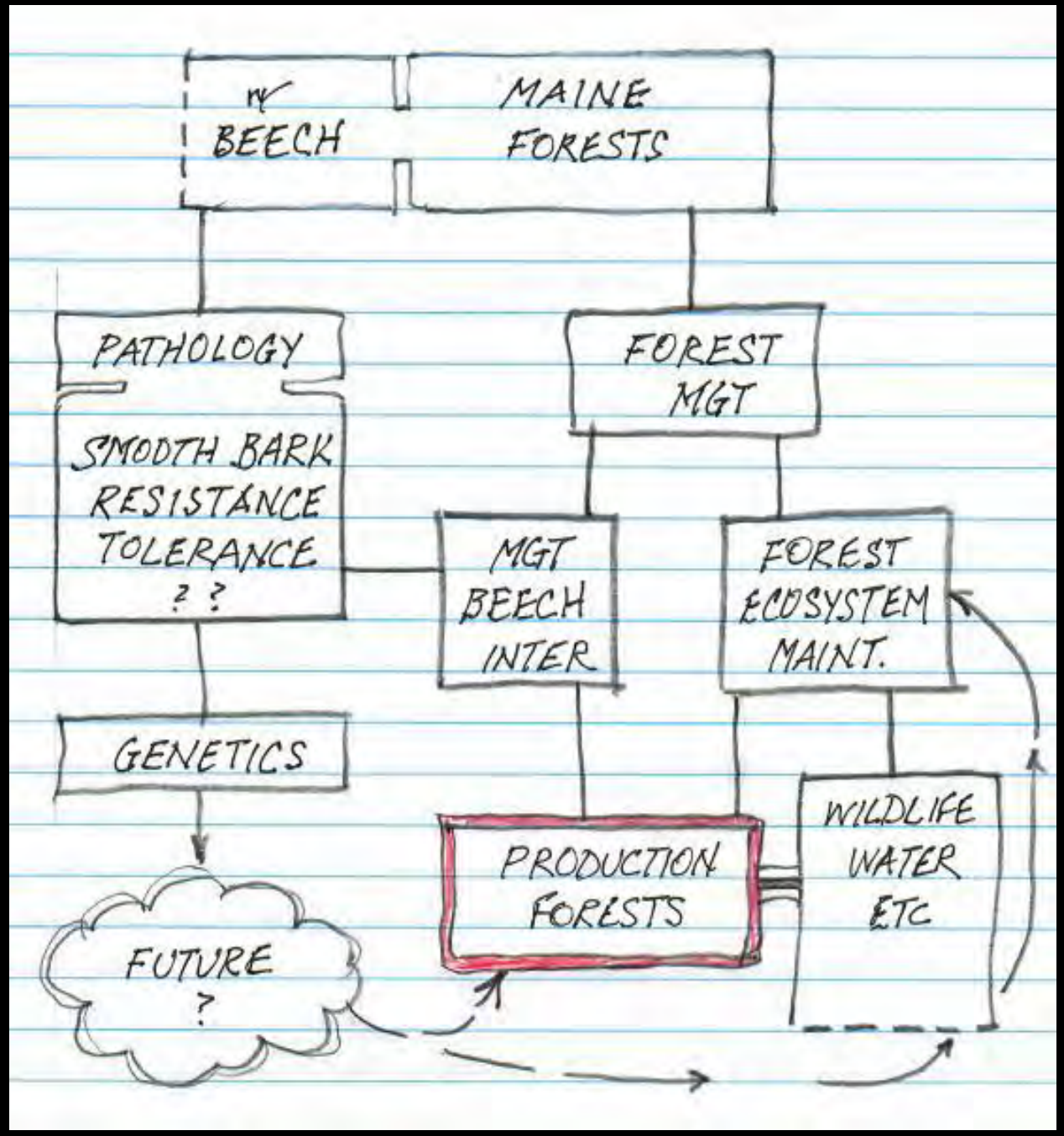


Abb. 20. Natürliches Verbreitungsgebiet der Buche *(Fagus sylvatica L.)* (nach MEUSEL 1965)


ATLANTIC OCEAN
50°
40°
30°
MEDITERRANEAN
SOURCE: JOACHIM W.T. LUERMAN


BEECH
MAINE FORESTS
PATHOLOGY
FOREST MGT
SMOOTH BARK
RESISTANCE
TOLERANCE
? ?
MGT BEECH INTER
FOREST ECOSYSTEM MAINT.
GENETICS
WILDLIFE WATER ETC
PRODUCTION FORESTS
FUTURE
?

“Although there is an increasing need
for research and experimentation
there is a greater need
to make use of what is available.”

C. B. MacDonald, woodlands staff forestry
manager, Proctor & Gamble Cellulose, Ltd,
Grand Prairie, Alberta
1982. PULP & PAPER CANADA 83:5

1932 J. Ehrlich. occurrence in USA.
Jour. Arnold Arboretum

b.b.d. enterered through Halifax, NS from Europe late 1800s….
variety of publications and reviews, primarily by pathlogists

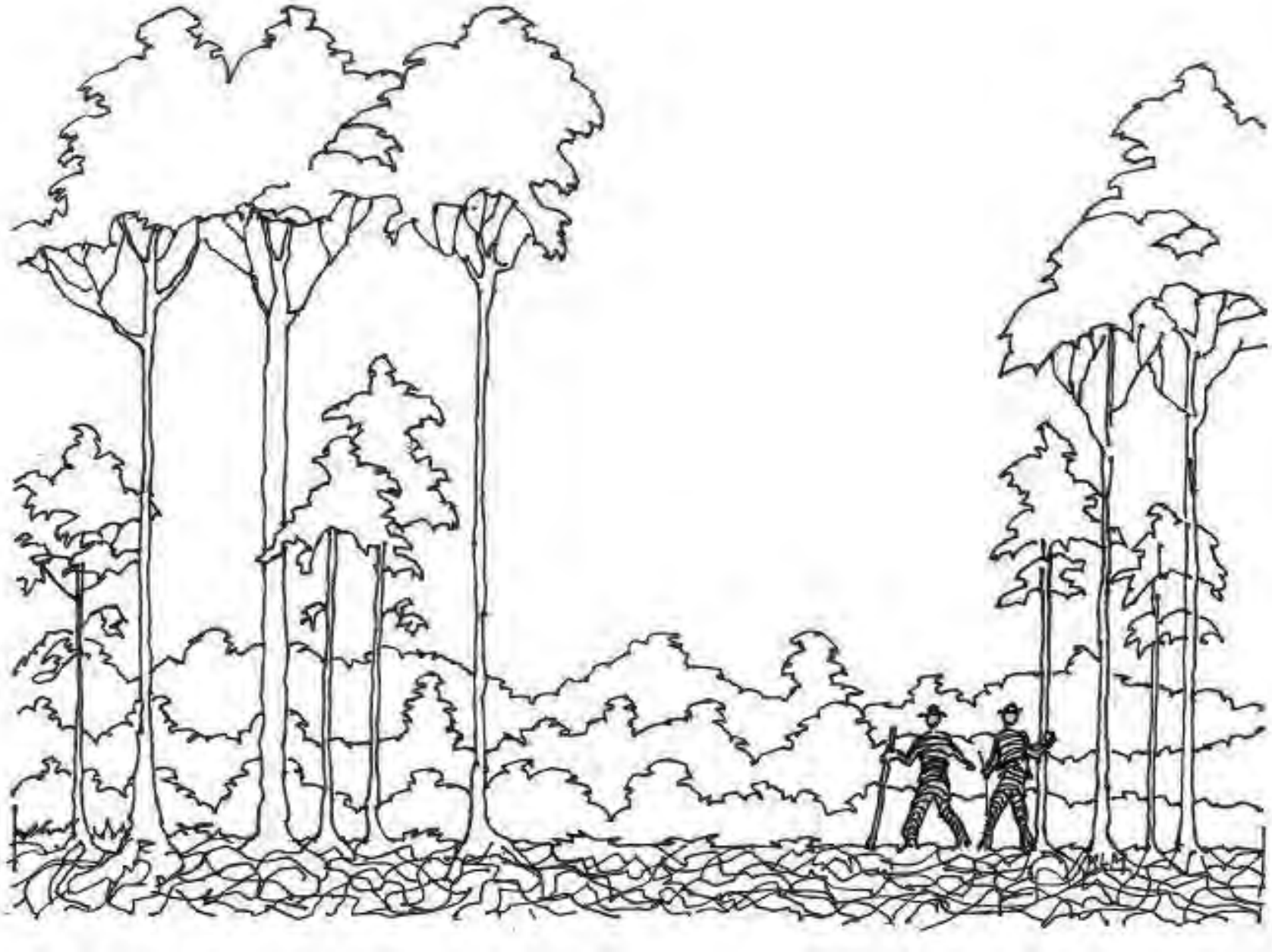
1967 reported, discussed. NE SAF Annual

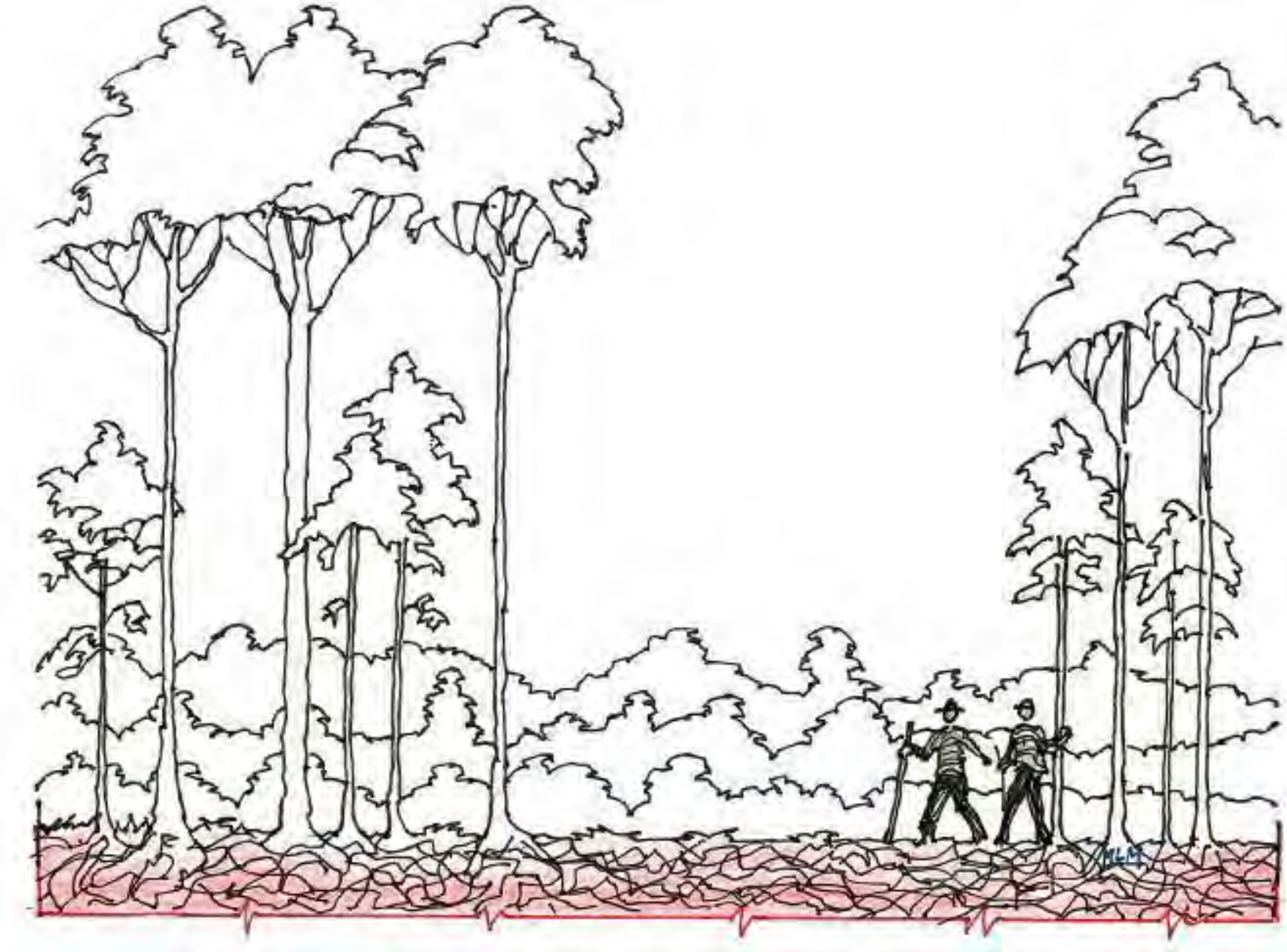
1971 glyphosate as herbicide

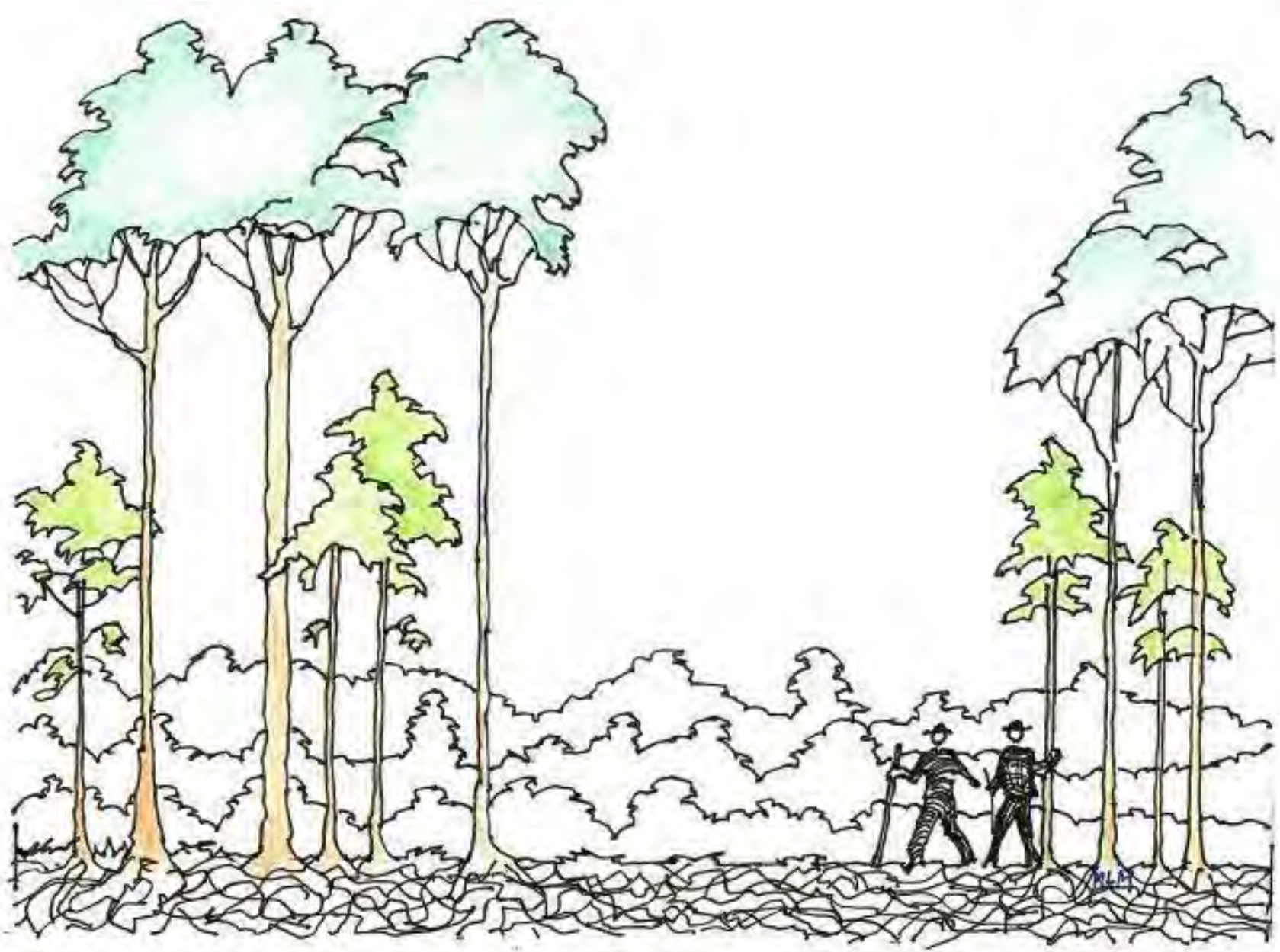
1974 plots at Telos Area

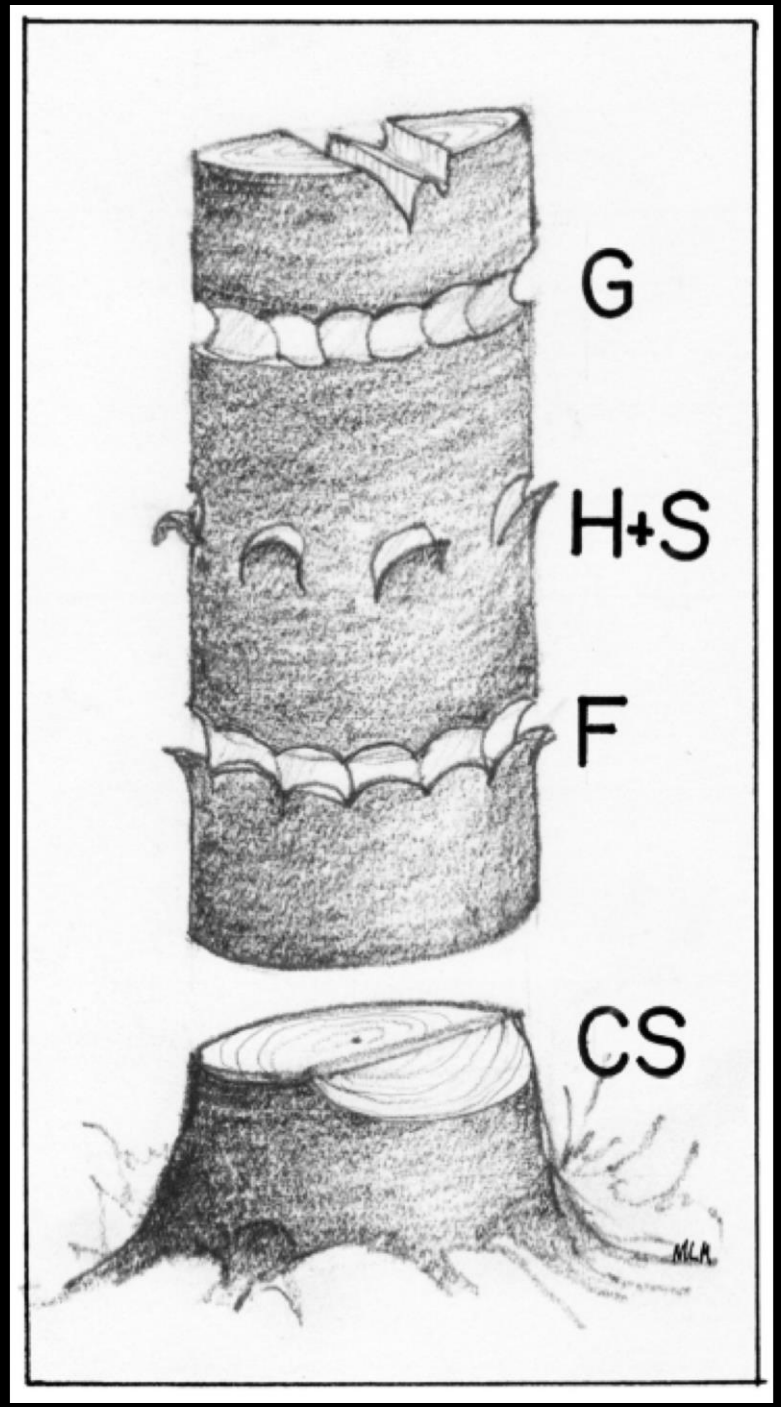
1977 CFRU aerial applic plots

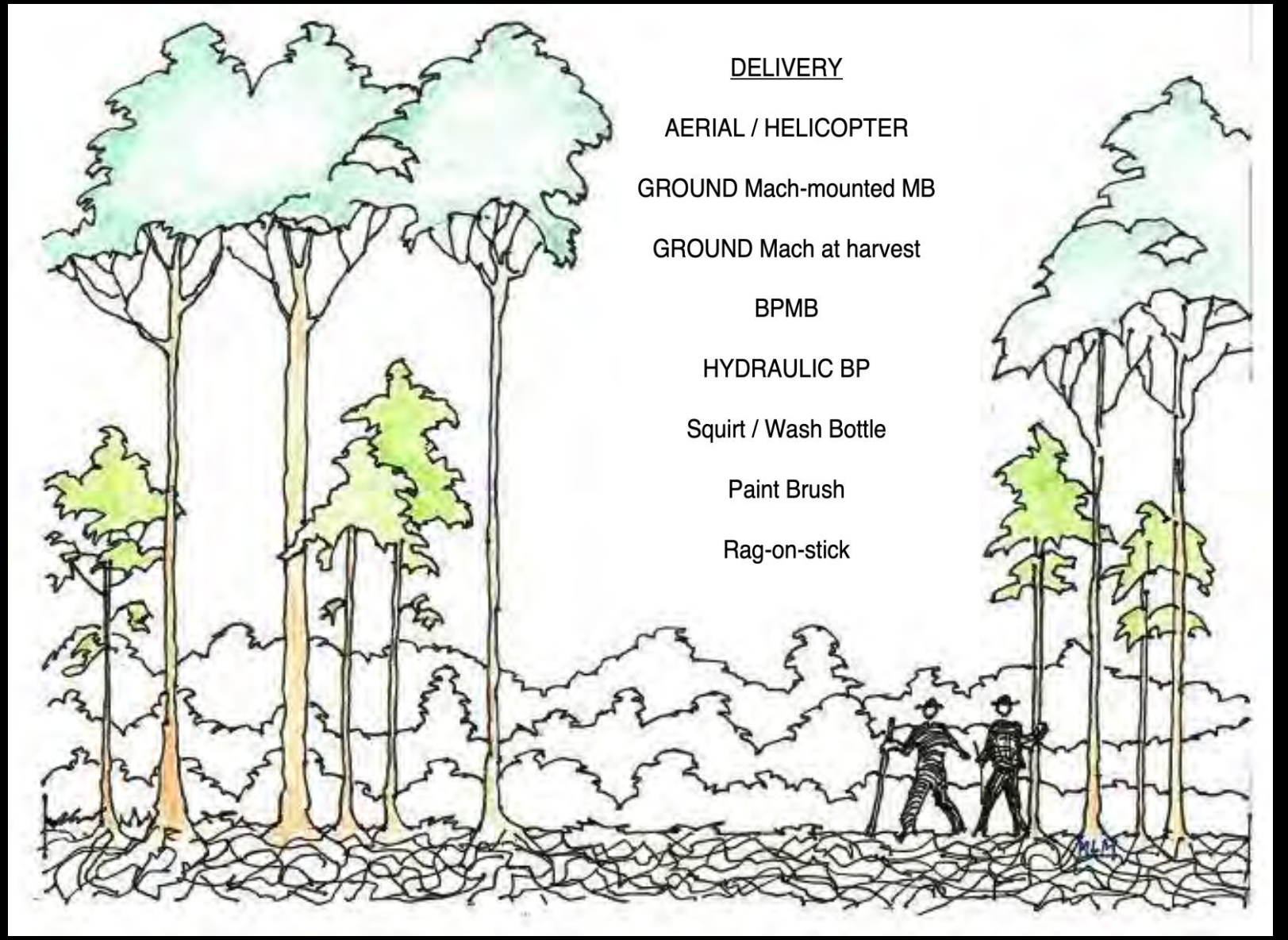
1978	effic of gly at NEWSS, Boston
1980	effic of gly at WSSA Toronto esp effective on beech, brackets of rates
1981	natl conf at Purdue Effic on beech, release of sugar maple
1989	100,000 acres aerial in Maine
1993+	gly special use label (in Maine) for sugar maple release

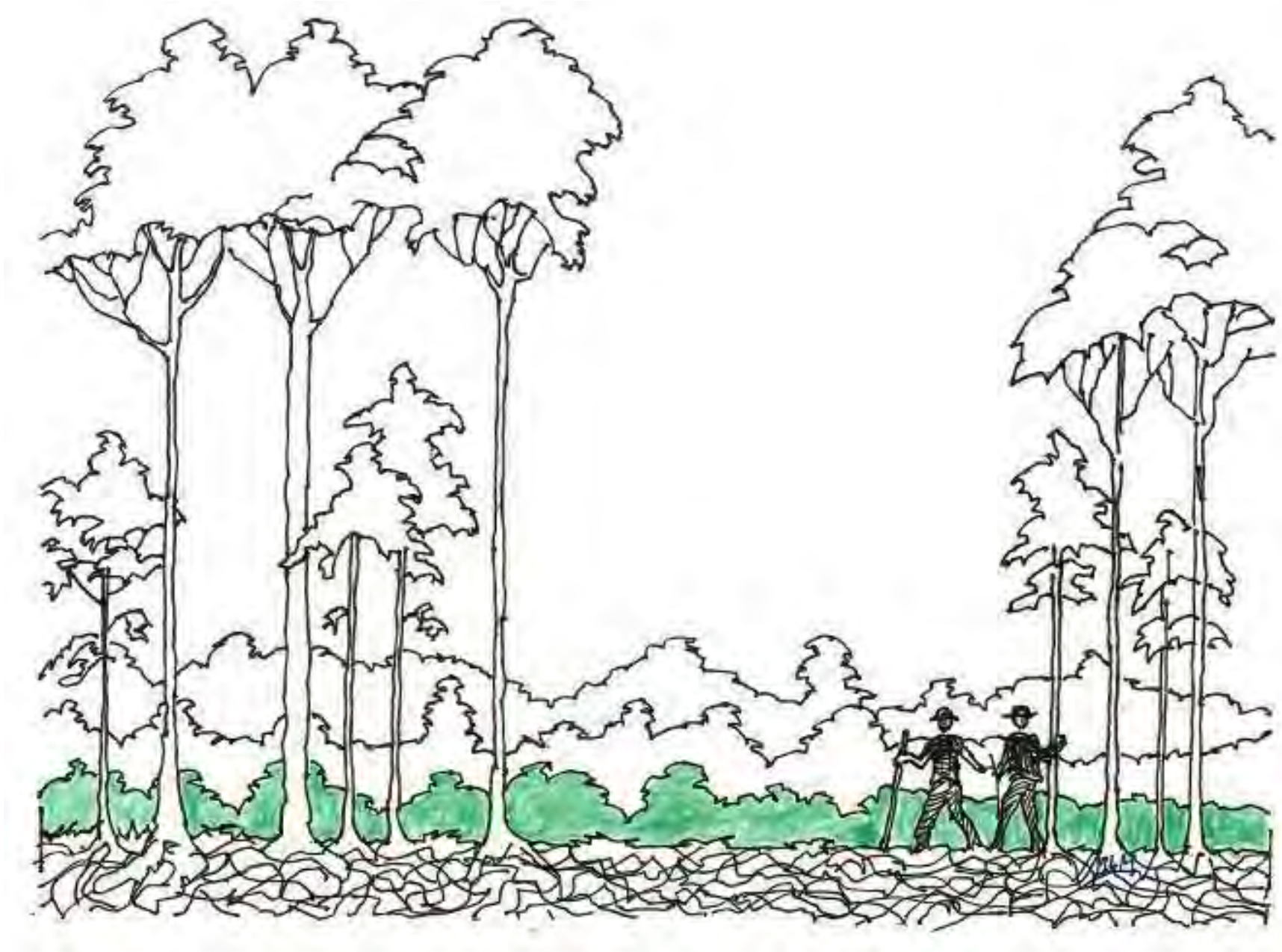


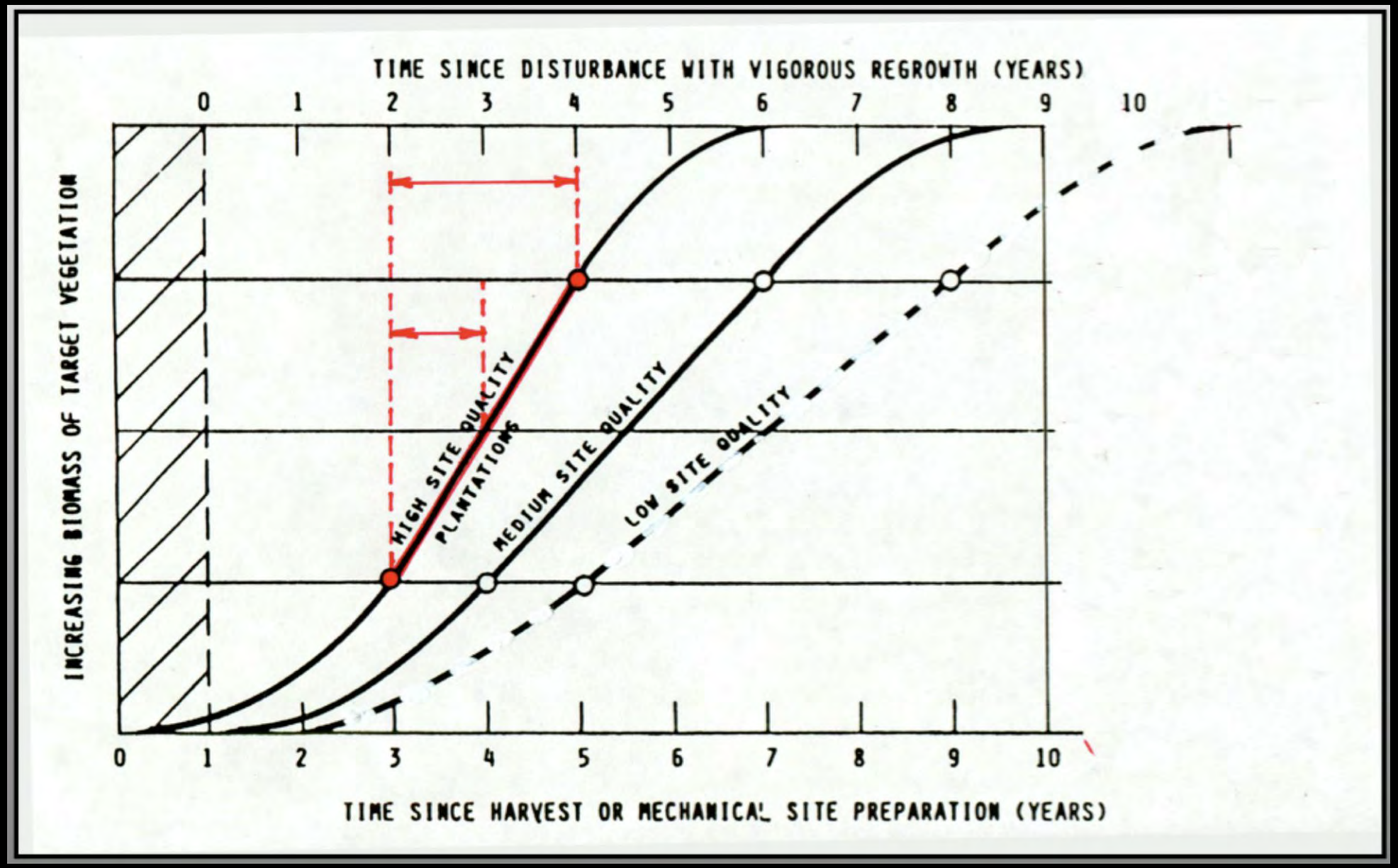


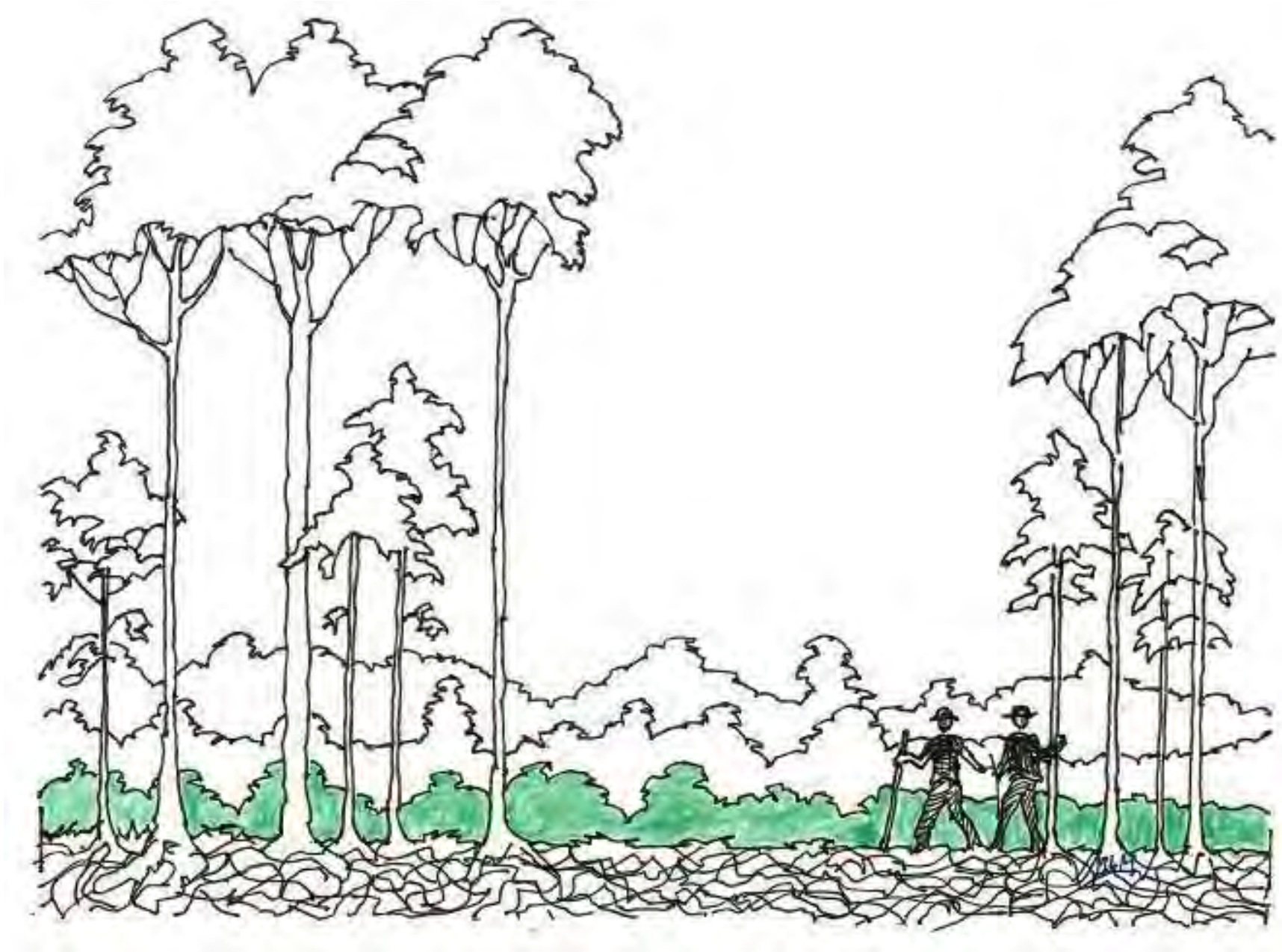


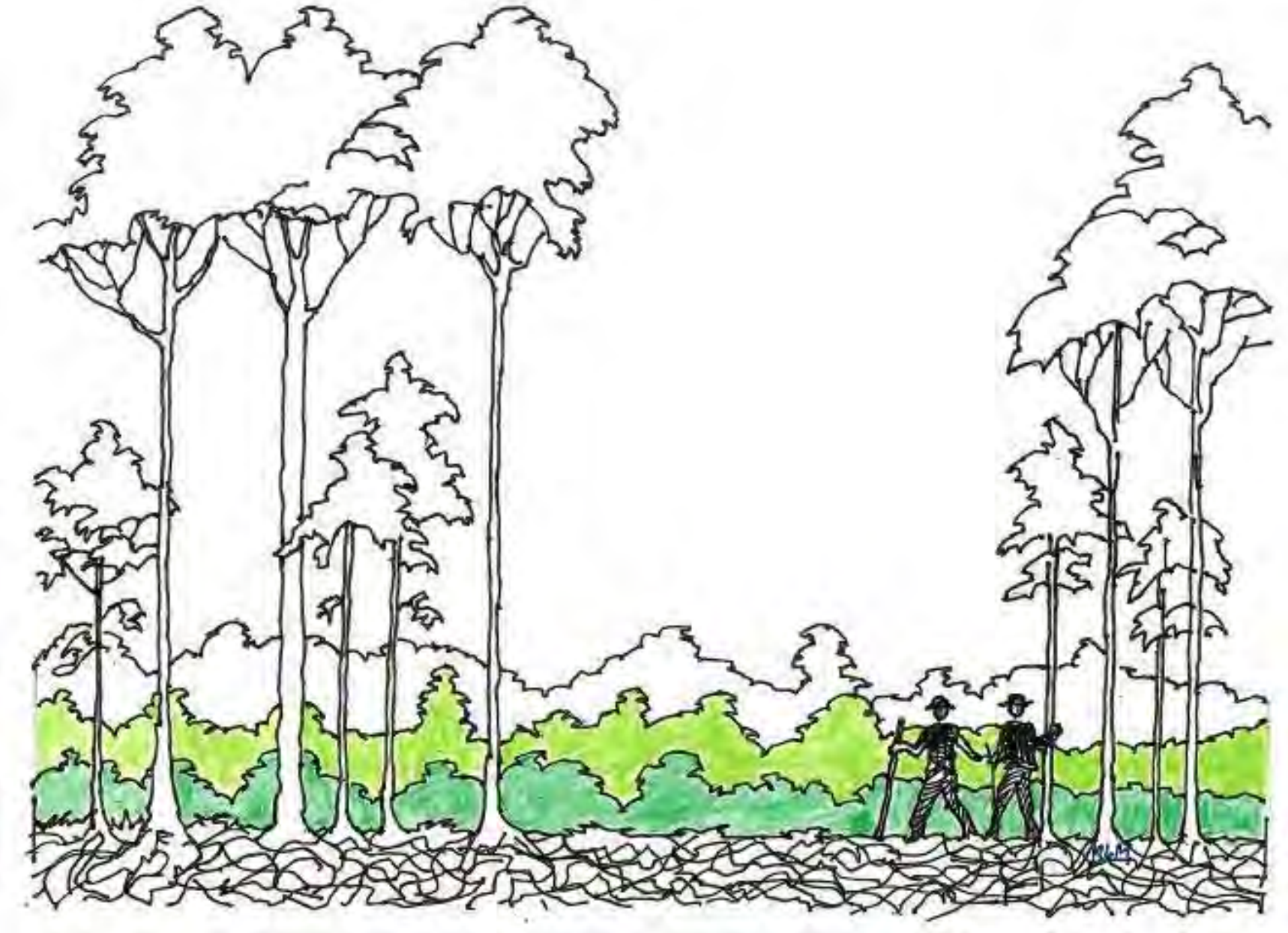

G
H+S
F
CS

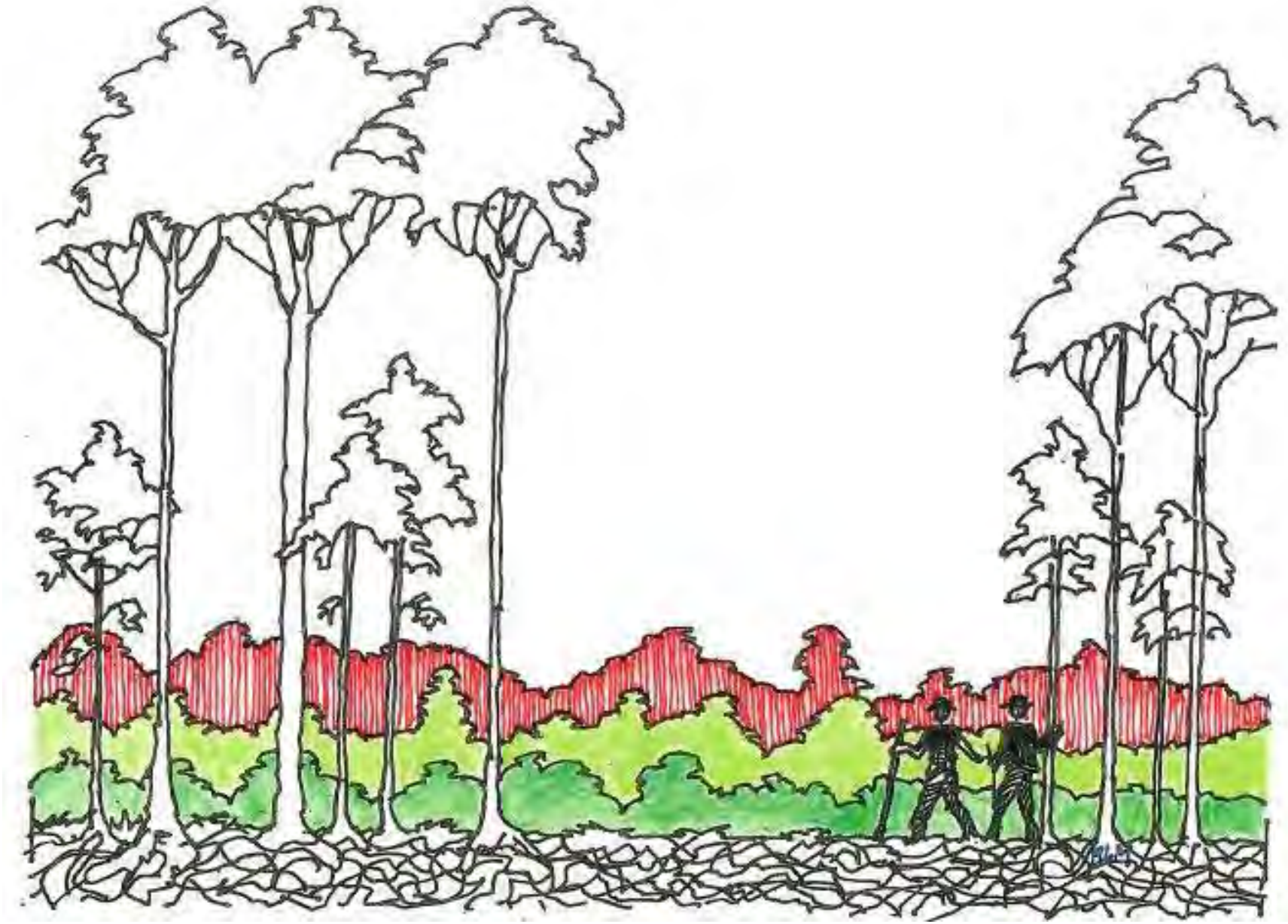

DELIVERY
AERIAL / HELICOPTER
GROUND Mach-mounted MB
GROUND Mach at harvest
BPMB
HYDRAULIC BP
Squirt / Wash Bottle
Paint Brush
Rag-on-stick




TIME SINCE DISTURBANCE WITH VIGOROUS REGROWTH (YEARS)
0 1 2 3 4 5 6 7 8 9 10
INCREASING BIOMASS OF TARGET VEGETATION
HIGH SITE QUALITY PLANTATIONS
MEDIUM SITE QUALITY
LOW SITE QUALITY
0 1 2 3 4 5 6 7 8 9 10
TIME SINCE HARVEST OR MECHANICAL SITE PREPARATION (YEARS)







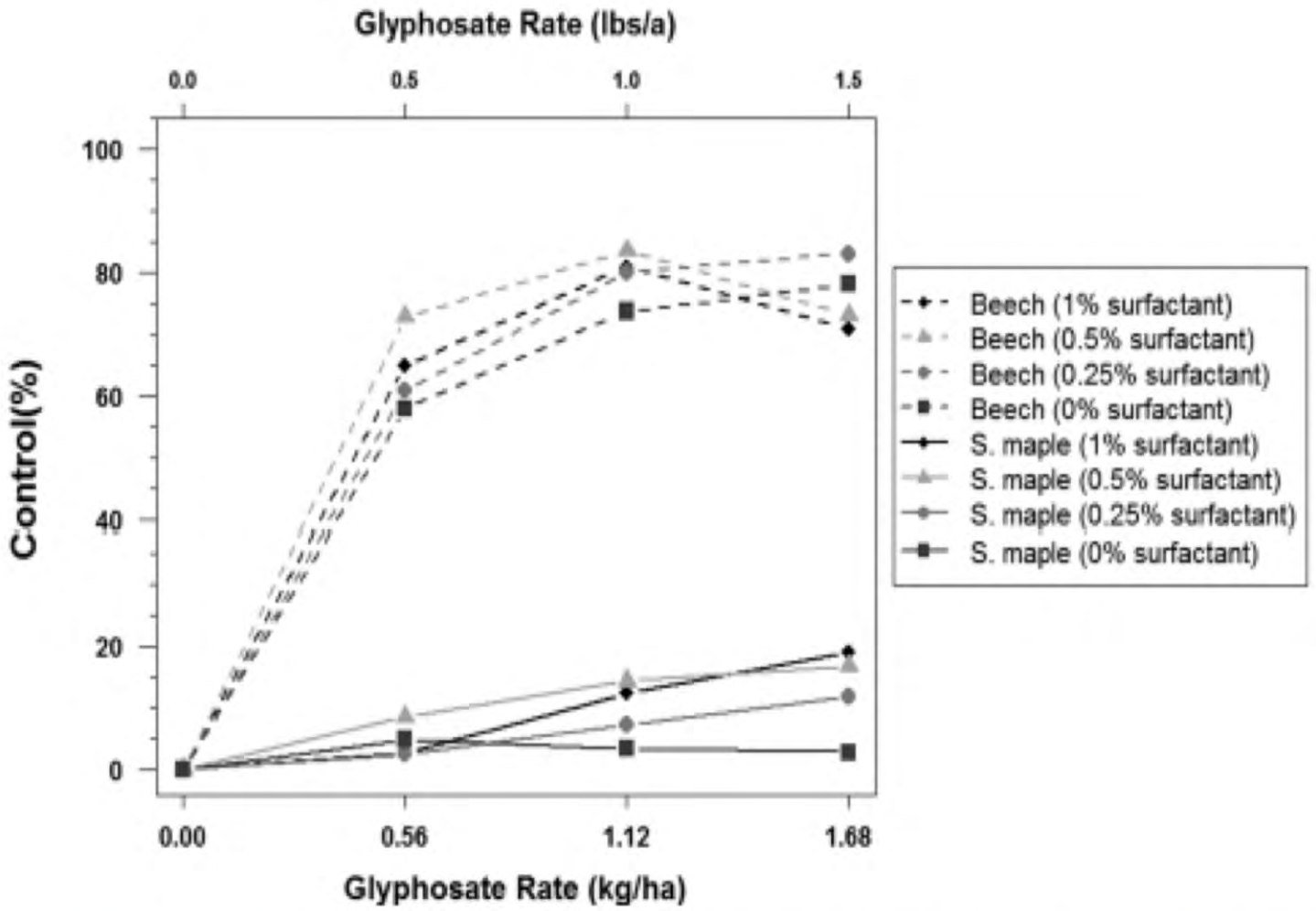
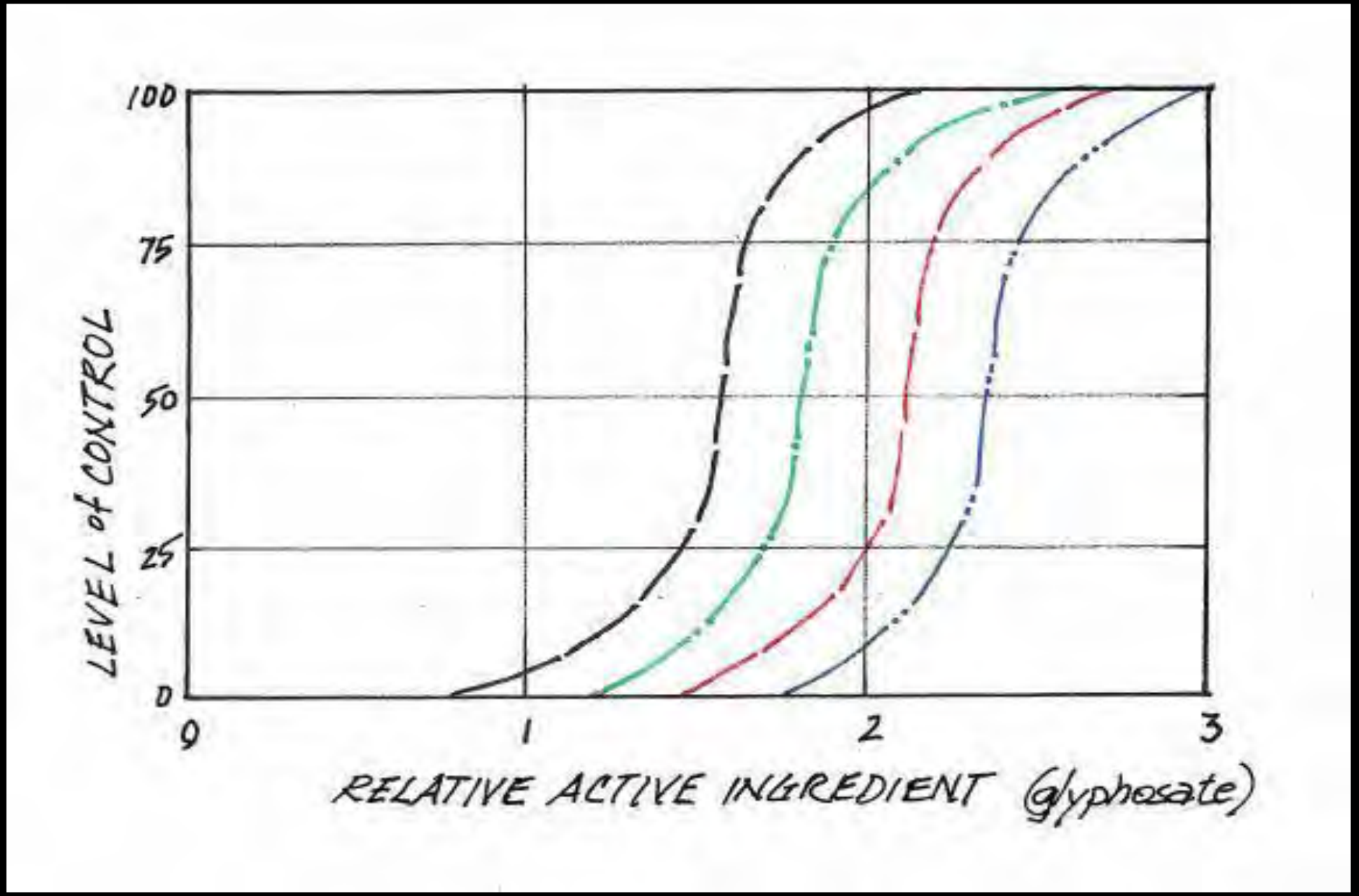


Figure 2. Third-year posttreatment control of beech and sugar maple for all glyphosate rates (lb/ac) and surfactant concentrations tested. Beech is indicated by dashed lines and sugar maple (S. maple) by solid lines.


100
75
50
25
0
LEVEL of CONTROL
0
1
2
3
RELATIVE ACTIVE INGREDIENT (glyphosate)

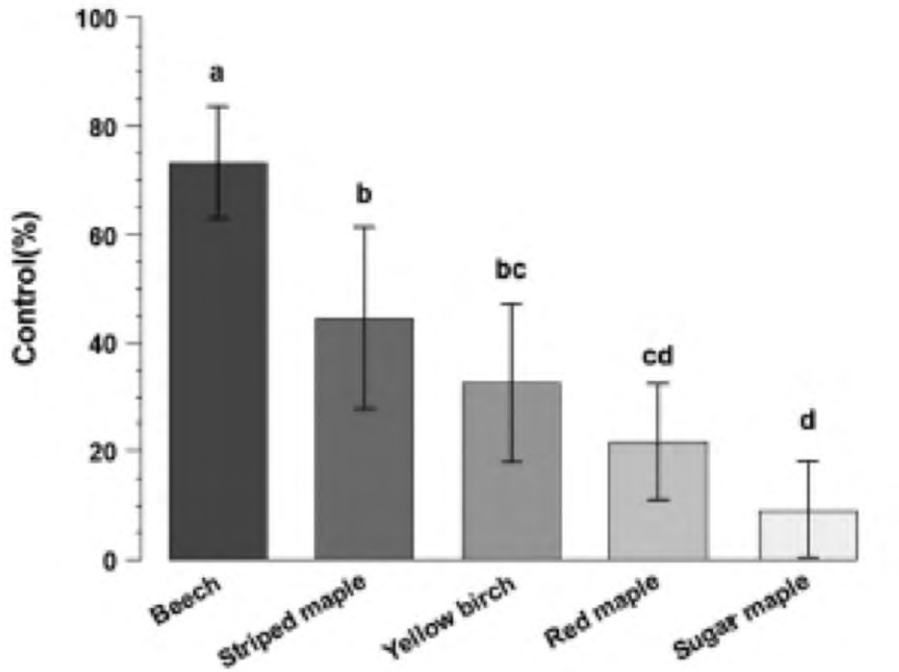


Figure 1. Third-year posttreatment control of five dominant hardwood species from all glyphosate treatments combined. Same letters above bars (a, b, c) indicate species that were not different at $\alpha = 0.10$. Error bars represent 1 SD above and below the mean.

SEASON-PHENOLOGY, FOLIAGE CONDITION

TARGET STRESS

PLANTING / PLANTING STOCK

WATER QUALITY

SURFACTANT

RATE CALCULATION

EVENING HOURS APPLIC

NO WIND, LATERAL MOVEMENT
(observe with back lighting, long lens)

MIXING, REMIXING

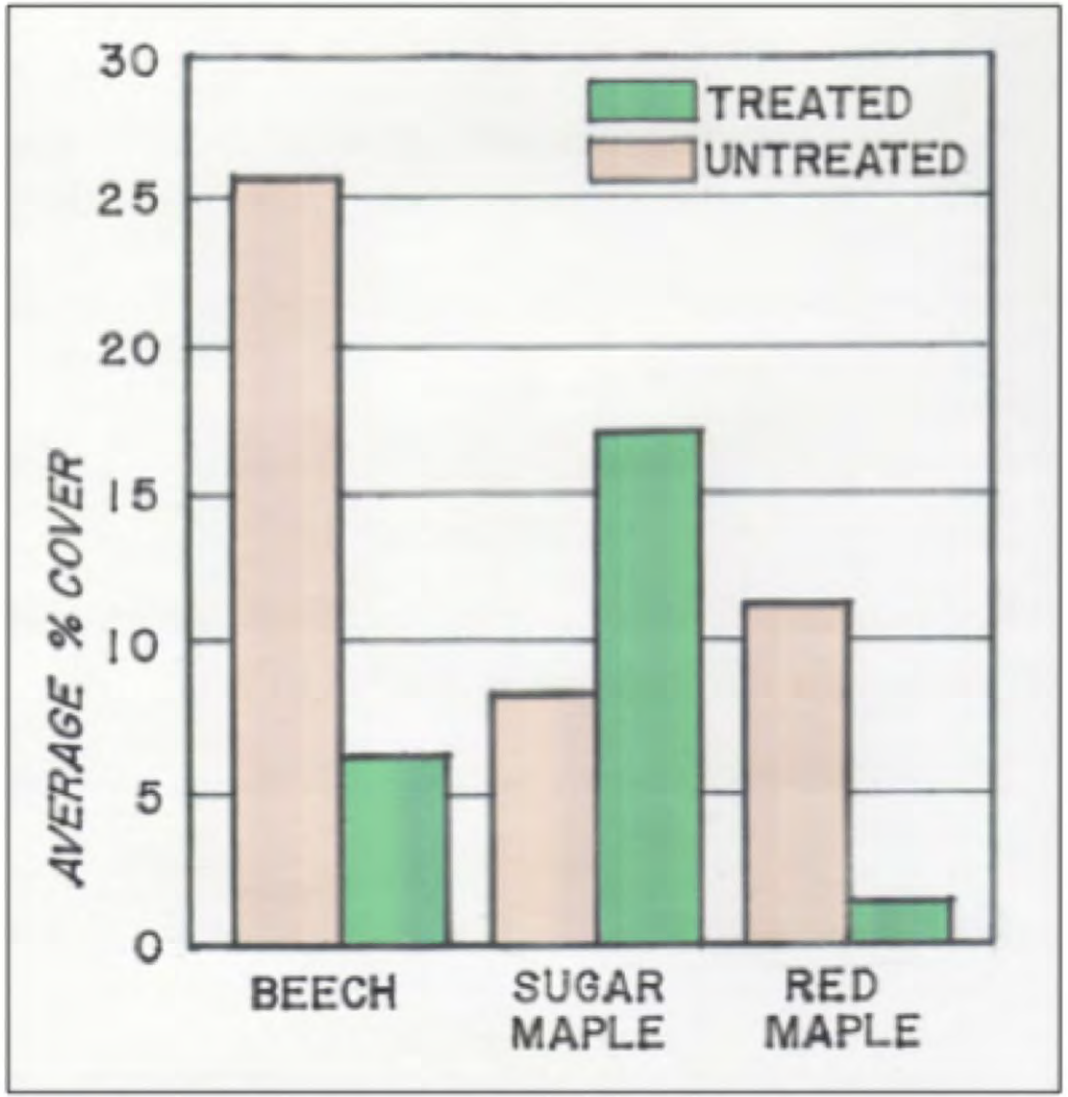
SPRAY PATTERN CONFIGURATION

More ---

DROPLET SIZE
(pay for large droplets)

a.i. CONCENTRATION

COVERAGE
Spray to wet
Not to run-off



Relative percentage cover of three species three years after operational treatment of a young hardwood stand with glyphosate (Plum Creek Timber Co. data)


THE
END