STAND TYPE (PT) Present status 431 a 451 A - target B - transitional C - distant SHARE [ha] SHARE [%] irrelevant 100 80 ROTATION [yrs] 30 30 **REGENERATION PERIOD [yrs]** continuous 81 **BEGINNING OF REGENERATION** irrelevant 61 V n(p)P, n(p)NnN, nH SILVICULTURAL SYSTEM High forest MANAGEMENT FORM 7 PERIOD FOR PLANTATION ESTABLISHEMENT [vrs] SUPERORDINATE BE (NS, SP, OK and mixed) target management for middle altitudes MANAGEMENT UNIT Target species composition for BE 20, OK 25, NS 10, SP 10, SF 10, EL 15, DF 3, SLI (SY) 4, GF 2, SBI (ASP, ROW) 1 43a subunit Target species composition for BE 35, NS 20, SP 10, SF 10, EL 15, DF 3, SLI (SY, OK) 4, GF 2, SBI (ASP, ROW) 1 43b subunit BE 30, NS 29, SF 10, SLI (LLI, SY, NOM) 5, EL 15, EM (HBM, WCH, OK) 5, DF 2, GF 3, SBI (ASP, ROW, GAR) 1 Target species composition for 45b subunit Selection felling interventions according to Regeneration Regeneration criteria: One can begin the regeneration also earlier (in 60th To prefer natural regeneration, large • Sanitation selection - salvage felling at all shelterwood cutting (or small one or small vr of age) – where is a risk of rapid disintegration. shelterwod cuttings ahead) should be done with When planning and conducting renewal cuts, take growing stages. SILVICULTURAL uneven intensity. In total – 2 interventions per account of NS stand present on the site maximally. Support of quality and stability – to release PRESCRIPTIONS 10 yrs (removal amounts ca 5-yr increment of If instable (high h/d ratio, short live crown), the quality crop trees including maintenance standing volume). To prefer removal of lowstand should be thinned less intensively with of accompanying species (NS, SF, OK quality trees, to release canopy in order to shorter period between the interventions, when individually, BE or SY as groups), in older initialise natural regeneration. To combine a clearcutting – use smaller cuts.

RSH 1 - Acidic and nutrient-medium beech with oak (CHS 43 a 45)

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 parts prefer removal of low-quality competitors. Support and maintenance of target stand structure – adjustments based on comparison of current structure with model one. Harvest of "mature" trees according to their development stage and management goals. Target diameter ranges between 40-60 cm. The removed trees are not only the thickest dominants, but also those ones, which will not perform well and which hamper a vertical canopy development. Intervention intensity (including salvage cut) in the context of total current increment accumulated following a previous intervention. Support of regeneration – to relese locally, preferentially at sites where a vertical canopy is needed to develop (NS and SF individually or small patches, BE or SY in small groups). Support of light-demanding species such as SP, EL and DF. 	 target-diameter felling approach (regeneration initiated), group fellings (growth and selfpruning) and thinning (more uniform structure stands in areas among the above-mentioned shelterwood parts). Soil scarification can be used if possible. In following phases, one should maintain the residual parent stand and postpone its presence on the site or alternatively leave it on the site with no final felling conducted. Artificial regeneration (including underplanting or undersowing) only for CDS species, which are missing (SF and BE). To initiate regeneration of SF ahead of time, BE up to 10 years after regeneration of SF. Open areas from salvage cut can be used for artificial or combined (if they are present in the mother stand) regeneration of light-demanding trees (SP, OK, SY, EL, DF). On larger areas after salvage cut, leave SBI, ROW, ASP as preparatory trees for subsequent easier introduction of SF or BE. Tending Plantations (underplanting, undersowing) and advanced growth if sheltered by a parent stand (upper storey), to release accompanying species and conduct sanitation cut. if no shleter above, advanced growth should be cleaned (in NS also using a shrub cutter – schematic approach) supporting (even individually) accompanying species. in young stands with gaps (exceeding 0.04 ha), repair planting with crop species that are capable of stabilizing and soil-imroving (EL, DF, OK, SY) or support of pioneering species such as ROW, SBI and ASP. Stands younger than 40yrs Heavy thinning in NS focused on individual stability and maintenance of long live crowns 	of natural regeneration (also around the individual parents) of trees already exists – preferably BE, SF and SP, OK, SY, EL, DF, which need more light). When releasing desirable undergrowth, remove NS from the upper storeys preferably. Underplant SF (within the stand) and BE (inner strip), provided the parent stands are vigorous. Support all self-seeded desirable tree species. In case of a rapid parent stand disintegration risk, support and rely on pioneering species (SP, ASP,

	trees are left on the site, second thin the dominants are 10 m tall – 1.2 thou are left on the site. To release acco species at the expense of NS. In larger uneven thinning intensity is benefici following site conditions, health and valuable species); at the same time skidding lines in appropriate density lines 30 m apart). Stands older than 40 yrs To maintain (preferably locally) thinn as crop trees (ca 300 per ha) are releas 2 competitors supporting natural rep (species from CDS) already after th support accompanying species in of lower storeys. The larger stand moreemphasis is put on unever (alternating thinner and denser Interval of interventions 5-10 yrs. A gradual removal of NS that have rep	 sand trees following the release cut. Uniform NS stands can be thinned also schematically. groups, an al (mozaic al (mozaic before top height 10 m or the density after slight thinning exceeds 1.4 thousand per ha, heavy thinning approach is not allowed any more. A light thinning from below consists in gradual removal of declining but still competing trees (high h/d ratio) – the intervention period 5-10 yrs. All other vigorous species than NS are beneficial. Stands older than 40 yrs generation If thinned appropriately (NS dominats show h/d 60-80 with live crown sharing at least 50% of the stem) – follow the prescriptions for B-transitional type. Emphasis on release cut (larger crowns expected) of the other trees, their support (also undergrowth) when thinned. Monospecific NS parts should not be thinned heavily in order to prevent weed infestation (on nutrient-medium soils) and restrict NS regeneration (20-30% can be tolerated). expected and BE 		
	regenerated below the mature NS.	upper storey should be thinned slightly in periods 5-7 yrs. Gaps followin salvage cut plant or regenerate naturally with desirable tree species.		
	Thorough sanitation cut of trees infested by bark beetle.			
	Stands damaged by game (bark browsing and peeling):			
	The thickets – try to find at least 300 trees per ha in the upper storey, which show no and/or slight damage – these ones release (according to density)			
Measures in stands damaged by biotic and abiotic agents	and protect individually in order to prevent damage, support every accompanying species, remove the most injured trees gradually, period of intervention no longer than 5 yrs.			
	In stand with logs – release minimally damaged crop trees, remove the most injured cutting or plant (also underplant) them with desirable tree species. Period of interve			
	The stands manifesting decline (yellowing, defoliation etc.)			

	The advance growths manifesting yellowing in more than 50% trees – do not use a schematic approach, focus on support of every healthy NS including the accompanying individuals. At top height 2 m, reduce a density to 4 thousand per ha – remove preferably the all-damage trees. Support all healthy NS trees regardless of the storey they thrive in. The gaps plant with desirable EL, DF, OK or leave them to SIB, ROW, ASP self-seeding.		
	The thickets and small-pole stands – if at least 1.4 thousand healthy NS trees are present, reduce the density to ca 2 thousand per ha at top height 7 m and continue to 1.5 thousand per ha when top height is 15 m. Remove all moribund and crooked trees, support all other desirable species. If less than 1.4 tree per ha are present on the site, support the healthiest 300-400 trees per ha, these ones release from the nearest competitors. The others leave without intervention excepting support of accompanying species.		
	As pole stage is achieved, thinning of declining NS stands is risky – threat of a sooner disintegration. If the stand contains a satisfactory share of accompanying species, support it maximally. Otherwise a sanitation cut and conversion are conducted. In case of a slower disintegration, all desirable tree species are underplanted and interplanted.		
Production safety	(Non-evaluated)		
Production potential	(Non-evaluated)		
Note	Following sanitation cut, the period needed to establish plantations is allowed to be extended to 2+7, alternatively 5+5 yrs (depending on dispensation from state forest administration).		

STAND TYPE (PT) 433	Present status			
	A - target	B - transitional	C - distant	
SHARE [ha]				
SHARE [%]				
ROTATION [yrs]	irrelevant	100	100	
REGENERATION PERIOD [yrs]	continuous	30	30	
BEGINNING OF REGENERATION	irrelevant	81	81	
SILVICULTURAL SYSTEM	V	nP, nH, (P)	nH, (N,nP)	
MANAGEMENT FORM	High forest			
PERIOD FOR PLANTATION ESTABLISHEMENT [yrs]	7			
SUPERORDINATE MANAGEMENT UNIT	BE (NS, SP, OK and mixed) target management of middle altitudes			
Target species composition for 43a subunit	SP 40, OK 20, BE 10, EL 15, DF 3, SF 5, SLI (SY) 4, GF 2, SBI (ASP, ROW, NS) 1			
Target species composition for 43b subunit	SP 35, BE 25, SF 10, EL 15, DF 3, NS 5, SLI	(SY, OK) 4, GF 2, SBI (ASP, ROW) 1		
SILVICULTURAL PRESCRIPTIONS	 Selection felling interventions according to criteria: Sanitation cut in all growing stages. Support of quality and stability – in younger parts care of crop trees including support of accompanying species, in older parts prefer removal of low-quality competitors. Support and maintain target structure – alternating patches of different age with desirable species. 	Regeneration conduct within smaller patches with the regeneration period longer (30 yrs). Combination of shelterwood, strip and selection cut – also shade-intolerant trees (OK, SP, EL) thrive there.	a risk of faster disintegration. Use strip and small- clearcuts, if longer lifetime of stands is expected, BE, SF and SLI can be planted below groups with broken canopy. Planting of OK, DF, EL on clearcuts. Larger stands divide into segments where different tree species are preferred thus creating a mosaic mixture. All self-seeded desirable tree species are	

acc	cording to condition and management bals. The crop-log diameters 35-50 cm. In	tolerant trees (SF, BE), tolerant ones such as OK	If there is a risk of faster disintegration, SIB, ASP and ROW self-seeding is benefitial and crop trees
to r ren und dev • Inte san incc pre • Sup of	needs of all species present on the site; move not only "crop", but also indesirable competitors, which hamper evelopment of vertical canopy. tervention intensity (including a nitation cut) based on total current crement accumulated following a evious intervention. upport of regeneration – release groups advance regeneration of desirable ecies where is already present.	 and broadleaved standards. Release cuts in shelterwood adjust to the species needs – intolerant ones have to be released quickly (maximally two phases), the tolerant trees release gradually (to the very final cutting of the SP stand). Tending Plantations (underplanting, undersowing) and advanced growth if sheltered by a parent stand (upper storey), just release accompanying species and conduct sanitation cut. if non-sheltered, reduce density (In SP also schematically – shrub cutter), maximally support accompanying species (even the individuals). Remove SP wolf trees. In plantation and advance growth gaps (larger than 0.04 ha), conduct a repair planting with stabilizers or soil imrovers (EL, DF or OK, SY) or support self-seeding of ROW, SIB and ASP. Stands younger than 40 yrs Intensive thinning from below in SP supporting individual stability and preventing short crowns 	 cutter) and support accompanying species maximally. In plantation and advance growth gaps (larger than 0.04 ha), conduct a repair planting with stabilizers or soil imrovers (EL, DF or OK, SY) or support self-seeding of ROW, SIB and ASP. Stands younger than 40 yrs Intensive thinning from below in SP supporting individual stability and relesing other tree species (first intervention top height 5 m reduces density to 5.5 thousand trees per ha, the second one to 3.0 thousand per ha at top height 10 and the third one (top height 17 m) reduces density to 1.8 thousand per ha. The accompanying species should be released at the expense of dominant SP. In larger groups support uneven intensity of interventions –
		than 0.04 ha), conduct a repair planting with stabilizers or soil imrovers (EL, DF or OK, SY) or support self-seeding of ROW, SIB and ASP. Stands younger than 40 yrs Intensive thinning from below in SP supporting individual stability and preventing short crowns – these should share at least 30% of the stem (first intervention at top height 5 m reduces density to 6 thousand trees per ha, the second one to 3.5 thousand per ha at top height 10 m and the third one (top height 17 m) reduces density to 1.9 thousand per ha. The accompanying species should be released at the	individual stability and relesing other tree species (first intervention top height 5 m reduces density to 5.5 thousand trees per ha, the second one to 3.0 thousand per ha at top height 10 and the third one (top height 17 m) reduces density to 1.8 thousand per ha. The accompanying species should be released at the expense of dominant SP. In larger groups support uneven intensity of interventions – establish skidding lines in appropriate density and
		Porosty nad 40 let/Stands older than 40yrs	species.

		Shift to a positive approach – release ca 300 crop	Stands older than 40yrs	
		trees per ha from 1-2 competitors. Interval	If thinning was conducted appropriatelly (SP	
		between interventions 5-10 yrs. Harvest of	dominants show h/d 80-100, live crowns share at	
		target-diameter SP prepares regeneration	least 30%) – see basic prescriptions for B-	
		simultaneously – prefer groups, break canopy for	transitional type. Emphasis on released	
		underplanting, alternatively undersowing.	accompanying species in order to maintain their	
			large crowns and support their natural	
			regenereration already in the stage of thinning.	
			Monospecific SP parts should not be released too	
			much – weed control (nutrient-medium site) and	
			do not support SP regeneration (30-40% share can	
			be tolerated).	
			In dense stands with inappropriate h/d ratio,	
			remove labile trees from undestorey, in main	
			storey apply slight intensity thinning every 5-7 yrs.	
			Gaps of salvage cut origin can be either planted or	
			naturally regenerated with desirable tree species.	
	Stands damaged by game (bark browsing and	l peeling):		
		, , , , , , , , , , , , , , , , , , , ,	these ones release and protect them individually in	
	order to prevent further injury, support all acompanying species, remove the most injured trees, intervention period should not be longer than 5 yrs In stands with logs – release the least injured crop trees, remove the most injured ones, support natural regeneration in gaps following salvage cuts			
Measures in stands damaged				
by biotic and abiotic agents	alternatively – plant (also underplanting) them with desirable species. Intervention period should not be longer than 7 yrs.			
	The stands threatened by drought			
	Reduce density of advance regeneration and young thickets (reduces interception and number of transpiring trees. Where SP stands have NS			
	understorey, remove the NS at once.			
Production safety	(Non-evaluated)			
Production potential	(Non-evaluated)			
Noto	Following sanitation cut, the period need	led to establish plantations is allowed to be extend	ded to 2+7, alternatively 5+5 yrs (depending on	
Note	dispensation from state forest administration).			

STAND TYPE (PT) 435	Present status			
	A - target	B - transitional	C - distant	
SHARE [ha]				
SHARE [%]				
ROTATION [yrs]	irrelevant	120	120	
REGENERATION PERIOD [yrs]	continuous	40	40	
BEGINNING OF REGENERATION	irrelevant	101	101	
SILVICULTURAL SYSTEM	V	nP, pN, pP	nP, pN, pP	
MANAGEMENT FORM		High forest		
PERIOD FOR PLANTATION ESTABLISHEMENT [yrs]	7			
SUPERORDINATE MANAGEMENT UNIT	BE (NS, SP, OK and mixed) target management at middle altitudes			
Target species composition for 43a subunit	OK 50, BE 15, EL 15, DF 3, SF 5, SP 5, SLI (SY) 4, GF 2, SBI (ASP, ROW, NS) 1			
Target species composition for 43b subunit	BE 35, EL 15, OK 30, DF 3, SP (SF, NS) 10,	SLI (SY) 4, GF 2, SBI (ASP, ROW) 1		
SILVICULTURAL PRESCRIPTIONS	 Selection felling interventions according to criteria: Sanitation cut in all growing stages. Support of quality – in younger parts combined approach, i.e. remove wolf trees and release quality trees including the support of accompanying species (groups more appropriate), in older parts support crop trees preferentially. Support and maintenance of target structure – alternating larger patches of 	Regeneration Regeneration conduct using a shelterwood strip felling with shelterwood groups placed ahead, these enlarge using a peripheral felling. Two- phase shelterwood – the first phase is a seed cutting including appropriate soil scarification. The second on eis a final cutting where 3-4-yr-old advance growth of 0.5 m height is released. Segment the stand appropriatelly in order to proceed the regeneration as quickly as possible, differentiate species composition of desirable	conduct soil scarification. Missing desirable species (BE, SF, SLI) plant into groups placed ahead or within inner edge of strip.	

	 species. Harvest of "mature" trees, group selection according to condition and management goals. The crop-log diameters 50-70 cm. In groups without OK adjust all interventions to needs of all species present on the site; remove undesirable competitors, which hamper development of vertical canopy. Intervention intensity based on total current increment accumulated following a previous intervention. Support of regeneration – release in larger groups (0-5 ha) when seed yrs are expected. 	 necessary to plant OK of local origin within renewal patches of 0.5 ha minimally. Tending Plantations (underplanting, undersowing) and advanced growth reduce density of advance growths (risk of development of inappropriate h/d ratio in OK and damage by snow load). Both naturally regenearted and planted OK – remove wolf trees first and support OK at the expense of fast-growing competitors such as SBI and ASP. where are gaps in juvenile stands (over 0.04 ha), conduct repair planting or support self-seeding of desirable stabilizers or soil improvers (EL, DF or SY, SLI). Stands younger than 40 yrs Remove wolf trees at top height 5 m, negative approach in upper and main storey. Next intervention at top height 11 m in upper and main storey resulting in 6 thousanf trees per ha. Simultaneously segment the stand by skidding lines appropriatelly (4 m wide lines 30 m apart). Further interventions aim at support of crop trees (first 200, later 100 crop trees per ha) when top height is 16, 20 and 24 m. Iniciate and maintain desirable undestory of SLI and other shade-tolerant species (SF and others). Stands older than 40yrs Further release of crop trees and segmentation of stands to regenerate them – group mixture of the other species where OK is missing. 	 Both naturally regenerated and planted OK – remove wolf trees and support self-seeding of all other desirable species. Where are gaps in juvenile stands (over 0.04 ha), conduct repair planting or support self-seeding of desirable stabilizers or soil improvers (EL, DF or SY, SLI). Stands younger than 40 yrs Negative intervention in all stand parts – reduced density promotes inkrement. Take care of 100 crop trees – release them from 1-2 competitors. Simultaneously segment the stand by skidding lines appropriatelly (4 m wide lines 30 m apart). Support all other desirable species by relesing them from undestory. Stands older than 40yrs Release crop trees continually. Emphasise on promotion of larger live crowns of accompanying species and initiation of their natural regeneration already during thinning the stands.
Measures in stands damaged by biotic and abiotic agents	Stands threatened by drought:		maintenance of soil moisture and nurses OK (self-
Production safety		(Non-evaluated)	

Production potential	(Non-evaluated)	
Note	Following sanitation cut, the period needed to establish plantations is allowed to be extended to 2+7, alternatively 5+5 yrs (depending on dispensation from state forest administration).	

STAND TYPE (PT) 436	Present status			
	A - target	B - transitional	C - distant	
SHARE [ha]				
SHARE [%]				
ROTATION [yrs]	irrelevant	120	100	
REGENERATION PERIOD [yrs]	continuous	40	40	
BEGINNING OF REGENERATION	irrelevant	101	81	
SILVICULTURAL SYSTEM	V	P, (pN)	P, (pN)	
MANAGEMENT FORM	High forest			
PERIOD FOR PLANTATION ESTABLISHEMENT [yrs]	7			
SUPERORDINATE MANAGEMENT UNIT	BE (NS, SP, OK and mixed) target management at middle altitudes			
Target species composition for 43a subunit	BE 40, OK 25, EL 15, DF 3, SF 5, SP 5, SLI (SY) 4, GF 2, SBI (ASP, ROW, NS) 1			
Target species composition for 43b subunit	BE 55, EL 15, OK 10, DF 3, SP (SF, NS) 10, SLI (SY) 4, GF 2, SBI (ASP, ROW) 1			
SILVICULTURAL PRESCRIPTIONS	Sanitation cut in all growing stages. Support quality – in younger parts remove wolf trees and release quality trees		•	

		 Plantations (underplanting, undersowing) and advanced growth Remove wolf trees in BE advance growths and plantations. Where are gaps in juvenile stands (over 0.04 ha), conduct repair planting or support selfseeding of desirable stabilizers or soil improvers (EL, DF, OK or SY, SLI). Stands younger than 40 yrs Remove wolf trees at top height 5 m, negative approach in upper and main storey. Next intervention at top height 10 m in upper and main storey resulting in 6 thousanf trees per ha. Simultaneously segment the stand by skidding lines appropriatelly (4 m wide lines 30 m apart). After 10 yrs when top height is 15 m, reduce density to 4-5 thousand trees per ha. Further intervention at top height 20 m supports 300-400 crop trees per ha. No intervention in understorey. Stands older than 40yrs 	 regeneration – also prefer other desirable species. Tending Plantations (underplanting, undersowing) and advanced growth Remowe wolf trees in BE advance growths and plantations, support all other desirable species. Where are gaps in juvenile stands (over 0.04 ha), conduct repair planting or support self-seeding of desirable stabilizers or soil improvers (EL, DF, OK or SY, SLI). Stands younger than 40 yrs Negativní zásahy ve všech částech porostu – podpora přírůstu snížením hustoty. Redukce při Ho 10 a 15 m na 5 a 3 tis. ks/ha./Remove undesirable trees – support increment by reduced density. At top height 10 and 15 m, the density should be 5 and
Measures in stands damaged by biotic and abiotic agents	Support any accompanying species to prevent	t disintegration of forest stands over large areas.	
Production safety	(Non-evaluated)		
Production potential	(Non-evaluated)		
	(Non-evaluated) Following sanitation cut, the period needed to establish plantations is allowed to be extended to 2+7, alternatively 5+5 yrs (depending on dispensation from state forest administration).		